REPORT OF THE TASK FORCE
ON BUSINESS INVESTMENT

QUÉBEC WELCOMES
INVESTMENT

Québec

REPORT OF THE TASK FORCE
ON BUSINESS INVESTMENT

QUÉBEC WELCOMES
INVESTMENT

Québec

Québec Welcomes Investment
Report of the Task Force on Business Investment

Légal deposit - Bibliothèque des archives nationales du Québec
March 2008
ISBN 978-2-550-52376-5 (Imprimé)
ISBN 978-2-550-52377-2 (PDF)

“Wealth is not without its advantages, and the case to the contrary, although it has often been made, has never proved widely persuasive.”

John Kenneth Galbraith

The Affluent Society (1958)

COVERING LETTER AND SIGNATURES OF THE THREE MEMBERS OF THE TASK FORCE

Madame the Minister of Finance,
Minister for Government Services,
Minister responsible for Government Administration
and Chair of the Conseil du trésor,

On October 30, you announced the creation of the Task Force on Business Investment in Québec.

Convince

You asked us to convince our fellow citizens of the importance of supporting productivity and business investment, to meet the demographic, economic, financial and environmental challenges our society now faces.

To this end, you mandated us to:

- *present the main observations regarding business investment performance in Québec compared to the other provinces and the best-performing countries;*
- *identify, in the current Québec context, the most significant levers to foster economic growth;*
- *submit proposals to the government on what actions and means should be taken to encourage, in particular, greater business investment to stimulate economic growth.*

A challenge

We hereby submit our report with our analyses and conclusions about business investment in Québec.

The very short time period we were given to carry out our mandate - four months - was in and of itself a challenge, given the scope of the topic.

But we must practice what we preach: we set out to make this exercise a demonstration of Québec productivity!

To help us meet this challenge, we were fortunate to have the first-rate and eager cooperation of everyone we had time to meet with during our work, and we thought this merited mention. We were struck by their overwhelming enthusiasm about our economic future and by the insightfulness of their suggestions. We sincerely hope that this is reflected in our report.

Thanks

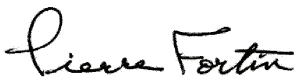
One of the best kept secrets of the Government of Québec is the exceptional quality of its senior public service.

The fact that we were able to meet the deadline is in large part because we benefited from the accomplished skill and dedication of your close collaborators from the Ministère des Finances-Brian Girard, Luc Monty, Bertrand Cayouette, Éric Ducharme and Marc Sirois, and their aides.

The support of Michel-Marie Bellemare, from the Ministère du Développement économique, de l'Innovation et de l'Exportation, and of Jean-Pierre Pellegrin, from the Ministère du Conseil exécutif, was also invaluable.

We are very grateful for this unique opportunity to be of service to our fellow citizens.

Yours truly,

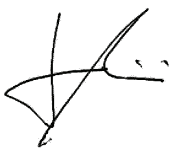


Pierre Fortin

Chair of the Task Force on Business Investment in Québec

Andrée Corriveau

Member of the Task Force on Business Investment in Québec



Jean Boivin

Member of the Task Force on Business Investment in Québec

PREFACE

This report can be read at three different speeds.

You might want to approach it like the 400 metre dash. If so, you'll need about a minute to read just the preface. This will still allow you to come away with a good idea of the report's main theme.

But if you have entered the 1000 metre event, it will take you four minutes to read the preface and the summary that follows. By reading these two sections, you'll be able to seize the essential of our arguments without getting lost in the details.

Finally, you might have signed up for the marathon. In that case, you'll have to spend about two and a half hours to follow all the twists and turns in our thinking. But after you've finished, you'll have earned the right to provide us with your detailed critical response!

So it isn't all light reading. That is because a great deal of effort and more than 150 working days went into the production of this report! We therefore ask your indulgence.

The framework of the report is as follows:

- First of all, we want to know why more investment is needed in Québec.
- Secondly, we need to review the situation to determine exactly where things stand today.
- Thirdly, we need to have some idea of what is holding back business investment in Québec and of the levers we can use to increase investment.
- Lastly, we have to decide what to do right now in order to get things moving.

■ Why we need more investment in Québec

Why do we want to increase business investment in Québec?

- Because an increase in investment allows us to do more with the limited resources we have. Investment makes us more *productive*.
- Because greater productivity increases our standard of living and our per capita income. That is why we want more investment.

But why should we want to improve our standard of living? In doing that, we can reduce poverty and put more wealth in the hands of the middle class; enjoy more leisure time, if that is what we want; ensure funding for health care and better public services; and have access to cleaner technologies and greater means for protecting the integrity of our environment and ensuring the sustainability of our development.

We can increase our standard of living in one of four ways:

- win the natural resources lottery;
- work in greater numbers;
- work more hours;
- produce more value per hour worked (not by driving workers to the edge of exhaustion, as we see in Charlie Chaplin's *Modern Times*, but by relying on Québec's ingenuity).

■ Where do we stand today?

It has been particularly by working in greater numbers for the last 25 years that Quebecers have grown wealthier and significantly narrowed the gap between their standard of living and that of Ontarians.

But the imminent demographic change will make this path towards greater wealth impossible between now and 2015. As baby-boomers retire and leave fewer children behind them, the percentage of Quebecers in the workforce will decrease. Our future will depend above all on our ability to use the fourth of the paths we indicated: produce more value per hour worked, in other words, become more *productive*.

This is why business investment is important. Investment is not the fundamental cause of an increase in productivity. New ideas are the real cause. We must instead view investment as an extremely important vehicle for ideas and thus for productivity.

Where do we stand today regarding business investment?

- Business investment in Québec amounts to 4 billion dollars per year for the construction of factories and buildings, 6 billion for the construction of hydroelectric, wind energy, mining and other types of facilities, and 16 billion for the purchase of industrial equipment, transportation equipment, computers and software, communications equipment and office equipment.
- Business investment is supported by 9 billions dollars of public investments in infrastructure and equipment (roads, public transit, schools, hospitals, water management, environment, etc.).
- In total, one of every eight dollars of all the wealth created annually in Québec is spent on business investment and on investment in the public sector.

Internationally, Québec fares poorly in terms of its investment rate in production equipment. It is well down in the ranking of industrialized countries, is behind the United States, and does not stand out when compared to the other provinces in Canada.

Québec's level of productivity lags behind that of the United States especially in the area of information and communication technologies and in the service sector.

The strongest investment rate in Québec's service sector is coming from three sub-sectors, namely finance, culture and transportation, which are showing the highest investment as a proportion of their resources. Four regions have seen remarkable progress in their employment rates: Bas-Saint-Laurent, Centre-du-Québec, Capitale-Nationale and Saguenay–Lac-Saint-Jean. Finally, multinational companies in Québec have been performing remarkably well: although they employ just 13% of all workers, they are responsible for 40% to 50% of business investment in production equipment.

■ Brakes on investment

What is keeping our business community from investing more? The answer is seen in a number of factors.

Our businesses will invest more in Québec if they perceive that doing so is more profitable. Investment profitability is the difference between the income it generates and the costs involved. We note here, at the risk of oversimplifying, that if we want more investment, we must increase the expected return and reduce the anticipated costs.

- **Increase the return on investment**

The key to success in improving the return on investment is to imitate others and to become innovative ourselves. Technological imitation and innovation are important, but so is organizational change. The economy is the offspring not just of technology but also of culture.

The quality of human capital also plays a very important role in bringing about the maximum return on business investment. Furthermore, the development of human capital does not end in school; it continues on into the workplace.

Finally, there must be competition, both from within and outside Québec. This is an iron-clad rule to which there can be no exceptions. If a company is a racehorse, competition is the spur that makes it gallop. Only a competitive business environment will push a business to excel. In particular, defending free trade and promoting the notion of extending it to other regions and other countries is an imperative for economic development.

- **Reduce Costs**

With respect to investment, we must monitor and control three types of costs, namely construction costs, the cost of loan capital, and taxes.

— The construction industry must be able to minimize the risks associated with schedule and cost overruns.

— If we do not have sufficient national savings to come up with loan capital, the savings-investment surplus will enhance the wealth of foreign lenders, not of Quebecers.

  Foreign multinationals are still an exceptionally strong source of investment financing in Québec. We must continue to do business with them. Québec's major advantages consist in its free access to North American markets and the quality of its workforce. But there should obviously be simple and transparent rules in place to deal with the takeover of local businesses by foreign companies.

  Moreover, with regard to its foreign investment prospecting (e.g., for providing financial aid to businesses), the Québec government's voice must be clear, unified, convincing, competitive and well coordinated.

The Task Force solidly supports the principle of *a level playing field for all*: government financial aid must treat all industrial sectors equally. Discrimination against the service sector by government programs is anachronistic and must end.

— The tax burden is heavier in Québec than elsewhere because there are more public services in Québec than elsewhere. But some forms of taxation are better than others.

It is generally desirable to tax consumption more than investment, because investment is a means of preparing for the future. There are two major taxes on business investment: the corporate tax and the capital tax. With respect to world ranking, if Québec's stated objectives materialize, the tax rate on investment will shift from very heavy to moderately heavy within four years.

Québec could do more to encourage business investment; it could immediately abolish the capital tax (an insane tax) and accept the federal government's invitation to lower the provincial corporate tax rate to 10% by 2012.

There are two good reasons for following this line of action. First, the capital tax and the corporate tax have a major negative impact on business investment. Secondly, almost all investment taxes end up being shouldered by the employees rather than the owners.

Finally, a generalized business investment tax credit would be a poor substitute for a corporate tax reduction, particularly because political lobbies would use it to their advantage. It would be costly to turn Québec's tax system into a large playground which allowed grants and tax credits to be negotiated and bartered. Nevertheless, investment tax credits targeting certain major economic or social objectives, such as compensating regions for distance-related costs, provide flexibility and have their place in the taxation arena.

■ How can we get things moving?

What must be done now to accelerate investment in Québec and improve our productivity and standard of living?

The analysis carried out by the Task Force showed that the key lies in working to achieve three fundamental objectives:

— accelerate our investment in human capital;

— make Québec more competitive and open to the world;

— reduce the investment tax burden.

These three objectives form the basis of the 21 recommendations the Task Force presents to the Québec government in Chapter 4. Go have a look at them!

TABLE OF CONTENTS

LIST OF TABLES

LIST OF GRAPHS AND FIGURES

SUMMARY

On October 30, 2007, the Minister of Finance announced the formation of the Task Force on Business Investment, created to "help the government identify ways to increase investment to sustain economic growth."[1]

To fulfill its mandate, the Task Force focused its reflection and analyses on the four following questions about investment:

- Why do we want more?
- What is the current situation?
- What is holding us back?
- What should we do now?

The Task Force's report has been developed around the answers to these four questions.

❑ Investment: why do we want more?

As a starting point, the Task Force supports the objective of increasing business investment because investment makes it possible to create more value per hour worked (to be more *productive*), and more value per hour worked universally increases income.

But while investing makes us more productive and greater productivity generates wealth, we need to take a step back and ask why it is important to build wealth.

■ Why is building wealth desirable?

The Task Force would like to stress the distinction between simply building wealth and the use that is made of that wealth. Building wealth means increasing opportunity. Building wealth can serve a variety of ends, such as reducing poverty, acquiring greater material comfort, having more free time and increasing the quantity and quality of services to the public. With regard to the latter, education, health and the environment are going to present major collective challenges in the coming decades, and we must be ready to tackle them.

[1] Task Force on Business Investment Formed. Press release issued by the Office of the Minister of Finance, the Minister for Government Services, the Minister responsible for Government Services and the Chair of the Conseil du trésor, October 30 2007.

Essentially, the reason we want a strong economy is to be able to stop talking about the economy and devote ourselves to all the activities that make life worthwhile: spending time with family and friends, engaging in sports, reading, studying, going out, travelling, going to shows, helping one another and volunteering.

■ How has Québec built wealth up until now?

The Task Group next observed that Québec is in the top 15% of the richest countries in the world, but that it has lost ground in the past 25 years, and that it is one of the poorest regions within industrialized countries. Today Québec ranks 55th among the 60 states in North America. Québec shares this ranking at the bottom of the North American scale with six other Canadian provinces - including Ontario - six provinces whose growth does not really benefit from the high price of hydrocarbons.

Nevertheless, Québec's wealth has grown faster than that of Ontario in the past 45 years. Its per capita income today is 92% of that of its neighbour.

A study of the factors behind this progress leads to two conclusions.

— On the one hand, Québec's success up until now is entirely attributable to two sources: the remarkable upsurge in its employment rate and increased trade with foreign countries.

— On the other hand, two other factors that were identified - the drop in annual hours worked per employee and the relative sluggishness of productivity in Québec - have had the opposite effect, slowing the convergence of per capita income in Québec with that of Ontario and other industrialized areas.

■ Productivity: the only way to generate wealth

However, the future will be different from the past. Demographic changes will soon radically change our economic environment.

In spite of efforts to continue to encourage citizens to be economically active, the percentage of the total population of Québec that will hold a job - our global employment rate - will inevitably drop, because an increasing proportion of Quebecers will be over 65.

Furthermore, foreign trade will continue to depend on the uncertainties of the international economic situation, which Québec has little control over. We can dream of winning the lottery, as Alberta did, but it would be foolhardy to count on it for our long-term economic growth.

It follows that, in the near future, our salaries, our per capita income and our standard of living will increase only if we are able to do much more with the limited number of workers we will have. If there are fewer of us working and we want to continue to reduce the number of hours we spend working every yea - which is entirely legitimate - the only way to generate wealth and avoid losing ground among nations is for each of us to create more wealth during each hour spent working, in other words, to be more *productive*.

To do this, we need to invest more, because investment is one of the main ways to increase productivity. Investment creates technological advances. It is accompanied by the training and education of workers. It brings about beneficial reorganizations of the way work is done and it helps disseminate new ideas throughout the economy.

❑ Investment: what is the current situation?

At the beginning of its observations, the Task Force made two distinctions.

— The first distinction involves remembering that investment performs three functions: replacing depreciated equipment (88% in 2006), equipping new workers (5% in 2006) and increasing the quantity of productive capital available for each worker (7% in 2006). It is primarily this last function that is the most instrumental in progress and that must be evaluated.

— The second distinction concerns types of investment. Basically, there are two types of investment: those made in structures-plants, - buildings and civil engineering structures - and those made in production equipment - industrial equipment, transportation equipment and information and communication equipment. Of the two, investment in production equipment is by far the greater driver of productivity.

On the world, continental and Canadian scenes, Québec does not rank very high in terms of business investment in production equipment (investment per dollar of domestic income). Québec ranks low in the OECD classification, behind the United States and the other Canadian provinces. Québec has managed to increase its accumulated level of equipment per worker (the third function, the one that counts most) more quickly than Ontario in the past 25 years. But we have not finished catching up; it takes time, and we have marked time for the past 10 years. Furthermore, Ontario is no longer the critical benchmark that it once was.

■ Five distinct factual dimensions

The Task Force identified five specific factual dimensions, all of which are very important for business investment in Québec.

— The first is investment in information and communication technology.

  The Task Force has shown that the central explanation for the lag in Québec - and Canada - in investment in production equipment is our under - investment in communication and information technologies. In other categories of equipment - industrial equipment, transportation equipment, etc. - the investment of Québec businesses per dollar of domestic income compares favourably to that of the United States.

— The second dimension concerns business investment in research and development (R&D).

  In this area, Québec ranks fairly well internationally. Québec's R&D tax credits have yielded positive results, although R&D investment remains concentrated in certain sectors.

— The third dimension is that of investment by foreign multinationals.

  In Québec, as elsewhere, multinational companies - whether Québec - based, Canadian or foreign - have much better performance than average in terms of productivity, salaries paid, research and technological and organizational innovation.

  Foreign multinationals are much less present in Québec than elsewhere in Canada, representing 13% of jobs here, compared to 20% or more in the other provinces. They are nevertheless the source of 40% of business investment in equipment in Québec, and close to 50% in the service sector, where they perform particularly well. Their contribution to investment is even higher here than those of foreign multinationals in the rest of Canada.

  The takeover of local businesses by foreign multinationals raises many concerns, some of them legitimate. The question is obviously a sensitive one, and it is important that rules be established and followed.

— The fourth dimension is the distribution of investment among the different industrial sectors.

  The commercial services sector is the area that has seen the fastest growth in Québec and elsewhere in the past 30 years. It employs 53% of Québec workers, compared to 43% in 1976. During this time, manufacturing has dropped to 14% of total employment, from 23% 30 years ago.

  However, our service sector - in Québec as in Ontario - lags significantly in productive capital and in productivity per worker compared to the United States. In spite of recent progress, the gap with the United States continues to widen. This is very important, because the Canadian productivity lag in the service sector is the main area in which Canada is unable to recreate American productivity at home.

  Finally, in Québec, business investment per dollar of income is at its highest in finance, culture and transportation. These sectors are followed by mining, energy and forestry and agriculture, and then by the manufacturing and professional services sectors. In terms of absolute investment, manufacturing, finance and culture are the leaders.

— The final dimension we looked at was the distribution of investment among the regions of Québec.

  Employment growth has been very strong during the past 20 years in resource regions such as in the Bas-Saint-Laurent and the Saguenay–Lac-Saint-Jean. Global demand for natural resources is strong and should remain so in the coming decades, which augurs well for regions that rely on mining, energy and even eventually forestry.

  Gaspésie lost large paper mills in Chandler and New Richmond and its mine in Murdochville, but it is in the process of recovery, particularly through the development of wind energy and seafood products.

  The outlook for Abitibi-Témiscamingue is favourable because of its mining sector.

  A few cities, such as Drummondville, Québec City and Rivière-du-Loup, have shown very solid economic performance recently.

  However, the relative sluggishness of growth in productivity in the resource regions, as well as in Metropolitan Montréal, remains a concern.

❑ Investment: what is holding us back?

To answer this third question, the Task Force identified the deterrents to business investment, addressing both the factors that reduce expected performance and those that increase the cost of investment.

— A company's return on investment depends on its level of employment and its capacity to produce more per hour of use of its human and equipment resources.

— The cost of investment reflects the cost of acquisition of capital goods, the cost and availability of loan capital and the cost of taxation.

■ How do we increase return on investment?

The income that a company derives from a new piece of equipment is determined by the *productivity* of this equipment, that is, the production that the equipment can provide per hour of operation, and by the selling price of this production.

The more abundant and skilled labour is, the higher equipment productivity is. Current labour shortages are constraining factors, but could be addressed in part through more qualified immigrants, immigrant entrepreneurs and immigrant investors.

However, pure productivity, in other words our capacity to produce more with the same amount of work and capital, is the basis of economic growth.

— At least 60% of the difference in prosperity observed across the country and at different times is explained by differences in pure productivity.

— Increases in pure productivity increase our standard of living without more work, more capital or more natural resources and, as a result, without harming the environment.

There are five ways an economy can produce more without increasing the amount of work and capital:

- by imitating the technologies developed by others;
- by getting directly involved in the process of technological and organization innovation;
- by having employees that are more skilled;
- through a business environment that encourages good decisions;
- by being able to count on a solid public infrastructure.

The Task Force analyzed each of these.

- **Technological imitation**

Technological imitation is an important avenue for increasing productivity. A large part of this progress ensues from *versatile technologies* like electricity and computer chips. Access to these technologies is necessarily through the acquisition of production equipment.

For two decades, investment in information and communications technologies has been a very important driver of the dissemination of technology and productivity growth in all industrial sectors, particularly in the service sector. In fact, Québec and Canada's productivity lag behind the U.S. is mainly associated with lower investment in information and communication technologies and slower productivity growth in the service sector.

One option for the Government of Québec is to extend the capital tax credit to investments in information and communication technologies, currently limited to manufacturing and processing equipment in forestry and manufacturing, without discriminating against the service sector.

But before taking this direction, we have to understand why Canadian and Québec companies find it less profitable to invest in information and communication technologies than American companies.

- **Involvement in the technological and organizational innovation process**

A second way for companies to improve the performance of their production process is to get directly involved in technological and organizational innovation. This means developing and acting on ideas about the types of products to create, the production process and how work is organized.

An important aspect of companies getting directly involved in developing new ideas is research and development. There is a close connection between companies' R&D and growth in productivity and per capita income.

This is not surprising. R&D turns companies into technological sponges. With business R&D investment at 1.5% of GDP, Québec ranks quite high in R&D activity internationally. Keeping the current R&D tax system is therefore a good idea. We also have to continue to encourage knowledge transfer among university and college scientific milieus, government labs and industrial research milieus.

But innovation within companies is far from a purely technological phenomenon: it is also a social phenomenon.

Recent studies have determined that organizational research is a major source of productivity growth. This includes changes to business models, management practices, how work is organized, sources and forms of financing, strategic alliances and the nature and degree of outsourcing.

All of these forms of change closely tie employees, customers and suppliers to the company's progress. In other words, investment in equipment leads to greater productivity, but productivity can also increase through many other sources than investment in equipment. The economy is the daughter of sociology and culture, not only of technology.

- **The quality of human capital**

A third key factor in business productivity is the quality of human capital.

Education is the main source of quality of human capital. Québec has made great strides in education in the past 60 years. Its educational revolution was meteoric. Its effect on the rate of employment and salary levels was enormous.

Investment in human capital must continue through continuing education and on-the-job training. The capacity for organizational innovation and productivity growth depend on it.

Several major challenges remain. We have to stop young people from dropping out of school, make acquiring basic skills an absolute priority, promote science and technology, promote the development of entrepreneurship and groom the next generation in companies, increase the number of university graduates and emphasize continuing education of employees.

- **The business environment**

The fourth driver of business productivity is the quality of the "business environment."

Essentially, the business environment must force companies to be competitive and open to the world. The most competitive economies and sectors are generally those that innovate more. If a company is a horse, competition is the crop that makes it gallop.

Competition

For business to perform, monopolies and exclusive spheres of interest cannot be allowed to exist. Of course, market regulation is required in many situations. But in many other cases, the sole effect of regulation is to offer excessive state protection to a preferred group over the competition. The consequences are twofold: higher prices for customers and less motivation to innovate.

Several recent studies have confirmed that regulation that restricts the entry of new businesses into markets has a negative effect on productivity. It was also observed that the cost of complying with regulation is much higher for small businesses than for large companies and is higher in Québec than in any other Canadian provinces.

We must continue efforts to reduce obstacles to competition in the Québec economy and to limit regulation to the necessary minimum.

Opening doors to the world

Another way to increase competition among businesses is to encourage openness to foreign markets.

Globalization has many benefits for Québec. It puts a maximum of competitive pressure on businesses and forces them to excel internationally. The Canada-U.S. Free Trade Agreement had extremely positive, verifiable effects on the volume of our exports to the United States, on the average size of our businesses, on the dissemination of technology and, as a result, on the productivity of our economy.

Globalization has not been a major factor in increasing disparities in Canada and Québec. It nevertheless hit certain groups of workers hard, in particular through mass lay-offs and the softwood lumber dispute. We have to seize the greatest benefit we can from globalization, but ensure that the process is civilized and compensate those who suffer as a result of it.

The Government of Québec must continue to facilitate interprovincial and international trade and direct investment by Québec multinationals abroad and foreign multinationals in Québec.

- **Solid public infrastructure**

Finally, a solid public infrastructure (roads, energy, public transportation, the environment, schools, hospitals, etc.) is also essential to a strong business environment.

For the past 20 years, governments have under-invested in infrastructure. They have, however, started to redress the situation, particularly in Québec, with an energy strategy and an infrastructure plan announced in 2006 and 2007.

How do we reduce the cost of investment?

While a number of factors can limit return on investment, others can increase the cost of investment and intensify the deterrent effect. The Task Force identified three sorts of costs:

- the acquisition cost of buildings;
- the cost and availability of loan capital;
- the cost of taxation.

The acquisition cost of buildings

The first type of cost to monitor is the acquisition cost of buildings and structures. We need an effective construction industry for this sort of investment to be affordable.

The industry is skilled in Québec, but there is always room for improvement. Building in Québec involves risks, as was shown in certain cases from the recent past. It is time to bring partners in the construction industry together to develop methods to reduce conflicts, shortages and schedule and budget overruns on Québec construction sites, where activity is bound to increase in the near future.

The cost and availability of loan capital

The second type of cost to watch is the cost of loan capital for investment. The Task Force looked at four factors: the availability of savings, openness to international investment, the availability of venture capital and government financial aid.

The availability of savings

While we do not save enough to finance the investment expenditures of Québec businesses, they can borrow outside of the province. But the more businesses are required to do so, the more their investments enrich foreigners rather than Quebecers.

This is why it is important for Quebecers to save. Unfortunately, our personal savings has declined in the past 25 years. So we have to step up efforts to encourage Quebecers to save, including by taxing consumption, if the tax burden is to be restructured.

At the same time, the Government of Québec must continue to limit its borrowing. By absorbing a smaller portion of national savings, it leaves more for businesses to invest in the economy.

Openness to international investment

A standard method of circumventing a shortage in national savings to finance business investment is direct foreign investment, that is, investment by businesses outside of Québec.

Only 13% of employment in Québec is under foreign control. But it has been shown clearly that multinationals - this applies also to Québec multinationals - have much better performance than the average local business in terms of productivity, salaries paid, research and technological and organizational innovation. As we pointed out, in spite of their small numbers, foreign multinationals are the source of 40% to 50% of investment in equipment among Québec businesses, including in the service sector.

Recent takeovers in Québec have raised fears, some of them legitimate. We must establish simple and transparent rules regarding takeovers of local business by foreign multinationals.

Given the performance of foreign multinationals, we must continue to welcome them to Québec. Québec has major assets for attracting direct foreign investment, including its easy access to the American market and the quality of its labour force. We must protect these assets, correct any deficiencies and develop new strengths.

This means making preserving access to the American market a major priority; working hard to develop labour, stabilizing the R&D tax system, moving up the date to eliminate the capital tax, avoiding new taxes on payroll expenditures and promoting the emergence of new, specialized or technological industrial niches.

It is not clear that Québec is effectively communicating its policies and advantages internationally. This is why the Task Force recommends studying and clarifying the functions of the many departments and agencies involved in seeking out foreign investment, and, if possible, reducing their numbers. Québec's international voice must be clear, simple, unified, competent, convincing, competitive and well coordinated.

The availability of venture capital

The third cost factor to consider is the availability of venture capital.

In 2003, the Brunet report pointed to the predominant place of the public sector in the venture capital industry in Québec, the absence of foreign capital and the difficulties regions experience. It recommended corrective action that has started to produce results. But progress has been slow and concerns have recently been raised about a shortage of funds in the start-up phase of projects.

What seems to be required is to support the Québec venture capital industry's reorganization efforts, to help identify niches of excellence in the regions (around the ACCORD project) and to carefully monitor the evolution of the availability of venture capital during the start-up phase of projects.

Government financial aid

The fourth factor to monitor in financing investment is government financial aid, the main agent of which is Investissement Québec.

This public company does great work, but the Task Force feels that it is too concentrated in the manufacturing sector (82%). This narrow sectoral focus is inscribed in the government programs that Investissement Québec is required to apply.

Without downplaying difficulties in the manufacturing sector, the Task Force believes that we have to end the anachronistic discrimination against the service sector and treat all sectors equally.

In addition to Investissement Québec, many departments and organizations are involved in aid to investment. The time is right for a careful study of the overall logic of this abundance of involvement and to clarify the objectives and functions of each body.

- **The cost of taxation**

In addition to the acquisition cost of structures and loan capital costs, the third factor that influences the cost of investing is taxation.

In Québec, past business investment is taxed primarily in two ways: corporate income tax (federal and provincial) and Québec's capital tax. If these taxes are too high, investment is less profitable and businesses will invest less. This is why we have to pay particular attention to these taxes.

Québec has chosen to have more public services than other places, so it must have higher taxes. But we must identify the least harmful ways of taxing.

To this end, the Task Force has identified three principles:

— We must tax consumption (GST, QST, specific taxes, user tariffs, etc.) rather than investment.

— We must avoid constantly changing the tax system.

— We must ensure that our corporate taxes are competitive internationally. If structural causes of our low rate of investment are difficult or impossible to eliminate, we may need to have lower corporate taxes than elsewhere.

To assess the tax burden on Québec businesses, it is helpful to calculate a synthetic rate, called the *effective tax rate on investment*, which summarizes the combined impact of taxes on the return on a new investment.

For example, if the before-tax return on an investment is 10%, an effective tax rate of 40% reduces it to 6%. This effective tax rate was 35% in Québec in 1998, it dropped to 24% in 2008, and it will drop to 19% in 2012, one year after the announced elimination of the capital tax. Québec's effective tax rate would then be around the median of OECD countries. It would be lower than tax rates in Ontario and British Columbia, but higher than tax rates in Alberta and the Atlantic Provinces.

The Task Force is convinced that Québec can and must do even more to encourage business investment.

Eliminating the capital tax immediately

The Task Force believes that Québec must eliminate its capital tax immediately. This tax is the most harmful to investment because, unlike corporate income tax, the amount paid is the same no matter what a company's financial situation. For reasons of efficiency and credibility, doing away with this tax is the first step we should take, and we should do so without delay.

Reducing corporate income tax

Québec's corporate tax is 11.4% in 2008, an increase of 2.5 points since 2006, and it will increase again to 11.9% in 2009. The federal corporate tax rate is 19.5% and will drop to 15% in 2012. The federal government has asked the provinces to reduce their rates to 10% by 2012, so that Canada can have the brand image of "the 15-10 country."

Should Québec heed the federal request? The Task Force thinks it should, because current studies agree that corporate income tax has a major negative impact on business investment.

Such a measure may raise a certain amount of reticence politically, because it is generally perceived as a gift to rich owners of companies to the detriment of the rest of society. This is both natural and misguided. When we tax corporate income, we take away money that would serve in part to raise salaries and to make investments that would increase productivity, and, again, increase salaries. Studies conducted with tens of thousands of companies indicate that almost 100% of any increase in business taxes is shouldered by employees.

Taxation in Québec must also support competition with other countries, because direct foreign investment is very sensitive to corporate income tax rates. Countries that insist on having a higher than average tax burden for businesses seriously risk being abandoned by international companies, even ultimately by local companies that are looking for greener pastures.

Finally, the Task Force believes it is much better for Québec to reduce its general corporate income tax rate to 10% as soon as possible, than to transform its current capital tax credit into a generalized investment tax credit.

This would involve transforming the capital tax credit currently offered to forestry and manufacturing companies for acquisitions of manufacturing and processing equipment into an investment tax credit that is generalized to all regions, all industrial sectors and all forms of tangible investment (including investments in information and communication technologies).

The Task Force's opposition to a generalized investment tax credit is based on three arguments.

— First, the history of the investment tax credit in the United States over the past 45 years has been astonishing. Since it came into being, it has been changed many times under the influence of lobby groups. This instability no doubt explains in large part why a link has never been identified between this credit and the level of business investment in the United States.

— Second, there are fairly solid studies that show that providers of investment goods take a large portion of the credit, hampering its effectiveness.

— Third, the tax credit applies purely to investments in tangible capital - so-called "tangible assets" - although it has been shown that a large part of increases in productivity has other sources, such as organizational change, scientific, traditional or artistic creativity, innovations in management, marketing and finance, training and on-the-job training. This is true of all sectors, but particularly of the service sector, where the productivity challenge is the greatest, if we compare the current situation in Québec and Canada with that of the United States.

A general reduction in corporate income tax, on the contrary, has the merit of applying to all sources of productivity growth that show up on the corporate balance sheet. This is why the Task Force believes that this is the best approach.

This negative view of a generalized investment tax credit obviously does not apply to a specific tax credit that target with a major economic or social objective, such as compensating regions for the costs of distance, offering one-time help to the forestry or manufacturing sector, promoting investment in protecting the environment, etc.

In these three examples, what is targeted is precisely tangible capital. A targeted investment tax credit offers flexibility. It is one among many intervention tools that governments must have to pursue particular major economic or social objectives.

❑ Investment: what do we do now?

To conclude its report, the Task Force has formulated the following 21 recommendations.

1. The Task Force recommends that the government completely eliminate the capital tax without delay.

2. The Task Force recommends that the government reduce the general corporate tax rate to 10% by 2012, rather than introduce a generalized tax credit on investment.

3. The Task Force recommends that the government stabilize the research and development tax system.

4. The Task Force recommends that the government avoid any additional increase in payroll taxes.

5. The Task Force recommends that the government put an end once and for all to the anachronistic discrimination in taxation and government programs against the service sector and treat all sectors equally.

6. The Task Force recommends that the government support the spirit of the Gagné Report by levelling the playing field for all regions while encouraging productivity through a general policy based on neutral criteria such as distance and encouraging investment.

7. The Task Force recommends that the government continue efforts already underway to reduce regulation.

8. The Task Force recommends that the government make it an absolute priority to preserve access to the American market for businesses, while continuing in its efforts to promote the mobility of workers and free trade between Québec, the rest of Canada and the rest of the world.

9. The Task Force recommends that the government recognize the remarkable contribution of Québec and foreign multinationals to investment in the province, continue to welcome foreign multinationals, but adopt clear rules about takeovers of local companies.

10. The Task Force recommends that the government review and clarify the objectives and functions of the various departments and agencies involved in seeking out foreign investment.

11. The Task Force recommends that the government subject companies more firmly to the discipline of competition.

12. The Task Force recommends that the government support restructuring efforts undertaken by the venture capital industry.

13. The Task Force recommends that the government review and clarify the objectives and functions of the various departments and agencies involved in financial aid to investment.

14. The Task Force recommends that the government encourage savings through various means, while avoiding increased income disparities.

15. The Task Force recommends that the government bring together partners in the construction industry to develop methods to reduce conflicts, shortages and schedule and cost overruns at Québec construction sites, particularly given the anticipated increase in construction activity.

16. The Task Force recommends that the government combat the phenomenon of young people dropping out of school (particularly boys) with greater conviction and that resources be made available at the high school level to help Québec catch up in the number of graduates it produces compared to the United States and Ontario.

17. The Task Force recommends that the government bring the number of university graduates to the U.S. level (32% of 25- to 44-year-olds).

18. The Task Force recommends that the government promote professional, scientific and technical training at the secondary and college level and continuous training of corporate employees, both staff and managers.

19. The Task Force recommends that the government continue to support knowledge transfer among university and college scientific milieus, government laboratories and industrial research milieus.

20. The Task Force recommends that the government offer concrete support to organizations that promote the development of entrepreneurship among young Quebecers and those that help outgoing managers groom the next generation.

21. The Task Force recommends that the government strengthen structures to receive immigrants, particularly qualified immigrants, immigrant entrepreneurs and immigrant investors.

❑ Conclusion

Québec's progress in recent decades is encouraging, but the Task Force is convinced that we must go farther without delay.

— On the one hand, faced with the challenges of Asia, demographics, public services (health, poverty, environment), time is at a premium. It is urgent that we accelerate our productivity and find the resources to face these three challenges.

— On the other hand, internationally, Québec needs to differentiate itself, in its own eyes and in the eyes of foreigners. The province is peripheral because of geography and the North American climate, but it has nonetheless achieved virtually the same productivity as central Canada. But Québec needs an additional push to achieve an American standard of living, which still exceeds ours by 30%.

We will not excel by remaining average, but by outdoing others.

MANDATE OF THE TASK FORCE

On October 30, 2007, the Minister of Finance announced the creation of the Task Force on Business Investment "to help the government identify ways to increase investment to sustain economic growth."[2]

In conferring this mandate, the government asked the Task Force to:

- present the main observations regarding business investment in Québec;
- identify the most significant levers that foster economic growth;
- submit proposals to the government on what actions and means should be taken to encourage greater business investment and thereby stimulate economic growth.

This mandate fell within an overall vision of the economic situation in Québec – a situation marked by strong economic growth, but also by a certain decline in Québec's standard of living compared to that of the major industrialized countries.

More specifically, the mandate given to the Task Force by the government was expressed as follows:

> "In recent years, Québec has experienced good economic growth despite a largely unfavourable international context characterized by the burst of the technological bubble, significant increases in the value of the Canadian dollar and in the price of hydrocarbons and, more recently, the liquidity crisis stemming from the burst of the American real estate bubble.
>
> Nevertheless, despite the strong performance of its economy, Québec's standard of living declined over the last decade in terms of its world ranking [...]
>
> This decline is not due to poor employment performance. [...] Rather, it is caused by a failure to increase work production (i.e., a failure to increase the level of "productivity").
>
> In this context, it would be desirable to see stronger business investment to sustain productivity growth in Québec. [...]
>
> Faced with increasingly fierce international competition and unfavourable demographics, Québec will find it difficult to improve, let alone maintain, its rank in the world with respect to standard of living, if it does not manage to reinvigorate private investment in Québec as a means of accelerating our growth in productivity.

[2] Task Force on Business Investment Formed – Press release issued by the Office of the Minister of Finance, the Minister for Government Services, the Minister responsible for Government Services and the Chair of the Conseil du trésor, October 30 2007.

To help it identify ways of increasing private investment, the government has created a Task Force [...]

The mandate of this Task Force will be to:

- present the main observations regarding private investment performance in Québec in recent decades, compared to the other provinces and the best-performing countries;
- identify, in the current Québec context, the most significant levers to foster economic growth (e.g. capital and workforce productivity, birth rate, immigration, taxation);
- submit proposals to the government on what actions and means should be taken to encourage, in particular, greater private investment to stimulate economic growth [...] "[3]

❑ A strategic mandate with a limited timeframe

The mandate given by the government was of the utmost strategic importance, since it involved making accurate diagnoses and from there identifying the most appropriate actions that will foster business investment, increase the standard of living and create wealth in Québec.

At the same time, the government hoped that the Task Force would quickly carry out its mandate within a short timeframe, in order to receive as quickly as possible the recommendations stemming from the Task Force's work.

[3] Conseil du trésor du Québec, C.T. 205496, October 5, 2007. In this document, the expression "Task Force on Private Investment" is used instead of "Task Force on Business Investment."

The Task Force adjusted its approach to take account of this constraint. The approach essentially took three forms:

— The Task Force members met as a group or individually with various resource persons who provided them with strategic insights on the issues and problems regarding business investment.[4]

  The members of the Task Force thus held in-depth discussions with decision-makers in the business world, union representatives, managers and executives, including foreign business executives located in Québec, representatives from organizations dedicated to economic development, former economic policy makers, and public corporation executives.

— The Task Force members also reviewed the available data and the analyses of such data with business and economic development.[5]

— Finally, the Task Force members synthesized the ideas and analyses that emerged from the work they had done on each of the specific topics covered as part of the overall study.

4 See Annex 2 for a list of the people who were consulted.

5 See Annex 2 for a list of the people who were consulted.

The Task Force was given a budget of close to $150,000 to conduct its work.

❑ Two Objectives

The Task Force members quickly decided on the two objectives they should set out to achieve in accordance with their mandate.

— The first objective, in keeping with the government's expectations, was to point out certain directions that should be followed in order to stimulate business investment.

— At the same time, the Task Force realized there was a need to educate people on the importance of creating wealth. The topic itself demanded this thrust; the mandate of the Task Force would affect all Quebecers, because it had to do with our ability to create wealth. An educational thrust was considered important seeing that not all members of society view the creation of wealth or the encouragement of business investment the same way.

  The Task Force thus devoted a good part of its efforts – including this report, which is the result of the work accomplished – in explaining certain economic realities by means of language and a format that the greatest number of people could understand. These efforts were essential: if we are to show all Quebecers the importance of the issues surrounding the creation of wealth, we must ensure first of all that everyone understands them.

❑ Principles

From the outset, the Task Force members wanted to identify a certain number of principles on which they could base their reflections. They identified five principles:

— The first principle is that prosperity is everybody's business.

  As mentioned above, efforts to create wealth must be supported by our society as a whole. By stressing the educational aspect of its mandate, the Task Force hopes to convince society of the importance of economic growth and the creation of wealth.

— The second principle is that the private sector is the engine that drives economic development. The corollary to this principle is that companies must conduct their business in a competitive environment.

  In its report, the Task Force went to great lengths to point out and qualify the links and relationships which explain the strategic nature of business investment and the crucial importance of subjecting businesses to competition to the greatest possible extent.

— The third principle is that government has a role to play in supporting economic development. Both the Québec government and the federal government have a role to play in this regard.

  The Task Force considers this principle as being complementary to the preceding one. The private sector drives economic development, but this does not mean government has no responsibility in the matter. On the contrary, government does have a role to play. In fact, the very rationale of this report has been to recommend to the Government of Québec the most appropriate initiatives and actions it should take within the context of this responsibility.

— The fourth principle is that prosperity must benefit all of Québec's regions.

  Prosperity cannot be a matter affecting just a few regions. Québec's economic growth can only be stronger if it takes full advantage of the different strengths brought to bear by all the regions.

— The fifth principle is that prosperity must benefit all Quebecers.

  This principle speaks for itself. Solidarity and protection of the most destitute form an integral part of the values held by Québec society. The Task Force considers that the creation and redistribution of wealth go hand in hand. Wealth must be allowed to accumulate, but we must also ensure that the benefits of economic growth are equally and fairly distributed.

These principles correspond to a vision of society that is shared by the vast majority of Quebecers. It was important to clearly set them before embarking on any discussion or analysis of business investment.

❑ Four questions

In order to fulfil its mandate, the Task Force used the following four questions about business investment to guide its thinking and analyses:

— Why do we want more?

— What is the current situation?

— What is holding us back?

— What do we do now?

The report of the Task Force answers these questions in turn, with a chapter dedicated to each one.

At the end of the report, there are two short annexes listing the members of the Task Force and the support team (Annex 1), as well as the names of the people and organizations that were consulted (Annex 2).

CHAPTER 1 – INVESTMENT IN QUÉBEC: WHY DO WE WANT MORE?

❑ A preliminary definition

What is business investment?

Business investment can be defined as all the expenditures that businesses incur in a given year to construct new factories, buildings and engineering structures, and to acquire new machinery and new equipment.

The objective that businesses seek to achieve through investing is to maintain and increase their ability to hire and produce. The business world is made up of public companies (Hydro-Québec, Loto-Québec, etc.) and private companies, which include local and multinational companies alike, and not-for-profit companies along with commercial enterprises.

Although in its broadest sense, business investment includes the construction of new residential buildings, the Task Force's analysis and recommendations deal only with non-residential construction.

Investment: What does it mean?

In its broadest sense, "investment" means any expenditure incurred by economic actors (individuals, families, businesses, governments) to acquire goods or services that will be of benefit not only in the year they are acquired, but also in future years.

- Examples of investing include buying a car, a house, a natural gas stove, a computer, a plastic-moulding machine, an automatic painting machine, a mobile telephone, or a Cégep or university course.
- On the other hand, buying bread, a train ticket or resin for making plastic takes place to provide an immediate advantage only; this is not investing.

In the case of a business, an investment consists in acquiring a durable production good. It is not a financial investment in the sense of an investment of savings in the form of shares or bonds.

The Task Force uses the term "investment" synonymously with the expression "fixed capital formation" used by Statistics Canada and the Institut de la statistique du Québec.

It goes without saying that business investment is not the only means for improving production capacity. Investment in human capital (education and training) and in public infrastructure (roads, public transit, water management, schools, hospitals, etc.), combined with the inexhaustible ability of human beings to design, develop and give concrete form to new ideas also plays a central role for ensuring the smooth functioning of an economy. We will talk about this later.

Still, this report will focus for the most part on business investment. With regard to energy infrastructure and other types of public infrastructure, we note that the government has been examining that topic during the past two years.[6]

The title of this first chapter is in the form of a question: Investment: Why do we want more?

We will answer this question in three stages:

— Why is building wealth desirable?

— How has Québec built up wealth until now?

— Productivity: the only way to generate wealth in the future.

[6] Ministère des Ressources naturelles et de la Faune: *L'énergie pour construire le Québec de demain* (Energy for building the Québec of tomorrow), Québec, 2006; and Conseil du trésor: *Québec Infrastructures Plan: Foundations for Success*, Québec, 2007.

1.1 Why is building wealth desirable?

Table 1 presents the overall non-residential investment situation in Québec in 2006.

TABLE 1

Total business and public sector investment in factories, non-residential buildings, engineering structures, and machinery and equipment in Québec in 2006
(in billions of dollars)

Type of investment	Businesses (private and public)	Public sector (departments and networks)	Total
Factories and buildings	3.9	2.5	6.4
Engineering structures	5.5	3.1	8.7
Machinery and equipment	16.4	2.9	19.3
TOTAL	**25.8**	**8.5**	**34.4**

Note: In the business sector, engineering structures consist mainly in physical assets as part of hydroelectric and wind projects. In the public sector, they consist mainly in investments in the road network.
Source: Estimates based on data from Statistics Canada.

We see that a total of 34.4 billion dollars was spent on these types of investment.

Since the value of all domestic production in Québec in 2006 amounted to 283 billion dollars, we can say that one of every eight dollars of all the wealth created in Québec in 2006 was spent on private and public investment in the productive equipment of the economy. This proportion has been about the same since the year 2000.

We also see from Table 1 that business investment differs from public investment in two ways.

— First, spending on business investment (25.8 billion dollars) is three times greater than spending on investment in public administration and health and education (8.5 billion dollars).

— Secondly, machinery and equipment accounted for almost two-thirds of business investment, while construction (factories, buildings and engineering structures) accounted for two-thirds of public sector investment.

The figures in Table 1 do not include business or public sector investment in research and development. This type of investment plays a very important role in furthering the economy's technological progress and enabling it to increase its production capacity. About 7.5 billion dollars were spent on R&D in Québec in 2007, made up roughly of 4.2 billion dollars by businesses and 3.3 billion dollars by the public sector.

1.1.1 Why accelerate investment in Québec?

Why do we want to accelerate business investment in Québec?

- First of all, more investment leads to more productivity.
- Secondly, more productivity creates greater wealth. Therefore, more investment creates greater wealth.

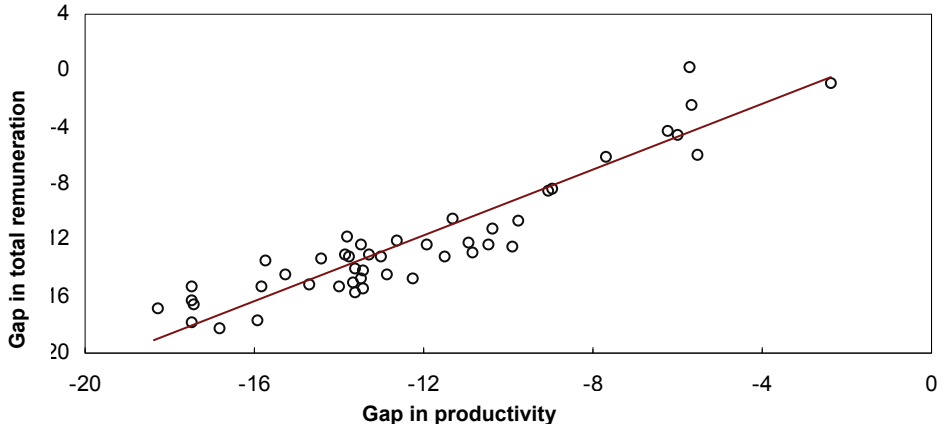
That more investment leads to more productivity is a simple question of logic. With more and better equipment, our workers are able to produce more value per hour worked, in other words, become more *productive*.

More productivity creates greater wealth due to the fact that more value per hour worked - more productivity – means higher wages for workers, a better return for shareholders and more tax dollars for governments. Graphs 1 and 2 illustrate the close correlation between average salary and productivity in Québec, Canada and 20 other OECD member countries.

First of all, Graph 1 shows the strong correlation (93%) between the gap in total remuneration (salary and benefits) and the gap in productivity separating Québec from Ontario for the 46-year period from 1961 to 2006. The straight line shows that for every 1% reduction in the gap in productivity between the two provinces there is a corresponding 1% reduction in the gap in remuneration; i.e., there is a one-to-one correspondence.

GRAPH 1

Correlations between the gap in total remuneration (salary and benefits) and the gap in productivity (internal production per person employed) separating Québec from Ontario
(annual data from 1961 to 2006)



Source: Statistics Canada.

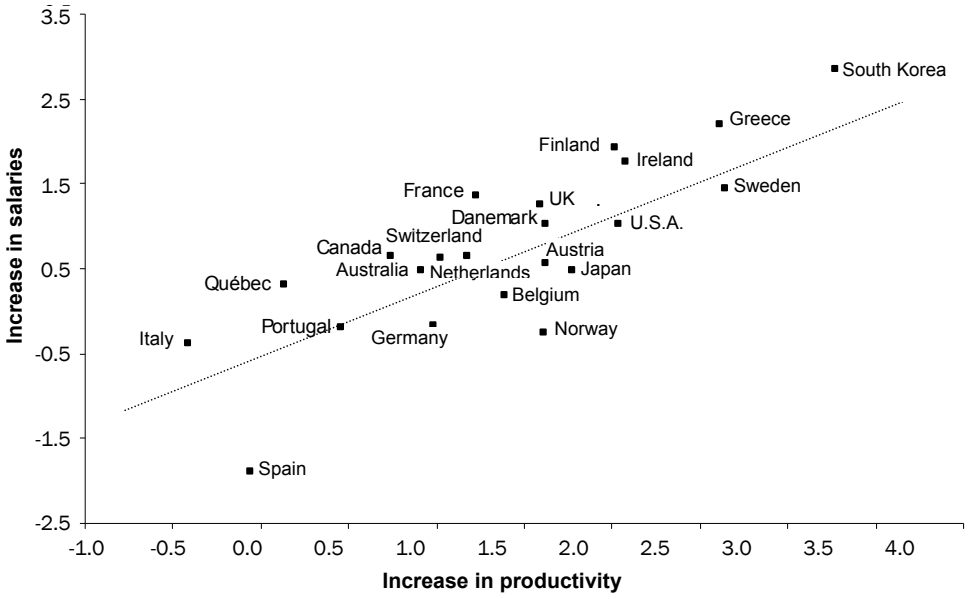
Graph 2 deals with this situation at the international level for the years 2001 to 2006.

The correlation between the annual salary increase and the increase in productivity, taking in 21 other OECD member countries, is still very high (84%) despite huge differences in national contexts.

Again, the correlation is one-to-one. The straight line shows that in these industrialized countries, each 1% increase in the annual growth rate in productivity is accompanied, on average, by an annual salary increase of more than 1%.

GRAPH 2

Correlation between annual salary increase and annual productivity increase in Québec and 21 OECD member countries between 2001 and 2006



Note: Salary increase can be expressed as an increase in purchasing power, i.e., the difference between the average annual increase in remuneration per employee in the private sector and the inflation rate. The increase in productivity is the average annual growth rate in production per employee in the whole economy.

Sources: OECD and Statistics Canada.

This result is of fundamental importance: a more productive society means higher salaries and a higher standard of living. On the other hand, artificially high salaries that are not supported by sufficient productivity lead only to unemployment. We will illustrate this later on using data specific to Québec.

1.1.2 Why create wealth in Québec?

More investment leads to greater productivity and more productivity creates greater wealth.

But is it really a good idea to create wealth? Why should we want to increase our per capita income? The main answer is so that we can increase the material comfort of the middle class and reduce poverty.

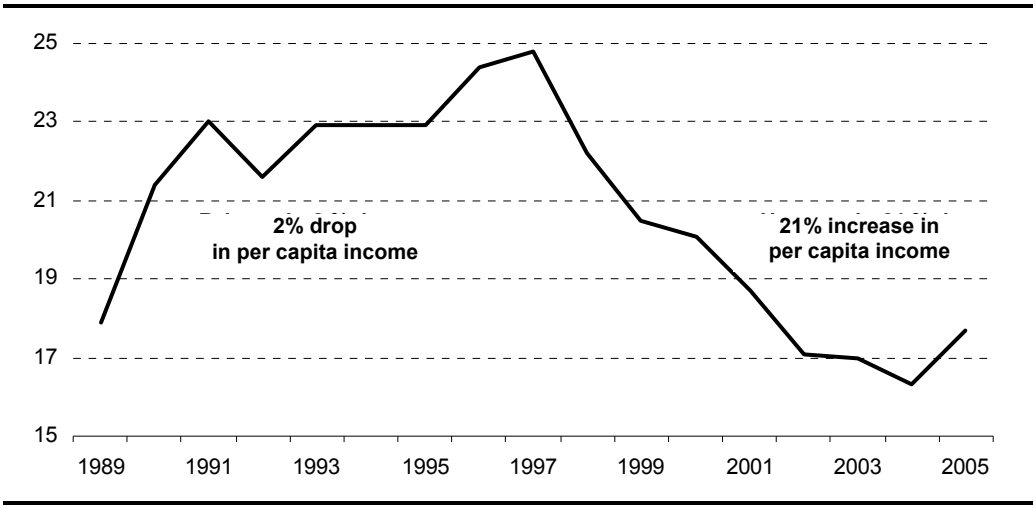
Graph 3 illustrates how poverty is affected. It shows that poverty increases when the growth rate slows down and decreases when the growth rate accelerates.

— Between 1989 and 1996, the average per capita income in Québec declined by 2%. During this period of recession followed by economic stagnation, the percentage of low-income families climbed to 25%.

— On the contrary, between 1997 and 2005, per capita income increased by 21%. The graph shows that the accelerated economic growth rate during this period brought the percentage of low-income families down to 18%.

GRAPH 3

Percentage of low-income Québec families between 1989 and 2005
(in percentage points)



Source: Statistics Canada.

It would therefore be wrong to believe that all of the poor people in Québec have remained poor despite the economic growth that took place over the last ten years, although this is the case for some of them. Poverty is a scourge that we must continue to fight against, but we will not conquer it by slowing down growth in per capita income.

❑ Does growth benefit the rich alone?

Are the rich the only ones who benefit from economic growth?

This may be true for certain periods and in certain countries, but once again, it does not necessarily have to be the case. Everything depends on the social policies that governments adopt.

Graph 4 shows that there is no necessary correlation between the average level of wealth and the degree of income inequality in Québec and 19 OECD member nations.

We note that all kinds of situations are possible.

— The United States is a rich and non-egalitarian country, but Norway is also rich while at same time much more egalitarian.

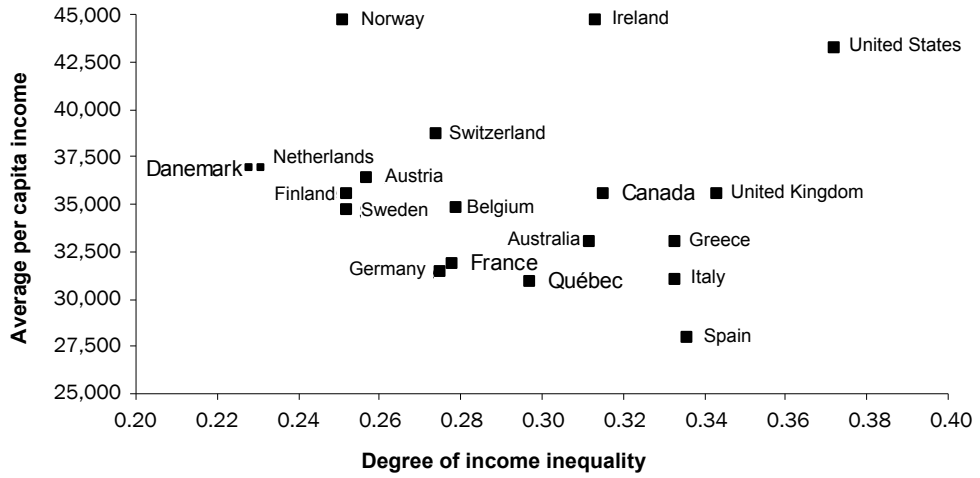
— Spain presents a modest standard of living and significant inequalities, whereas Germany has its inequalities under much better control without being much richer.

What is Québec's place in all this? As Graph 4 shows, it is not as rich as the average province, but wealth is better distributed in Québec than in the rest of Canada.[7]

[7] Canada has been slipping in terms of the global income inequality index for the last 15 years, but not as much as in the United States. Québec saw somewhat of a decline between 1995 and 1997, but less than elsewhere in Canada. Its position held steady between 1997 and 2005 (the last year for which data was available) and was still less than the Canadian average.

GRAPH 4

Absence of a correlation between degree of income inequality and average per capita income in Québec and in 19 OECD member countries



Note: The income inequality index is known as the Gini coefficient. This index, published by the Luxembourg Income Study measures the degree of disposable income inequality among inhabitants of a country after taxes and after social transfer payments. The index is equal to 0 if income distribution is perfectly egalitarian; it is equal to 1 if inequality is at its maximum. The domestic per capita income is the one published by the International Monetary Fund. It is expressed in US dollars the purchasing power of which is identical from one country to the next. A supplementary correction takes into consideration the fact that the cost of living in Québec is lower than anywhere else in Canada.

Sources: Luxembourg Income Study, International Monetary Fund and Statistics Canada.

❑ Nothing dictates how greater wealth is to be used

It is important to note that accrued wealth simply means an increase in our opportunities. It says nothing about what we will do with those opportunities.

— The first use we naturally think of consists in enhancing our individual and family comforts with regard to food, clothing, housing, transportation, recreational services, personal care, or savings for the future.

— A second possible use for greater wealth would be to enjoy more free time without lowering one's standard of living. Working fewer hours means more free time for family, friends, the community, playing sports, reading, going out, going to shows, travel, thinking, worshiping, helping others, etc.

If you work fewer hours per week, fewer weeks per year or fewer years during your active working life, you will certainly earn less money. But that is a perfectly acceptable choice, provided you freely chose to do so. Working fewer hours than you want to amounts to unemployment in disguise; working more hours than you want to amounts to forced labour.

— Seeing that a higher overall income for the working population automatically results in larger tax revenues, a third possible use for the accrued wealth could be to increase the quantity and quality of public services.

Government might increase its support for education, offer more adequate health care and social services, improve income security, increase assistance to families, repair and develop infrastructure, do more to attack poverty, provide better environmental protection, support culture more, reinforce public safety and the justice system, develop local community-based services, and so on.

Education, health care and the environment in particular will pose major challenges in the decades ahead. We'll talk about education further along.

■ Health needs

In the area of health, we must keep in mind that the portion of the Québec population which is aged 65 and older and is a major user of health services will almost double between now and 2030. During that period, the portion of the population which is aged 20 to 64 and is the main source of the working population will decline considerably. These changes will exert a great deal of pressure on Québec's finances. Health care expenses will increase and tax revenues will decrease.

In this context, any increase in economic growth will be particularly timely, because it will lead to higher tax revenues and will help pay for health care.

■ Environment

We face many serious challenges regarding the environment. They include ensuring better waste management, reducing the various forms of pollution, limiting urban congestion, reducing greenhouse gas emissions, restoring our forests, protecting our natural environment, using energy more economically, etc.

People who are naïve enough to think that we can achieve all these objectives at minimal cost are sorely mistaken. Government spending on the environment will have to increase, and applying the polluter-pays principle means we will all have to pay because we are all polluters in one way or another.

If our per capita income becomes stagnant, these public and private expenditures, on which the long-term survival of the human race literally depends, will inevitably cause our standard of living to decline. But if our per capita income continues to grow, we can cover these expenditures, which in any event must be made, while continuing to improve our standard of living.

Finally, the application of the polluter-pays principle through taxation or the use of polluting rights will direct personal behaviours and technological development towards activities that respect the environment.

It is therefore quite possible to imagine a world where economic growth can continue, at the same time ensuring less waste of our natural resources and allowing protection and restoration of the environment. In such a world, producing more does not necessarily mean destroying more of our natural spaces, creating more pollution and wasting more of our natural resources.

1.2 How has Québec built up wealth until now?

We agree that it is desirable to acquire wealth.

We must now look back in time and determine how Québec has built up wealth until the present day.

1.2.1 International comparative position of Québec's standard of living

But isn't Québec already wealthy? The answer is, yes and no.

Table 2 shows that when we place Québec among the 180 member countries of the International Monetary Fund, its average per capita income of $30,910 US ranks it 26th in the world. In this sense, Québec is rich: it is among the top 15% of the richest countries on the planet.

Nevertheless, there are several aspects which show that Québec's position is not as good as it seems.

— First of all, 25 years ago, in 1981, Québec was ranked 18th in the world with regard to per capita income. Since that time, it has fallen by eight points in that ranking.

— Secondly, Table 2 shows that in 2006, Québec's per capita income was close to that of Japan, France, Germany and Italy. But Japan has been experiencing a serious financial downturn for the last 20 years, and the economic performance in France, Germany and Italy was mediocre between 1993 and 2006, before the recent upturn.

TABLE 2

Average per capita income in Québec and the 30 wealthiest countries in the world in 2006

(in US dollars with identical purchasing power; index: United States = 100)

Country	Per capita income	Index: United States = 100
Luxemburg	81,511	188.6
Ireland	44,676	103.4
Norway	44,648	103.3
United States	43,223	100.0
Iceland	40,112	92.8
Hong Kong	38,714	89.6
Switzerland	38,706	89.5
The Netherlands	36,937	85.5
Denmark	36,920	85.4
Canada (excluding Québec)	36,849	85.3
Qatar	36,632	84.7
Austria	36,368	84.1
Finland	35,559	82.3
United Kingdom	35,486	82.1
Belgium	34,749	80.4
Sweden	34,735	80.4
United Arab Emirates	34,109	78.9
Singapore	33,471	77.4
Australia	33,037	76.4
Greece	33,004	76.4
Japan	32,530	75.3
France	31,825	73.6
Israel	31,561	73.0
Germany	31,390	72.6
Italy	31,051	71.8
Québec	30,910	71.5
Taiwan	30,687	71.0
Cyprus	29,870	69.1
Spain	27,914	64.6
New-Zealand	25,874	59.9
Brunei	25,772	59.6

Note: Income here refers to domestic income, i.e., income generated within the country. In some cases, an appreciable portion of this income (up to 15% in Ireland, for example) can leave the country in the form of interest paid to foreign lenders or profits returned to foreign multinationals. For each country, the per capita income in local currency is converted into American dollars by the IMF, not at the official exchange rate, but rather an exchange rate called "purchasing power parity." This exchange rate, which is different for every country, converts each dollar of income into a US dollar with identical purchasing power in each country. We can thus interpret the differences in per capita income in the countries in the table as real purchasing power differences. For example, the IMF's purchasing power parity exchange rate for Québec and Canada is at 80 cents US per Canadian dollar. This conversion also takes account of the difference in the cost of living between Québec and the other Canadian provinces.

Sources: International Monetary Fund and Statistics Canada.

— Thirdly, Table 2 shows 13 other European countries surpassed Québec in per capita income in 2006. Apart from the Netherlands and the United Kingdom, all have a population comparable to that of Québec's 7.7 million inhabitants – ranging from 300,000 in Iceland to 11 million in Greece. It is difficult to explain why Québec's per capita income is not on par with most of these countries.

— Fourthly, comparisons with the rest of North America do not put Québec in a good light.

  Table 2 shows that Québec's per capita income is 30% less than that of the United States. Québec also lags 16% behind the other nine provinces ("Canada excluding Québec").

Table 3 gives us a closer view of the situation of the fifty American states and the ten Canadian provinces.

It presents these 60 North American states in descending order, according to per capita income.

— We note that seven of the ten Canadian provinces, including Ontario, Québec and British Columbia are ranked in the bottom ten.

— The only provinces ranked higher on the list are the three major beneficiaries of the oil and gas boom, namely Alberta (3rd), Newfoundland (20th), and Saskatchewan (31st).

— Only two of the 50 American states – West Virginia and Mississippi – have a per capita income lower than Québec's.

TABLE 3

Per capita income in the 50 American states and the 10 Canadian provinces in 2006

(in U.S. dollars)

State or province	Per capita income	Index: U.S. = 100	State or province	Per capita income	Index: U.S. = 100
Delaware	70,724	161.0	**Saskatchewan**	**40,826**	**93.0**
Alaska	61,346	139.7	Georgia	40,533	92.3
Alberta	**60,922**	**138.7**	Kansas	40,411	92.0
Connecticut	58,244	132.6	Ohio	40,190	91.5
Wyoming	57,400	130.7	Florida	39,442	89.8
New York	52,934	120.5	Indiana	39,426	89.8
Massachusetts	52,441	119.4	Tennessee	39,417	89.8
New Jersey	51,943	118.3	New Mexico	38,837	88.4
Colorado	48,487	110.4	Vermont	38,809	88.4
Virginia	48,314	110.0	Missouri	38,659	88.0
Nevada	47,444	108.0	Utah	38,332	87.3
California	47,380	107.9	Michigan	37,739	85.9
Minnesota	47,328	107.8	Arizona	37,699	85.8
Illinois	45,948	104.6	Oklahoma	37,620	85.7
Maryland	45,909	104.5	Maine	35,543	80.9
Washington	45,894	104.5	Alabama	34,914	79.5
Hawaii	45,358	103.3	Kentucky	34,702	79.0
Texas	45,342	103.2	South Carolina	34,530	78.6
Louisiana	45,044	102.6	Montana	34,217	77.9
Newfoundland	**44,088**	**100.4**	Idaho	34,032	77.5
Nebraska	42,809	97.5	**Ontario**	**35,488**	**80.8**
New Hampshire	42,799	97.5	**British Columbia**	**34,253**	**78.0**
Rhode Island	42,768	97.4	**Manitoba**	**33,637**	**76.6**
North Carolina	42,288	96.3	Arkansas	32,672	74.4
Iowa	41,572	94.7	**Québec**	**32,455**	**73.9**
North Dakota	41,495	94.5	West Virginia	30,607	69.7
South Dakota	41,347	94.1	**New Brunswick**	**29,900**	**68.1**
Pennsylvania	41,018	93.4	Mississippi	28,938	65.9
Wisconsin	40,894	93.1	**Nova Scotia**	**28,919**	**65.8**
Oregon	40,884	93.1	**Prince Edward Island**	**27,196**	**61.9**

Note: As in Table 2, the domestic per capita income of each Canadian province (GDP per population) has been converted into US dollars using the purchasing power parity exchange rate between Canada and the United States. Here, the per capita income in Québec is a bit higher than in Table 2 ($32,455 compared to $30,910). The reason is that the purchasing power parity exchange rate used here is the one suggested by Statistics Canada, at 84 cents U.S. per Canadian dollar, which is slightly higher than the 80 cents U.S. per Canadian dollar used by the IMF in Table 2. Here, as in Table 2, differences in the cost of living among provinces were taken into consideration, but differences in cost of living among the American states were not.

Sources: U.S. Census Bureau, U.S. Department of Commerce and Statistics Canada.

Graph 5 reproduces the data from Table 3 for the ten Canadian provinces. We see that they make up three different groups:

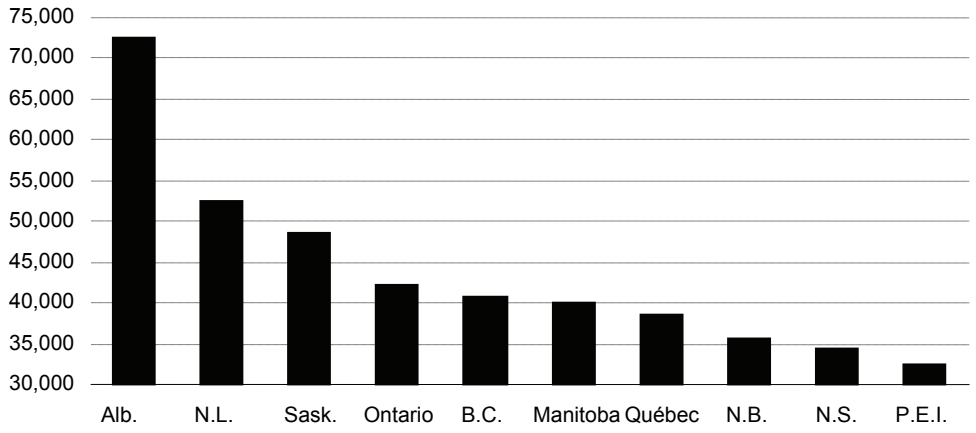
— a "resources" group with high per capita income, consisting of Alberta, Newfoundland and Saskatchewan;

— an "industrial" group with moderate per capita income, consisting of Manitoba, Ontario, British Columbia and Québec;

— and finally a "maritime" group with lower per capita income, consisting of Prince Edward Island, Nova Scotia and New Brunswick.

GRAPH 5

Domestic per capita income in the 10 Canadian provinces in 2006
(in Canadian dollars with identical purchasing power)



Note: The per capita income of each province is the relationship between its real domestic income (its GDP divided by the price index of its final domestic demand) and its total population. A supplementary correction was made to take account of the absolute price levels which differ among the provinces. In the case of Alberta, Newfoundland and Saskatchewan, an appreciable (but unknown) percentage of domestic income leaves the province in the form of profits paid to foreign multinationals.
Source: Statistics Canada.

We may draw three conclusions from Tables 2 and 3 and Graph 5.

— First, Québec is not poor. It is ranked among the 26 wealthiest nations in the world.

— Secondly, Québec has lost ground in comparison to other countries over the past 25 years, is not as wealthy as many European countries of similar size, and is not as wealthy as 48 of the 50 American states.

— Thirdly, Québec is not the only region in Canada with a modest standard of living compared to the rest of North America. The six other provinces that are not benefiting from the hydrocarbon boom fare no better or in some cases are even worse off.

  Québec's situation is thus one which is shared by other provinces. If we face a challenge in creating wealth, it does not consist in catching up with the Canadian average (something we have done or have come close to doing), but rather in bridging the gap with the standard of living in the US.

1.2.2 Comparative evolution of per capita income in Québec over the last 45 years

Graph 6 gives a general idea of Québec's efforts in creating wealth over the past 45 years. It presents the evolution of Québec's standard of living compared to the evolution of Ontario's standard of living.

Ontario has been chosen for this comparison because its economy is large, diversified. It is a neighbour of Québec and it was the economic engine of Canada throughout the twentieth century.

Graph 6 establishes a comparison by showing the relation between Québec's and Ontario's per capita incomes for each year from 1961 to 2006.[8] A jump in the line showing the actual changes from one year to the next indicates faster growth in Québec than in Ontario. A drop in the line indicates that Ontario's growth was faster.

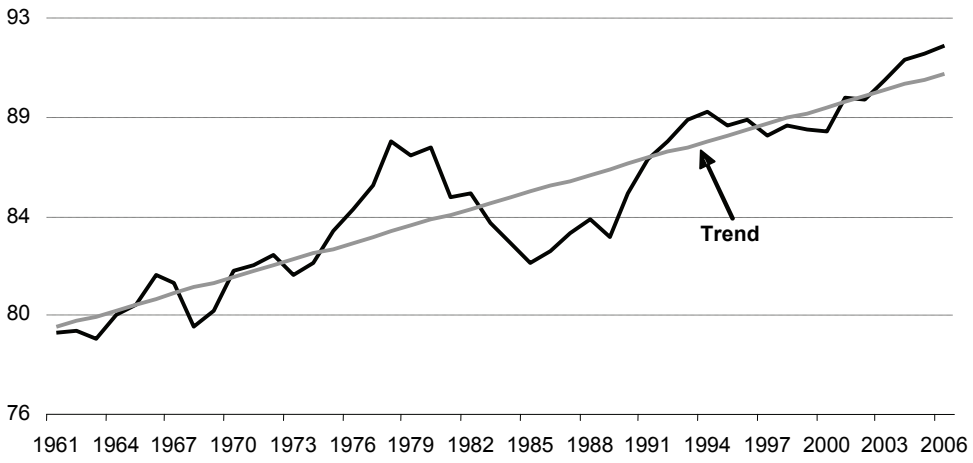
Graph 6 confirms what we already know intuitively: Québec has not been catching up steadily or constantly, but instead has had its ups and its downs. We note, for example, the growth "bubble" created by the James Bay hydroelectric project from 1975 to 1982 and the economic decline that followed.

[8] Like the IMF's data (Table 2) and North American data (Table 3 and Graph 5) the data in Graph 6 reflect not only monetary income differences, but also the differences in the cost of living between Québec and Ontario.

Above all, the straight line tracing the long-term trend shows that during the 45-year period in question, per capita income in Québec generally grew faster than in Ontario. It jumped from 79% of Ontario's in 1961 to 92% in 2006, gaining an average of 1 percentage point on Ontario every three or four years. The initial gap of 21 percentage points between the two regions has therefore narrowed to 8 points.

GRAPH 6

Evolution of Québec's per capita income as a percentage of Ontario's per capita income from 1961 to 2006
(in percentages)



Note: The per capita income of each province is the relationship between its real domestic income (its GDP divided by the price index of its final domestic demand) and its total population. A supplementary correction was made to take account of differences in the two provinces' absolute price levels.
Source: Statistics Canada.

1.2.3 Why is Québec's standard of living closing in on that of Ontario?

The past has many things to teach us regarding the future. We must understand what has brought Québec's per capita income closer and closer to Ontario's over the past few decades if we want to determine whether this trend will continue.

As with any society, Quebecers had four ways to acquire wealth:

- work in greater numbers (increase the employment rate);
- work more hours per year;
- produce more value per hour worked (become more productive);
- obtain more favourable terms in external trade (sell high and buy low).

Which of these ways helped to increase our per capita income and which ones held it back?

❑ Since 1982, Québec has seen strong job creation

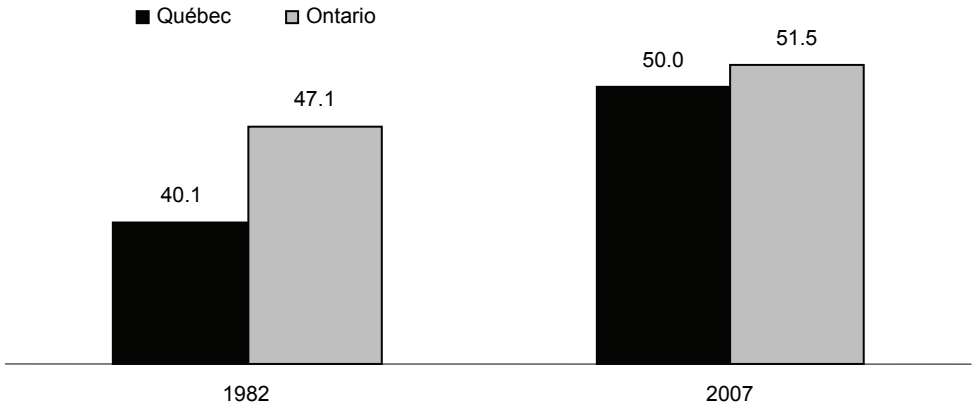
Job creation has without a doubt come first among the four means used by Québec to bring its per capita income closer to that of Ontario.

Indeed, Québec has experienced strong job creation over the past 25 years. Graph 7 illustrates this evolution.

- In 1982, only 40% of Québec's population was working, compared to 47% in Ontario.
- By 2007, this gap had virtually disappeared: 50% of Québec's population was working, compared to 51% in Ontario.

GRAPH 7

The workforce in Québec and Ontario as a percentage of total population: 1982 and 2007
(in percentages)



Note: The employment rate given here for each province is the relationship between its total workforce and its total population (not its working-age population).
Source: Statistics Canada.

How do we account for this remarkable surge in Québec's employment rate? There are, no doubt, several causes. We mention three important ones, as follows:

— the revolution in education;

— the increase in the number of women joining the workforce;

— the noticeable improvement in labour relations.

■ The revolution in education

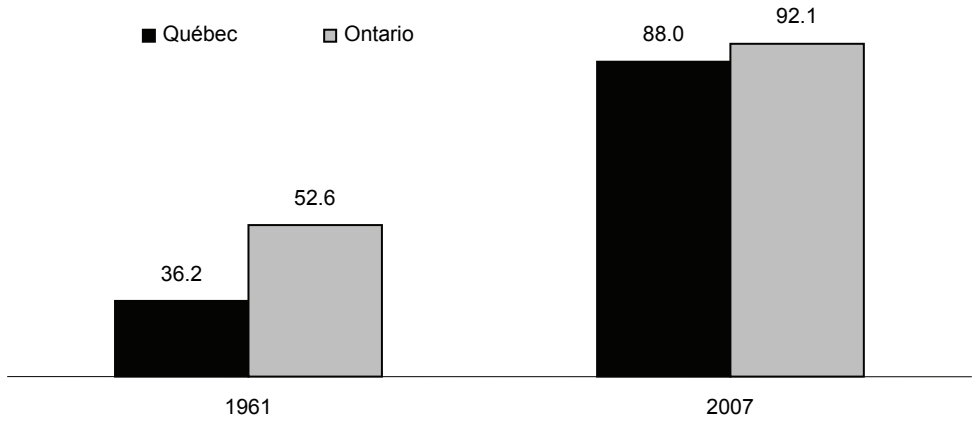
Graph 8 shows that in 1961, only 36% of young Québec adults had obtained at least a high school diploma, compared to 53% in Ontario.

The statistics for 2007 show that levels of education have improved throughout Canada. The gap between Ontario and Québec has narrowed considerably; 88% of Quebecers had obtained a high school diploma in 2007, compared to 92% of Ontarians.

The importance of this evolution stems from the fact that a society's employment performance is closely tied to level of education. The higher the education level, the better one's chances of finding work. In 2007, for example, 85% of Quebecers aged 25 to 54 with a high school diploma years were working, compared to 61% who did not have a high school diploma.

GRAPH 8

Percentage of young adults in Québec and Ontario with at least a high school diploma: 1961 and 2007
(in percentages)



Note: Statistics for 1961 cover the 25-34 age group; those for 2007 cover the 25-44 age group.
Source: Statistics Canada.

■ The increase in the number of women entering the workforce

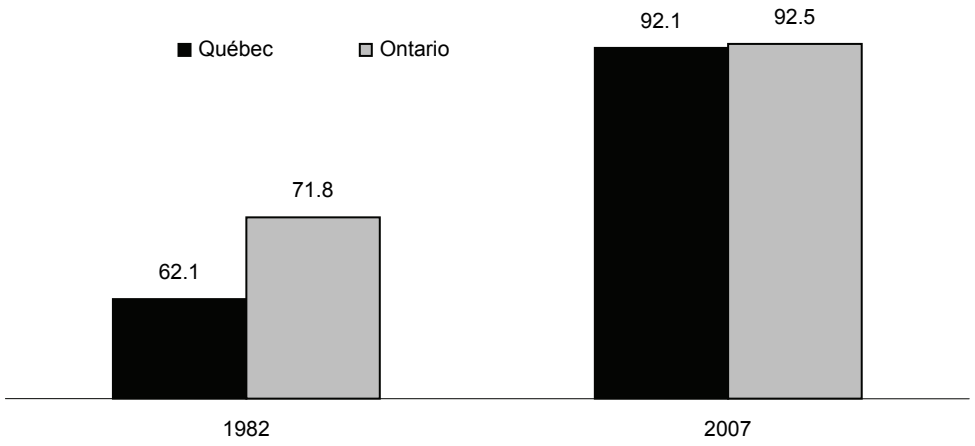
Graph 9 shows that over the last 25 years, Québec has completely caught up with Ontario regarding the number of women in the workforce.

— In 1982, there were 62 women for every 100 men in the 25-54 age group in Québec's workforce, compared to 72 in Ontario.

— In 2007, women's presence in the workforce had greatly improved in both Québec and Ontario, but the 10 point difference had disappeared: the proportion was 92 women for every 100 men in both provinces.

GRAPH 9

Number of women for every 100 men in the 25-54 age group in the workforce in Québec and Ontario: 1982 and 2007
(in percentages)



Source: Statistics Canada.

■ Improved labour relations

Labour relations are also important; 40% of Québec workers belong to a union, compared to 28% of workers in Ontario.

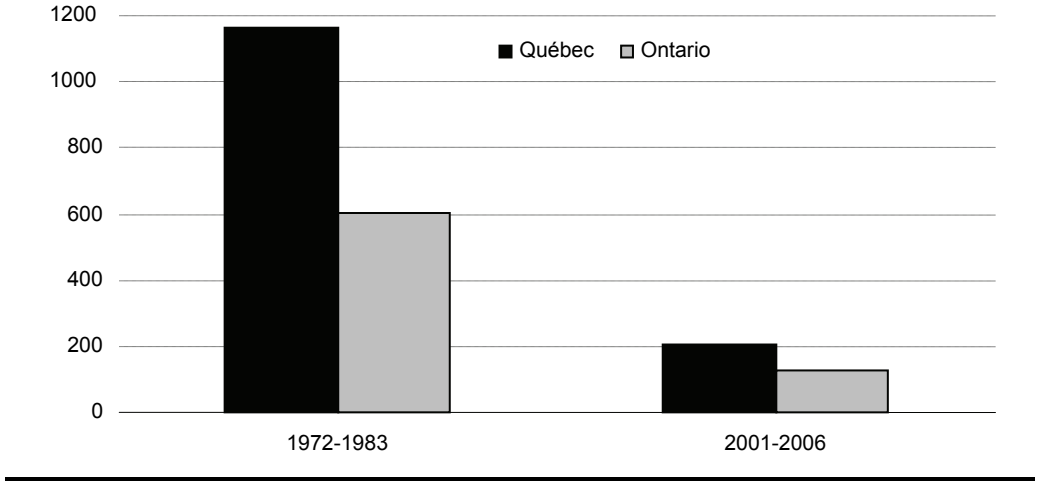
More harmonious labour relations have improved the functioning of the labour market and have supported the increase in the employment rate since the mid-1980s.

— Graph 10 shows that from 1972 to 1983, twice as many workdays per year per 1000 workers were lost due to a strike or a lockout in Québec than in Ontario (1161 workdays versus 604).

— The contrast with the period of 2001 to 2006 is startling. During that period, Québec lost 202 workdays and Ontario, 126. Labour relations have become less confrontational in the two provinces and the improvement is clearly more noticeable in Québec than in Ontario.

GRAPH 10

Average number of workdays lost per year per 1000 workers due to work stoppages in Québec and Ontario: 1972-1983 and 2001-2006
(in days)



Source: Human Resources and Social Development Canada.

❑ The number of hours worked per year has gone down significantly over the last 40 years

The second means by which a society can increase wealth is to increase the amount of work per year per person, i.e., by lengthening the normal work week, shortening vacation time or reducing the number of holidays.

But to make this kind of decision, the advantage (increased income) must be weighed against the disadvantage (loss of free time). Here, the verdict of history is clear: in the twentieth century, workers in all industrialized countries have considerably shortened their work week. They have considered that it is worthwhile to give up some income in order to have more free time.

Quebecers have not bucked this trend. During the past few decades, they made more of an effort than other Canadians to reduce their normal work week, increase the amount of vacation time and increase the number of holidays. Over the past forty years, the number of hours worked per year has dropped significantly, and early retirement has become much more popular in Québec than in Ontario and the rest of Canada.

In other words, in Québec there are fewer hours worked per week and per year and fewer years spent in the work force than in the rest of Canada. However acceptable this evolution may be in terms of our society's overall well-being, it is slowing down Québec's efforts to reach parity with Ontario with respect to per capita income. In working less, we are creating less value. The result is less money to be distributed as income.

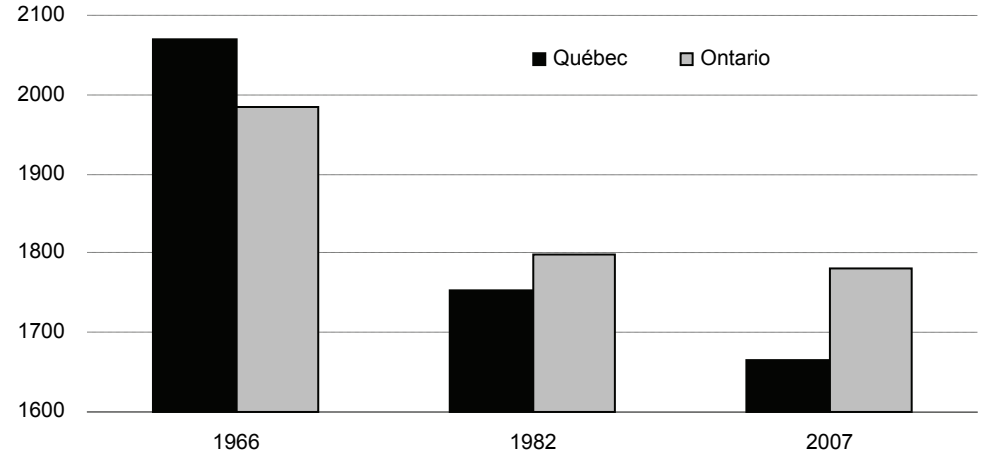
— Graph 11 shows that in 1966, Quebecers worked an average of 85 hours per year more than did their counterparts in Ontario (2070 hours vs. 1785 hours).

— But in 2007, Quebecers were working 114 hours less per year than were Ontarians (1666 hours vs. 1780 hours).

The 404 hour reduction in annual work time in Québec over a 40-year period is the equivalent of ten full work weeks per year that the average worker is no longer working.

GRAPH 11

Average number of hours worked per year per worker in Québec and Ontario: 1966, 1982 and 2007
(in hours)



Source: Statistics Canada.

Graph 12 compares the length of the work year in Québec with the work year in other countries.

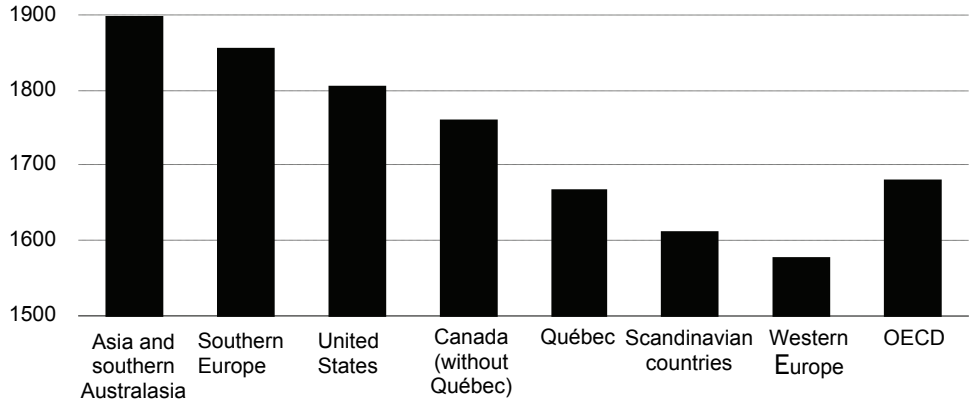
Standardized OECD data for the year 2006 indicate that Québec's work week was shorter than the median among OECD member countries.

As a general rule, Quebecers work fewer hours per year than workers in the rest of Canada, in the United States, Asia, Australasia and Southern Europe, but more hours than workers in the Scandinavian countries and Western Europe.

GRAPH 12

Average number of hours worked per year per worker in various countries and regions of the OECD in 2006

(in hours)



Note: **Asia and Australasia**: Australia, South Korea, Japan and New Zealand. **Scandinavian countries**: Denmark, Finland, Iceland, Norway and Sweden. **Western Europe**: Germany, Austria, Belgium, France, Ireland, Netherlands, United Kingdom and Switzerland. **Southern Europe**: Spain, Greece, Italy, Portugal, Turkey. Regional figures are the simple averages of hours worked in the countries that make up the region. Canadian statistics are corrected from the slight over-estimate of Statistics Canada's Labour Force Survey.

Sources: OECD and Statistics Canada.

❑ Productivity has increased more slowly in Québec during the last 25 years

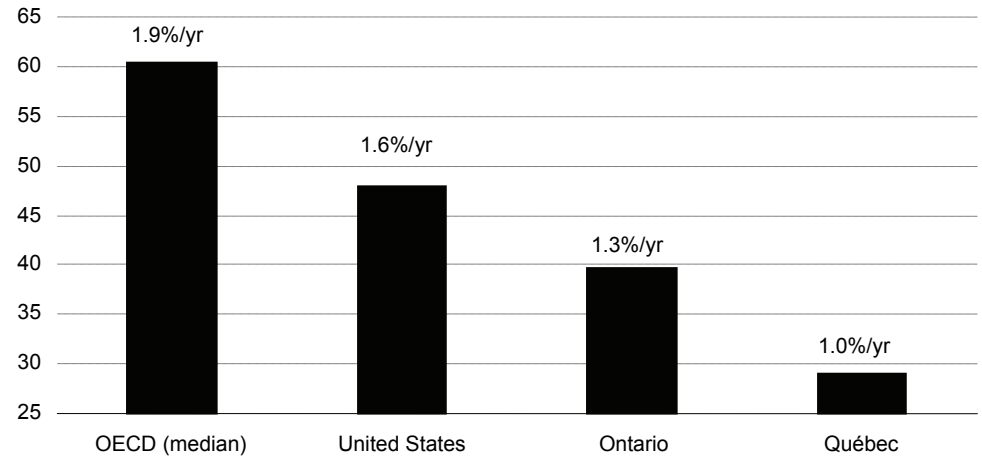
The third way for a society to build wealth is based on productivity gains, i.e., by producing more per hour worked.

— Productivity in Québec has made good progress over the past 25 years. In 2006, it was 29% higher than in 1981, for an average increase of 1.0% per year (Graph 13).

— But progress was faster elsewhere. The rate of progress reached 40% in Ontario and the rest of Canada (1.3% per year), 48% in the United States (1.6% per year) and an average of 60% in OECD member countries (1.9% per year). What we see in action here is the principle of exponential growth: a variation of just a few-tenths of 1% in the average annual growth rate can make an appreciable difference in a relatively short period of time.

GRAPH 13

Percentage of the increase in global productivity from 1981 to 2006 in OECD member countries, the United States, Ontario and Québec (domestic production per hour worked)
(in percentages)



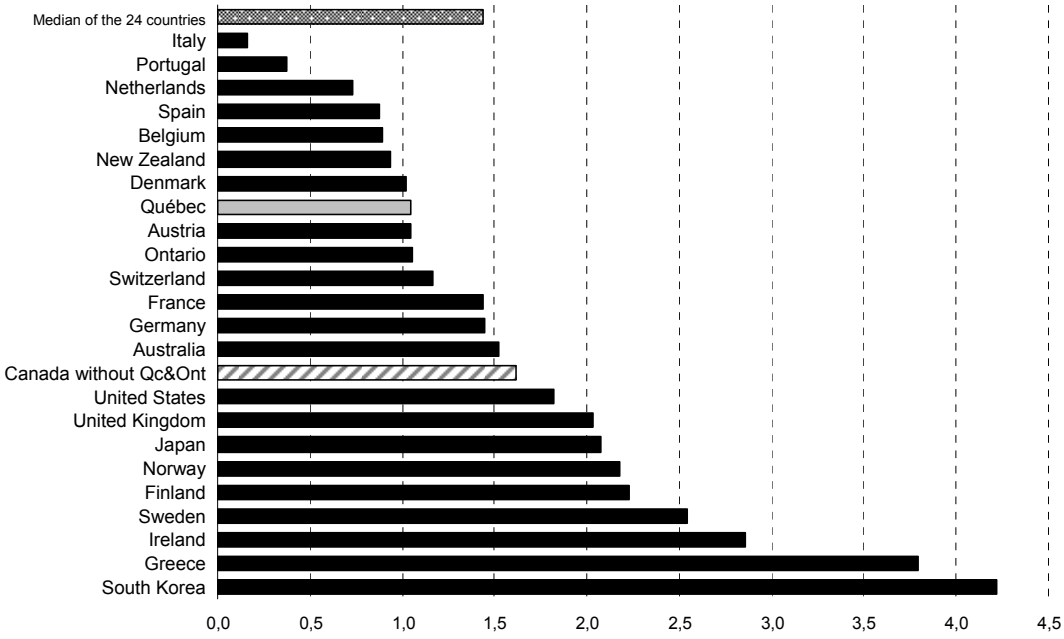
Note: Statistics on the average annual rate of productivity growth in the OECD countries (GDP in constant dollars per hour worked) were provided by the OECD and cover 19 countries for which such statistics have been available since 1980. The median value of these 19 countries is used. For the United States, Ontario and Québec, the statistics are also based on GDP in constant dollars per hour worked. The estimate on the hours worked in the United States was corrected according to information provided by Jean-Pierre Maynard in *The Comparative Level of GDP Per Capita in Canada and the United States: A Decomposition into Labour Productivity and Work Intensity Differences*, Statistics Canada, catalogue no. 15-206-XWE, March, 2007.
Sources: OECD and Statistics Canada.

Along with the drop in the number of hours worked per year per worker, the comparative sluggishness in Québec's productivity also slowed Québec down in its path towards catching up to Ontario and other industrialized regions regarding income per capita.

Graph 14 shows that the situation in Québec has barely improved in recent years.

GRAPH 14

Average annual increase in the global productivity rate from 2001 to 2006 in 22 OECD member countries (domestic production per hour worked)
(annual data, in percentages)



Sources: OECD and Statistics Canada.

- From 2001 to 2006, Québec's productivity continued to grow at an annual rate of 1.0%. This relatively slow pace kept Québec in the bottom third of the 22 OECD members represented on the graph.
- What is new is that the same slow rate of productivity has been occurring in Ontario as well (1.1% per year).
- In the other provinces, there has been something of a surge (an increase of 1.6% per year). To a large extent, this is the result of heavy investments in equipment in the resource regions of Canada.

— During this period, productivity increased at a rate of 1.8% in the US and at more than 2 % in South Korea, Japan, the United Kingdom and some smaller European countries (Greece, Ireland, Sweden, Finland and Norway).

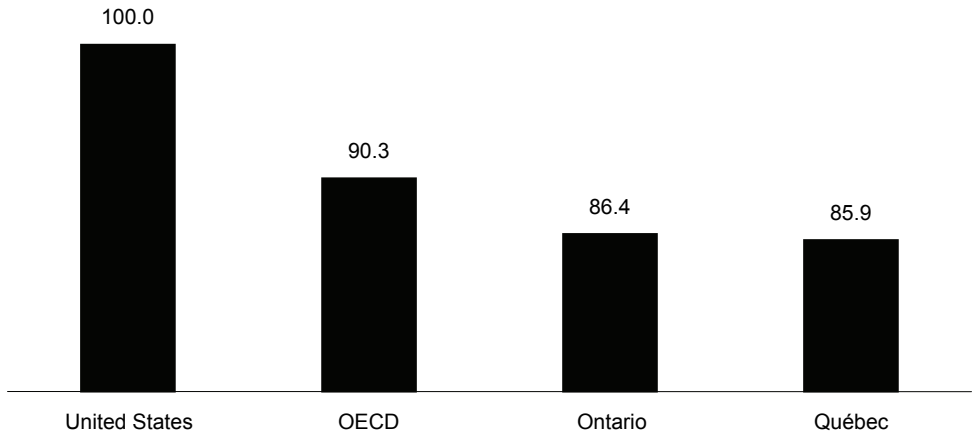
We must therefore acknowledge that Québec and Ontario are losing ground in their ability to produce wealth per hour worked, compared with the United States and the majority of the other industrialized nations.

Exactly how far have Québec and Ontario fallen behind today in productivity? Graph 15 shows that in 2006, their overall levels of productivity were more or less the same, at $40 US per hour worked. Productivity in these two provinces was about 14% behind American productivity ($46 US) and 4% behind the median productivity of the OECD member countries ($42 US).

To summarize, Québec and Ontario suffer from the same two problems: their productivity is weaker and is increasing at a rate more slowly than the US rate and the median rate of the industrialized nations.

GRAPH 15

Overall productivity level in 2006 in OECD member countries, the United States, Ontario and Québec (domestic production per hour worked)
(in US dollars with identical value; index: United States = 100)



Note: Statistics on the OECD countries (GDP in constant dollars per hour worked) were provided by the OECD. Very small countries (Iceland and Luxemburg), emerging countries (Mexico and Turkey) and countries in transition (the Czech Republic, Hungary, Poland and Slovakia) and Greece (for which there are no statistics) are not included. The median value is based on the countries involved. The statistics for Québec and Ontario were provided by Statistics Canada. In calculating productivity in the United States, Ontario and Québec, we estimated the number of hours worked using the information provided by Maynard (op. cit.).
Sources: OECD and Statistics Canada.

❑ The terms of Québec's external trade have improved somewhat

The fourth and final way of creating wealth is to benefit from improved terms of trade with other provinces and foreign countries. By improved terms of trade we mean obtaining higher prices for exports or paying lower prices for imports, or both.

Here are some examples. In recent years, Alberta's exports have benefited from a worldwide increase in the price of oil. Québec exports benefited from a higher price for electricity in the north-eastern part of the United States and a rising price for gold worldwide, and all provinces have benefited from lower import prices due to increased trade with emerging countries and a stronger Canadian dollar.

The traditional method for measuring terms of trade between a country or region and other countries is the relationship between export prices and import prices. Has the evolution of this relationship helped Québec to bridge the gap with Ontario regarding per capita income over the last 25 years?

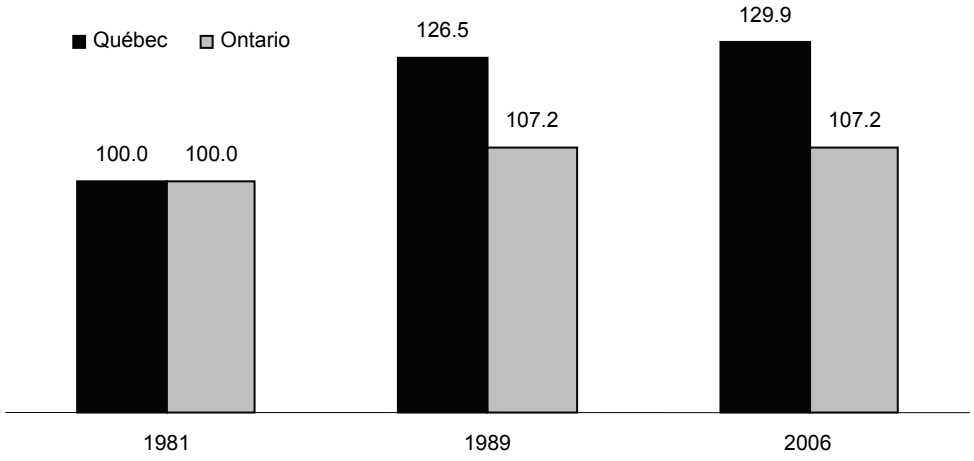
Graph 16 provides a positive response to this question in showing the evolution of terms of trade with foreign countries (mainly the United States).

— From 1981 to 2006, Québec's terms of trade improved by 30%, versus an improvement of just 7% for Ontario. Terms of trade improved everywhere, but they had a much bigger impact on the per capita income in Québec than in Ontario.

— The graph also shows that improvement in terms of trade began as early as the eighties, before the Free Trade Agreement between Canada and the United States came into effect in 1989. The prices of aluminum and pulp and paper at the time also had a positive impact for Québec.

GRAPH 16

Terms of trade between Québec and Ontario and foreign countries in 1981, 1989 and 2006
(relationship between export prices and import prices, 1981=100)



Source: Statistics Canada.

To summarize, over the past few decades, per capita income in Québec has gradually neared the per capita income in Ontario.

We may draw two conclusions.

— First, the success up until now in Québec is fully due to two factors, namely, the remarkable surge in Québec's employment rate and the improvement in its terms of trade with foreign countries.

— Secondly, the two other factors we identified, namely, the decrease in the number of hours worked per year and the comparative sluggishness of Québec's productivity have had an opposite effect by slowing down Québec's progress in bringing its per capita income up to the level in Ontario and other industrialized regions.

1.3 Productivity: The only way to generate wealth in the future

We may suggest with little risk that the future will be different from the past and that the evolution of the various factors we have discussed points to the role productivity will play in assuring our future prosperity.

1.3.1 The future will be different from the past

To understand what the future might look like, we must analyze the impact that the four elements we have just described – employment rate, terms of trade with foreign countries, amount of time worked per year and productivity. – will have on Québec's economic growth in the years to come.

❑ Demographic change will cause Québec's employment rate to fall

In the next quarter century, demographic change will inevitably cause the employment rate in Québec to fall.

Between now and 2030, the number of people in Québec aged 65 and older, mainly consisting of retirees, will almost double, whereas the number of people aged 20 to 64 years, the main pool of potential workers, will diminish.

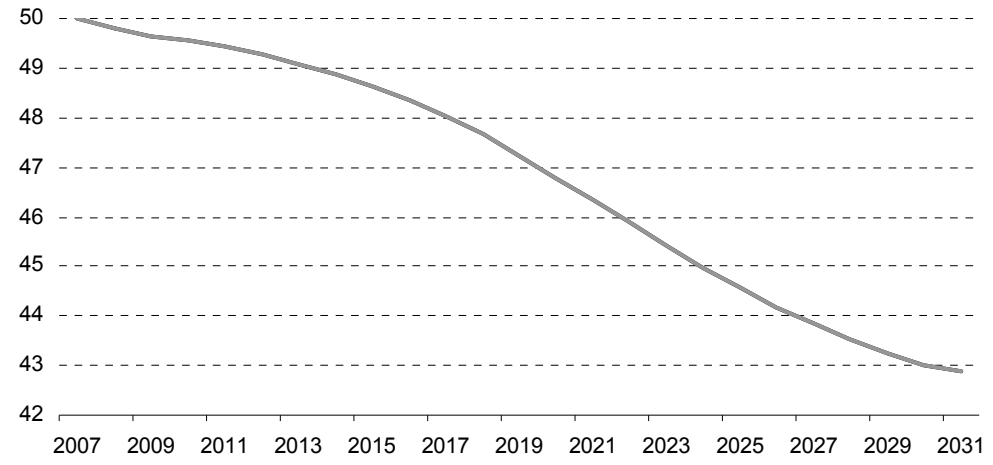
If the employment rate of people aged 20 to 64, who form the main segment of the active working population, were to remain at its current level of 79%, this massive movement of people of active working age towards the inactive age group will lead to a sharp reduction in the employment rate of the total population.

Graph 17 shows that even if we adopt the "positive" demographic growth scenario of the Institut de la statistique du Québec,[9] the overall employment rate will drop from 50% in 2007 to 43% in 2030.

[9] Birth rate: 1.65 children per woman in the 15-to-44 age group; net immigration: 35,000 people per year.

GRAPH 17

Projected employment rate of Québec's total population from 2008 to 2031, if the current employment rate of the population aged 20 to 64 were to stay the same
(in percentages)



Source: Institut de la statistique du Québec, strong population growth scenario.

Is it possible to alleviate the impact of aging on the future evolution of the employment rate of Québec's population? The answer is assuredly, yes.

Québec still has a workforce reserve – male and female - that can and should be used in various ways, namely, by continuing to increase education levels, doing more to encourage women to enter the workforce, encouraging people to stay in the workforce longer, accelerating the integration of immigrants, combating structural unemployment, and providing a better work-life balance.

But the impact of aging would still be irreversible even if Québec were enormously successful in all of these interventions. To reverse this impact, the total employment rate of Québec's active working population aged 20 to 64 would have to be raised to 92% from its current level of 79%, and such a goal is purely utopian.

The percentage of the total working population in Québec will inevitably go down in the decades to come.

This means Québec will no longer be able to count on a continual increase in its employment rate to bolster its per capita income, as it did in the past. The employment rate of the total population will diminish and will be a factor in the decline of the standard of living. With fewer hands and brains at work, there will be less production.

Moreover, since the aging of the population will be faster and more pronounced in Québec than in the rest of Canada, there is very little doubt that Québec will see a bigger decline in its employment rate than the other provinces. Therefore, after gaining ground in per capita income compared to Ontario in the past, Québec will experience demographic changes that will cause it to lose ground in the future.

❑ The number of hours worked per year will continue to drop

Can the levelling off and decline of the overall employment rate of Québec's population be compensated for by an increase in the number of hours worked per year? That is highly unlikely.

Very few Quebecers are willing to increase the number of hours they work each year, which could be done by lengthening the work week or reducing the amount of vacation time and the number of holidays. In 2007, Quebecers worked, on average, 90 hours (two weeks) less during their work year than they did ten years ago, despite the increasing shortage of labour which is creating a strong level of employment demand.

Devoting part of the annual increase in income to an increase in the amount of time away from work continues to be widespread in Québec and is due to the gains made possible by economic growth. The huge popularity of parental leave and work-life balance measures that a certain number of companies and organizations have adopted is proof of this.

There is no tangible sign that the reduction in the number of hours worked each year is a trend that will be reversed any time soon. It would be astonishing to see a lengthening of the normal work week. or a reduction in vacation time or the number of holidays in Québec. We cannot count on this type of change to help us increase our per capita income in the future.

❑ Our terms of trade will be subject to the vagaries of the international situation

Will Québec's terms of trade with foreign countries continue to improve and to be a strong and viable source of future economic growth? That is possible, but not at all certain.

To a large extent, the evolution of our terms of trade depends on the international economic situation, over which Québec has little say, whether with regard to prices (e.g., of oil and gas, electricity, timber, paper, gold, aluminium or foodstuffs), the evolution of air and rail transport, and so on. In this global lottery, Québec could win or lose its shirt, depending on the economic circumstances at a given time. What is certain is that Québec will have no control over the result.

Nor would it be wise to count on important gains in the prices of our manufacturing exports. Because of the strong and lasting increase in the value of the Canadian dollar and of fierce competition from emerging countries, future growth in Québec exports and in the prices of those exports, which are concentrated in the primary and manufacturing sectors, will be limited.

It is highly unlikely that the relocation to emerging countries of a large part of the traditional manufacturing activity from industrialized economies like that of Québec is temporary. Québec's manufacturing and export sector will no doubt remain dynamic, but it will be smaller, more specialized and more technologically advanced.

❑ Increasing our productivity is the only way to prevent our standard of living from declining

If demographic changes slow down our employment rate, if our citizens continue to want more free time, and if the terms of our trade with foreign countries depend on the unknown international situation, Québec will have no choice: its future economic progress – at least the part that it can control – will depend first and foremost on its ability to accelerate its production of value per hour worked.

In other words, either our production will accelerate and our standard of living will improve at a good pace, even more rapidly than in recent years; or our productivity will continue its current humdrum pace and our standard of living will decline and lose ground compared to other regions in North America and other industrialized countries.

Table 4 summarizes these prospects for growth over the next decade, drawing our attention to various scenarios.

— From 2000 to 2006, per capita income in Québec increased, on average, 1.2% per year. This period of expansion saw a significant decline in the amount of time worked per year and a strong employment surge (particularly for women). It is highly unlikely that this will continue.

— The four scenarios envisaged for the period 2007-2017 adopt the same hypothesis concerning "strong" demographic growth that was used previously.

  On the economic front, they assume that the number of hours worked per year will continue to decline, but at the more moderate rate of the past 25 years, namely, by 3 or 4 hours per year (0.2%).

  These scenarios also recognize that the slower growth rate of the working age population (0.3% per year) will lead to a slower employment growth rate of 0.3% per year, if the employment rates per age group remain the same. The growth rate could be somewhat faster (0.6%) if there is a sustained effort to encourage greater participation in the labour market.

  Finally, three hypotheses are considered for productivity: the status quo, i.e., growth at the same annual pace of 1% as in recent years; moderate growth of 1.5%, and faster growth of 2% per year.

The annual increase in per capita income that these four scenarios project reinforces the basic conclusion of the analysis:

— Without an increase in productivity, per capita income will soon grow twice as slowly than in recent years.

— A moderate increase in productivity (1.5% per year) could prevent such a decline in per capita income.

— Only through a strong increase in productivity (2% per year) could per capita income increase more rapidly.

TABLE 4

Annual increase in Québec's per capita income: Its evolution from 2000 to 2006 and four scenarios for 2007 to 2017

(in percentages)

Period	Demographic environment	Economic environment	Annual increase in per capita income
		Hours/employee: – 0.8%/yr	
	Pop. total: + 0.7%/yr	Employment: + 1.7%/yr	
2000-2006	Pop. 20-64: + 0.9%/yr	Productivity: + 1%/yr	+ 1.2%
	Strong scenario of the ISQ	Hours/employee: – 0.2%/yr	
	Pop. total: + 0.7%/yr	Employment: + 0.3%/yr	
2007-2017	Pop. 20-64: + 0.3%/yr	Productivity: + 1%/yr	+ 0.4%
	Strong scenario of the ISQ	Hours/employee: – 0.2%/yr	
	Pop. total: + 0.7%/yr	Employment: + 0.6%/yr	
2007-2017	Pop. 20-64: + 0.3%/yr	Productivity: + 1%/yr	+ 0.7%
	Strong scenario of the ISQ	Hours/employee: – 0.2%/yr	
	Pop. total: + 0.7%/yr	Employment: + 0.6%/yr	
2007-2017	Pop. 20-64: + 0.3%/yr	Productivity: + 1.5%/yr	+ 1.2%
	Strong scenario of the ISQ	Hours/employee: – 0.2%/yr	
	Pop. total: + 0.7%/yr	Employment: + 0.6%/yr	
2007-2017	Pop. 20-64: + 0.3%/yr	Productivity: + 2.0%/yr	+ 1.7%

Sources: Statistics Canada, Institut de la statistique du Québec and the Task Force's own calculations.

1.3.2 Accelerating productivity is no cause for needless worry

The mere mention of the word productivity often provokes anxiety despite its inherent benefits. It is helpful to examine the causes of this anxiety in order to eliminate any misunderstanding.

❑ Does more productivity mean working more hours?

Some think that being more productive means increasing the number of hours of work by lengthening the normal work week, shortening the number of vacation days or reducing the number of holidays.

There is a misunderstanding here: being more productive means doing more during each hour at work, not working more hours. The number of hours worked is a matter of choice on the part of workers and companies, but it is a choice that is distinct from productivity and one that should be made freely.

❑ Does more productivity mean working faster and harder?

Some think that "improving productivity" is an exhortation that hides a management strategy to make employees work faster and harder. It brings to mind the image of frenzied assembly-line work that the great British-born film-maker Charlie Chaplin gave us in his famous movie from 1936, *Modern Times*.

Today, we know that Chaplin got it right and that such a strategy was doomed to failure. Modern manuals on human resources clearly show that the ability of people to do more per hour depends on their motivation, education and training level, the quantity and quality of the tools they have to work with, and intelligent workplace organization that they themselves have helped to develop.[10]

Speeding things up to increase productivity simply doesn't work. Instead, it saps employees' motivation and leads to more absenteeism and staff turnover. The results are the opposite of what is being sought.[11]

---

[10] See in particular Robert Karasek and Töres Theorell: *Healthy Work: Stress, Productivity and the Reconstruction of Working Life*, Basic Books, New York, 1990.

[11] See Alain Vinet: *Travail, organisation et santé: le défi de la productivité dans le respect des personnes*, Presses de l'Université Laval, Québec, 2004.

❑ Does more productivity mean more unemployment?

We often hear people express the fear that workers will be the losers if they accept the idea of increased productivity. It is not hard to imagine that a company which can produce the same thing while paying for fewer hours of work will lay off part of its staff.

Contrary to this fear, we frequently see that a company which is successful in one area is just as successful in other areas. In other words, the most productive companies are often the ones that can hold up best against the competition, expand their market the best and hire the most staff.

One could still counter by saying that agriculture and manufacturing, two sectors whose productivity has been increasing rapidly, have also seen their employment levels decline for the past 60 years, in absolute terms for agriculture and in relative terms for manufacturing.

— In 1946, there were around 275,000 agricultural workers in Québec. Today, there are only 70,000.

— In 1946, manufacturing work accounted for 30% of all employment in Québec. Today, that percentage has dropped to 14%.

Graph 18 shows, however, that in looking at national economies, we find no observable correlation between the unemployment rate and the global level of productivity.

— Some countries with a high productivity rate, such as Norway, Ireland, the Netherlands and the United States, have the lowest unemployment rates.

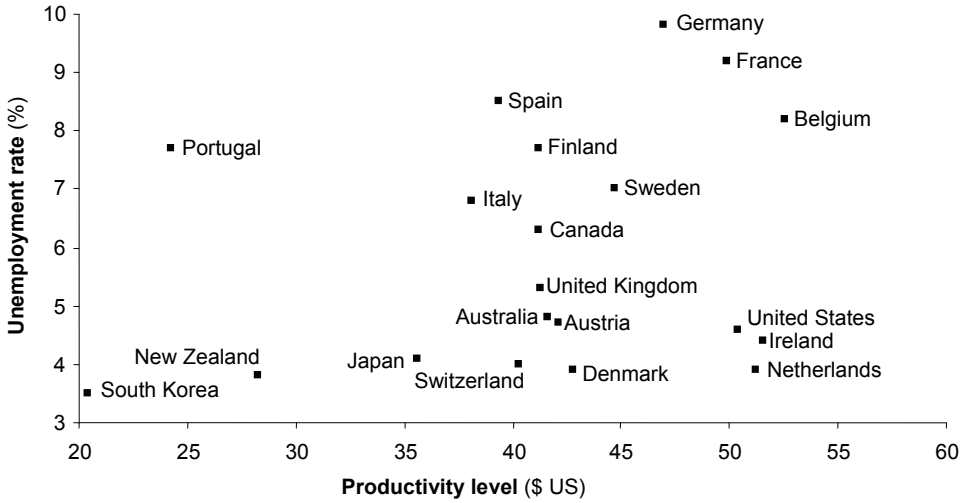
— Others with a lower productivity rate, such as Spain and Portugal, have a higher unemployment rate.

The increase in productivity during the last two centuries has required a continual shifting of activity and labour from one economic sector to another. We see this in the transition from the steam engine to the electric motor, from the horse-drawn carriage to the automobile and from the typewriter to the computer. None of these transitions took place without a few bumps along the way.

Fortunately, governments today understand better than in the past that companies and workers affected by change need assistance to make the transition, in terms of modernization for companies and training for workers. It is very inadvisable to end a process that has enabled our standard of living to increase twelve-fold over the last 140 years and has never stopped creating new jobs as older jobs disappear.

GRAPH 18

Absence of a correlation between the unemployment rate and productivity levels in 21 OECD member countries
(domestic production per hour worked, 2006 data)



Sources: OECD and Statistics Canada.

❑ Does more productivity mean greater environmental damage?

Increased productivity is seen negatively by some quarters that view productivity as a major cause of damage to the environment and of global warming.

It is true that economic growth in industrialized countries has led to major environmental damage. But economic growth by itself is not the cause of this damage. As we pointed out earlier, the real cause is our poor use of the opportunities that growth has opened up and our negligence in adequately addressing environmental problems.

That is why any future slowdown in growth will not be the solution to the problem. On the contrary, more sustained economic growth will improve our chances of winning the environmental battle. It will provide us with the financial resources we need to commit ourselves to this battle and it will make the behaviours and technology responsible for environmental damage too expensive to maintain.

We must simply use the means necessary for getting people to put resources to good use and for making polluters pay the appropriate penalties.

❑ Why do salaries struggle to keep up with the cost of living?

Questions may be raised at times about the one-to-one relationship between an increase in salaries and an increase in productivity, which we illustrated previously for the Canadian and international contexts in graphs 1 and 2.

Indeed, statistics show that accumulated salary increases since the late 1980s in Québec did not keep up with cost of living increases, with the result that purchasing power actually declined in absolute terms during this time period even though hourly productivity (real volume of production per hour worked) increased by more than 20%.

For example, according to Statistics Canada's *Survey of Employment, Payroll and Hours,* the consumer price index in Québec rose by 49% between 1988 and 2006, whereas the average weekly salary per employee increased by only 47%.

There is no error in these figures, but the following three points should be made.

— The first one is that the number of hours worked per year by Quebecers decreased by an average of 6% during this period of 18 years. The salary increase per employee thus underestimates by 6% the increase for each hour worked.

— The second one is that baby boomers, who form the most prevalent age group in the workforce, have given more and more importance to improving their insurance and pension plans as they age. For each hour worked, employee benefits have almost tripled since 1988 in Québec. Today, they add 16% to the average basic salary.

  We don't get anything for nothing: to obtain these benefits, workers had to agree to smaller basic salary increases. It follows that an indicator such as average weekly salary, which does not include employee benefits, underestimates the real improvement in working conditions that have taken place over the past twenty years.

— The third point is that employers make salary adjustments on the basis of increases in the prices of their products, not on the prices paid by consumers. This is important to know, because a high percentage of consumer goods purchased in Québec are made with imported material.

  When the price of a barrel of crude oil jumped from $20 to $90, few Québec employers had the means to compensate their employees for the jump in the cost of living that followed, because they were not the ones selling the crude oil and pocketing the profits. The ones making the profit are the countries exporting this product.

The employee-consumer is the one who more often than not loses out here; while sales prices were increasing by 41% and limiting salary increases between 1988 and 2006, consumer prices rose by 49% and put a real dent into purchasing power.

The only way of circumventing these problems is to use a salary indicator that allows one to trace the evolution of overall employee compensation (including benefits) of all employees per hour worked, and to compare it to the evolution of hourly work productivity, with compensation and productivity measured in constant dollars using a sales price index, not the consumer price index.

This is what Table 5 does, using the most comprehensive data possible, namely the data from Statistics Canada's Provincial Economic Accounts.

Table 5 traces out the paths taken by productivity and overall compensation in constant dollars from one peak in the economic cycle to the next since 1974. It shows that when all is said and done, both progressed at approximately the same pace, increasing by 41% or 42% in 32 years.

This confirms the trend by which salaries increase in a one-to-one relationship with productivity over the medium and long terms. This trend was shown previously in graphs 1 and 2 for the Canadian and international levels.

One immediate consequence is that despite the major economic fluctuations that have shaken the economy between 1974 and today, the portion of domestic income that goes to salaries has remained pretty much the same, around 75%, from one cyclical peak to the next.

TABLE 5

Productivity and overall compensation of employees per hour worked in Québec in four economic peak years (1974, 1988, 1999 and 2006)

Year	Hourly productivity (1974 index = 100)	Hourly compensation (1974 index = 100)	Compensation as a portion of domestic income (%)
1974	100	100	76
1988	116	114	74
1999	129	125	74
2006	142	141	75

Note: Selecting these years allows us to standardize the economic cycle. This is necessary because of the immense variability in productivity and compensation among the economic cycles. 1974, 1988 and 1999 are years when the economic cycle peaked and then entered a slowdown or recession. 2006 was also a peak year, which saw the unemployment rate at its lowest since 1974. Hourly productivity is the "net domestic product at factor cost" (called simply "domestic income" in the table) per hour worked and assessed in constant dollars. This traditional production concept does not include depreciation and indirect taxes, but it includes inventory profits and business grants. Overall hourly compensation is based on the total amount of salaries, wages and employee benefits paid out per hour worked (in constant dollars) and includes a part of the net income of sole proprietor businesses. Salaries and productivity are expressed in constant dollars as a ratio of the GDP implicit price index. We divide overall compensation by domestic income to determine its percentage as a portion of domestic income. Similarly, we may divide hourly compensation by hourly productivity.

Source: Calculations by the authors based on Statistics Canada's Provincial Economic Accounts.

Table 6 completes the description by presenting the evolution of the portions of domestic income that are paid to the other two major partners in the economy, namely, business shareholders (or owners) and creditors.

— Here, as with compensation, the amount of business profits represented as a percentage of domestic income has remained pretty much the same (around 16% to 18% of domestic income) from one cyclical peak to the next despite very strong cyclical variations.[12]

— The amount of investment income as a percentage of domestic income closely followed the fluctuations in interest rates from one decade to the next, ranging from 6% in 1974 to a high of 10% in 1988.

[12] The amount of profits in Québec as a percentage of domestic income reached a peak of 20% in 1964 and a low of 9% in 1982 and 1992. It is interesting to note here that the percentage of profits as a portion of domestic income is much higher in the US and in the Canadian provinces of Alberta, Saskatchewan and Newfoundland than in Québec.

TABLE 6

Proportion of employees' overall compensation, business profits and investment income as part of Québec's domestic income in four economic peak years (1974, 1988, 1999 and 2006)
(in percentages)

Year	Employee compensation	Business profits	Investment income	Total
1974	76	18	6	100
1988	74	16	10	100
1999	74	18	8	100
2006	75	17	8	100

Note: The reason for selecting these years is explained in the note accompanying Table 5. Domestic income is net domestic product at factor cost, defined in such a way as to exclude depreciation and indirect taxes, but it does include inventory profits and business grants. Overall hourly compensation is based on the total of salaries, wages and employee benefits paid out per hour worked (in constant dollars) and includes a part of the net revenue of sole proprietor businesses. Business profits are calculated before payment of taxes and dividends, but after payment of interest and the subtraction of depreciation. They include inventory profits and business grants and the other part of the net income of sole proprietor businesses. Investment income includes interest and various local types of investment income of individuals (excluding dividends from corporations and interest on the public debt) and government investment income (including profits from state-run corporations).
Source: Calculations by the authors based on Statistics Canada's Provincial Economic Accounts.

❑ The economy's doing well, so why worry?

We are aware that it is difficult to generate public enthusiasm for making productivity increase a priority objective for Québec.

In the years 1982-1985 or 1991-1994, it was easy to get the public focused on employment, when the unemployment rate was between 12% and 14%. In the same way, it is easy today to be convinced about the importance of reducing greenhouse gas emissions, seeing that the threat of global warming and climate instability have never been more palpable.

But in the case of productivity, the threat is hardly perceptible. Demonstrating the imminent danger that demographic change could represent to our prosperity appears to be merely theoretical to many people, particularly after ten years of very rapid economic growth, with employment at an all time high and the unemployment rate is at its lowest in 35 years.

The Task Force believes we must persuade the public that it is of tremendous importance to accelerate productivity in Québec. But we must keep in mind that any talk of this kind will never be convincing as long as Québec is not caught up in a crisis involving its economy or public finances.

It is unfortunate but true to say that people will not likely rush out to buy an insurance policy against water damage before their homes are flooded.

CHAPTER 2 – INVESTMENT IN QUÉBEC: WHAT IS THE CURRENT SITUATION?

In the preceding chapter, the Task Force analyzed the issues involved in business investment in Québec:

— We want more investment in Québec companies because more investment will allow us to do more with the human resources, natural resources and infrastructure that we have, even if they are in limited supply.

— By making our economy more productive, we will benefit from increased income, more free time (if that is our choice), better public services, stronger means for protecting the environment, and sustained development.

In this chapter, the Task Force will present various observations regarding business investment in Québec. These observations will serve as the basis for determining ways to accelerate business investment.

As we indicated in Chapter 1, business investment includes all expenditures made to build new structures and to acquire new production equipment.

— Structures include new buildings (factories, commercial buildings, etc.) and new civil engineering works (hydroelectric or wind energy complexes, mining complexes, pipelines, etc.).

— Production equipment includes industrial equipment, transportation equipment (trucks, automobiles, etc.), information and communication equipment (computers, software, etc.), office equipment, etc.

An investment is therefore a tangible addition of structures and production equipment to the already existing productive capital stock.

2.1 Two distinctions

First, we must make two distinctions regarding investment.

— The first distinction to make is that that business investment fulfils three functions.

— The second distinction deals specifically with production equipment, the strategic importance of which it is necessary to fully explain.

2.1.1 The three functions of investment

Business investment fulfils three functions: a replacement function, a demographic function and a capital intensification function.

❑ The replacement function

Regarding the replacement function, investment serves to replace or renovate buildings, works and production machinery and equipment which are wearing out or becoming obsolete.

The majority of business investment is dedicated to this replacement function. In particular, production equipment consisting of production machinery or equipment depreciates very quickly, at a rate of about 30% per year. Twenty years ago, the depreciation rate was 20%; this was a time before modern and high-turnover information and communications technologies (ICTs) invaded offices and production systems.

The introduction of ICTs into the area of production machinery and equipment has led to an increase in the amount of replacement investment as a portion of annual business investment.

Table 7 illustrates this situation by studying the Québec experience from 1996 to 2006.

— During this period, replacement investment accounted for 160 billion dollars (or 88%) of the total investment of 181 billion dollars made by businesses in machines and equipment.

— The remaining amount of 21 billion dollars (or 12%) accounted for the only new additions made to the existing net capital stock.

TABLE 7

Distribution of accumulated business investment in production machinery and equipment in Québec: 1996-2006
(in billions of 1997 constant dollars)

Function	Nature of function	Amount	Portion
Replacement	Replace depreciated equipment	$160	88%
Demographic	Equip new workers	$8	5%
Capital intensification	Increase equipment per worker	$13	7%
ACCUMULATED INVESTMENT		**$181**	**100%**

Source: Calculations based on Statistics Canada data.

❑ The demographic function

The second investment function is demographic in nature.

From 1996 to 2006, the number of workers in Québec businesses increased cumulatively by 15%.[13] The number of new arrivals into the workforce exceeded the number of workers who left or retired. Furthermore, the strong economy caused an appreciable decline in the unemployment rate.

Table 7 shows the consequences of this evolution in the workforce: a significant portion of the net addition to the stock of production machinery and equipment during this period (8 billion dollars out of 21 million dollar) was simply "following the demographics" or, in other words, providing new workers with equipment comparable in quality to that of their predecessors.

❑ The capital intensification function

If total investment exceeds the level allowing it to fulfil the replacement function and the demographic function, it can fulfil a third function: that of increasing the amount of productive capital that each Québec worker has compared to the previous year. Doing so entails an increase in the "capital intensity" of the economy.

[13] This figure of 15% is obtained by converting workers into "full-time equivalent units." The number of people with a job increased by 21%, but the average number of hours worked per person decreased by 5%.

Table 7 shows that 13 billion dollars of the 181 billion dollars invested by businesses in production machinery and equipment from 1996 to 2006 was used to increase the amount of capital per worker, after investments for replacing depreciated equipment and for adjusting to demographic change.

In 2006, the Québec worker had, on average, 22% more of production equipment (industrial equipment, transportation equipment, ICTs, etc.) to work with than in 1996.

Table 7 deals exclusively with investment in production machinery and equipment. It does not say anything about the evolution of investment in structures (factories, buildings and civil engineering works). In this area, we found that the capital intensity of Québec's economy declined between 1996 and 2006. In particular, Québec workers in 2006 carried out their duties in 10% fewer factories and buildings than in 1996. In short, they are better equipped, but working in less space than ten years ago.

2.1.2 Investment in equipment

We will now explain the strategic nature of investment in production equipment.

❑ The connection between investment and production per hour worked

Business investment in structures and production equipment boosts productivity in three distinct ways.

— First, if this type of investment is large enough to increase the amount of equipment per worker, as the example in Table 7 has just shown, workers can do more each hour worked. The better equipped one is, the more one can do.

— Secondly, new investments often improve the quality of the buildings in which work is carried out and the quality of the production equipment which workers use to carry out their duties.

  Whether it replaces depreciated structures or equipment, acquires first-rate tools for new workers, or adds to the amount of capital per worker, new investment often improves the quality of the structure or equipment. It constitutes the special channel through which technological innovations are introduced into businesses. It is a crucial vehicle for progress in productivity and allows more to be achieved in less time.

— Thirdly, new investments often act as “spark-plugs” that benefit productivity in different ways. They can require workers and management to obtain specific training which launches them on a new learning curve. New investments also lead companies to restructure their work organization. Finally, new ways of doing things often end up having an effect on other businesses.

  Training, learning, organizational restructuring and the introduction of new technology and practices, all associated with new investments, help to improve productivity. The most striking example in the last three decades is obviously the computer revolution triggered by the invasion of the versatile technology of the microprocessor (the microchip).

❑ The main concern: Production equipment more than structures

In continuing with our observations on business investment behaviour in Québec, we now direct our attention to both investment in structures (factories, buildings and civil engineering works) and investment in production machinery and equipment. The two are complementary. But priority must be given to production machinery and equipment.

When we consider structures, we quickly see that Québec has performed very well compared to the rest of Canada.

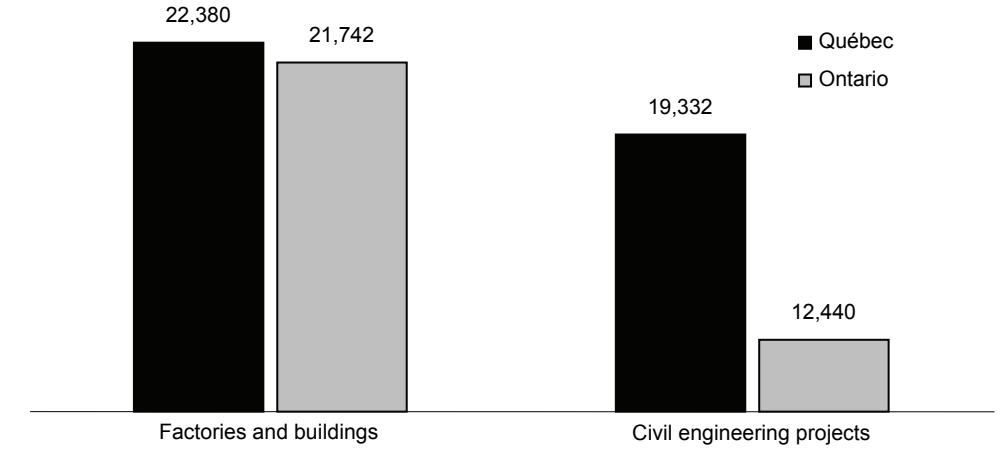
The comparison with Ontario as shown in Graph 19 is convincing enough.

— First, we note that the value of business buildings per worker (factories and buildings) is slightly higher in Québec than in Ontario.

— Secondly, Québec shows a very clear advantage over Ontario in the area of engineering works, particularly dams and hydroelectric power plants. It is well ahead of Ontario in this regard.

GRAPH 19

Value of business buildings per worker (factories and buildings) and of civil engineering works per worker (hydroelectric power plants, pipelines, etc.) in Québec and Ontario in 2006
(in millions of dollars)



Note: Workers are counted as full-time equivalent units. Full-time is defined as a 1,920 hour year (240 eight-hour days). The figures for business buildings include workers in the business sector; in the case of civil engineering works, we have used all workers.
Source: Statistics Canada.

It is also important to note that clean electricity production from hydraulic energy (and now wind) is a major economic and environmental asset for Québec.

However, it fully appears that investment in production machinery and equipment is much more important than investment in structures for allowing technological and organizational innovation and gains in productivity. There are two arguments that support this point of view.

- First, it stands to reason that better buildings improves productivity, but what really helps workers perform better is having access to better production equipment, better transportation equipment, better information and communication systems, etc., rather than to have all this production equipment housed between better walls and under a better roof.[14] Investment in buildings is essential, but in the collective effort to improve productivity, investment in equipment is at the top of the list.

- Secondly, current research on productivity shows that it is imperative to focus on investment in production equipment. A good deal of research over the past 20 years has stressed the important and direct contribution provided by investment in production equipment to productivity growth.

  - Some researchers have emphasized the favourable external spin-offs (specific training, learning, organizational restructuring, diffusion).[15]

  - Others have drawn attention to the technological progress that has been made in the very way production equipment is made.[16] This progress has been dazzling; it has led to a strong reduction in the price of production machinery and equipment, and has thus encouraged businesses to invest in new forms of production.[17]

[14] Civil engineering works are also important for Québec productivity. Our enterprises (private and public alike) need to build hydroelectric or wind energy complexes, oil and gas pipelines, rail lines, transmission lines, and so on. But these types of projects have recently been covered by various plans, strategies and studies, so we will not deal with them in our report.

[15] Bradford De Long and Lawrence Summers: "Equipment Investment and Economic Growth," *Quarterly Journal of Economics*, vol. 106, May 1991, pp. 445-502.

[16] Jeremy Greenwood, Zvi Hercowitz and Per Krusell: "Long-Run Implications of Investment-Specific Technological Change," *American Economic Review*, vol. 87, June 1997, pp. 342-362.

[17] In the US, from 1991 to 2006, the average price of production equipment dropped by 21%, whereas the overall domestic production price index rose by 38%. In Québec, the average price of production equipment dropped by 12%, whereas the overall domestic production price index rose by 26%.

— Several other researchers have identified a close and direct statistical correlation between productivity growth and investment in production equipment in all countries and during all periods. We see this in recent Canadian economic history as well.[18]

The link with investment in buildings has also been recognized, but the consensus is that investment in production equipment is the top priority.

In what follows, we will give particular attention to Québec's performance regarding investment in production equipment. We will first compare its performance to the performance in other countries and then to the performance in the other North American provinces and states.

❑ Investment in equipment: Québec does not rank well internationally

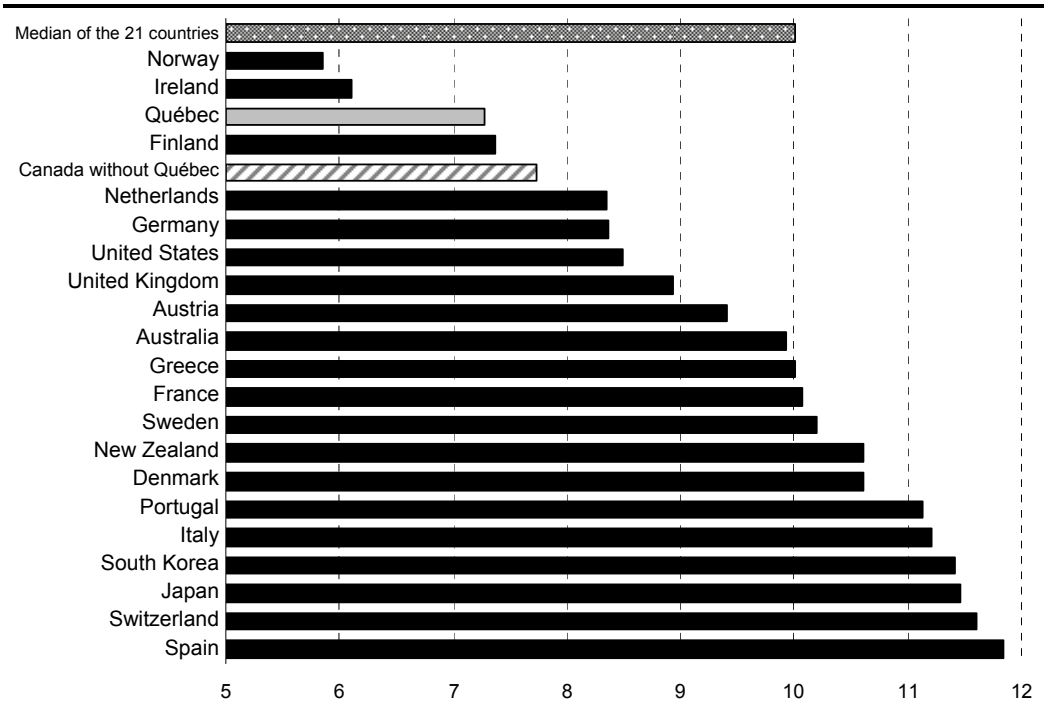
Graph 20 shows where Québec ranks among 21 OECD member countries in terms of investment in production machinery and equipment for the period 2001-2005. Investment is defined here as investment per dollar of domestic income.

[18] Xavier Sala-i-Martin: "I Just Ran Two Million Regressions," *American Economic Review*, vol. 87, May 1997, pp. 178-183; Jakob Madsen: "A Century of Economic Growth: The Social Returns to Investment in Equipment and Structures," *The Manchester School*, vol. 73, January 2005, pp. 101-122; Tahir Abdi: "Machinery and Equipment Investment and Growth: Evidence from the Canadian Manufacturing Sector," Working Paper 2004-04, Department of Finance Canada, Ottawa, 2004; Someshwar Rao, Jianmin Tang and Weimin Wang: "What Explains the Canada-U.S. TFP Gap?," Working Paper 2006-08, Industry Canada, Ottawa, 2006.

Graph 20 shows that the countries which invest the most in production equipment in proportion to their domestic income are Spain, Switzerland, Japan, South Korea, Italy and Portugal. Québec is ranked 20th. The other Canadian provinces (excluding Québec) on average do not fare much better, in being ranked 18th.

GRAPH 20

Private and public investments in production machinery and equipment as a percentage of domestic income in Québec and in 21 OECD member countries (2001-2005 average)
(in percentages)



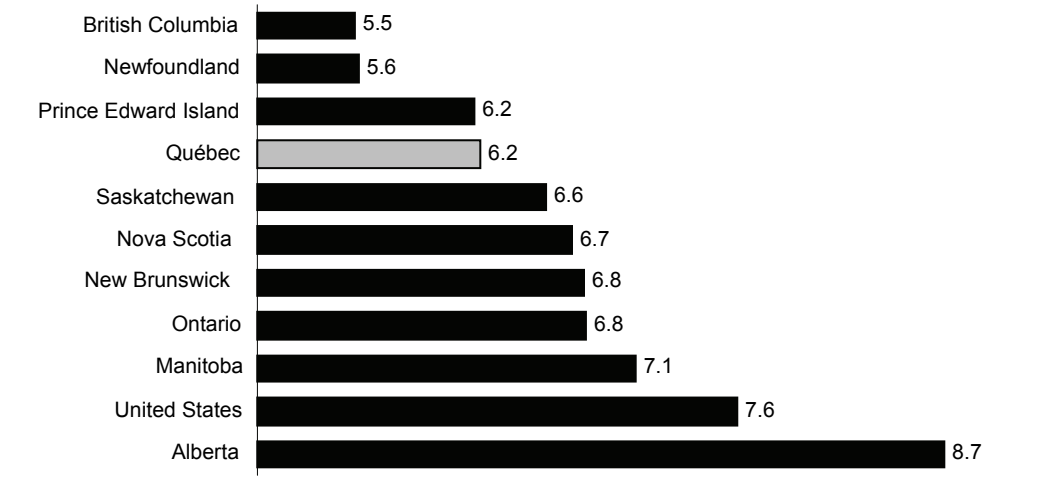
Note: The OECD does not provide public sector statistics separately; they are included in the percentages. The statistics exclude very small countries (Iceland and Luxemburg), countries in transition (the Czech Republic, Hungary, Poland and Slovakia), developing countries (Mexico and Turkey) and countries for which information is lacking (Belgium).
Sources: OECD and Statistics Canada.

Graph 21 provides a more detailed look at equipment investment in each of the ten Canadian provinces and compares their situation to that of the United States.

With more than 60% of its capital assets in the oil sector, Alberta dominates the North American scene. But no other province invests more than the United States does. After Alberta and the US comes a group of seven provinces, including Québec, where equipment investment stands between 6% and 7% as a proportion of domestic income. Québec is ranked 7th among the provinces.

GRAPH 21

Business investment in production machinery and equipment as a percentage of domestic income in the United States and the 10 Canadian provinces (2001-2006 average)
(in percentages)



Sources: Statistics Canada and the U.S. Department of Commerce.

Investment can be measured per worker as well as per dollar of domestic income. The C.D. Howe Institute recently compared investment among the Canadian provinces using this complementary measurement of intensity.[19] The results are not very different: on this scale, Québec placed 8th among the provinces for the period 2001-2006.

[19] William Robson and Robin Banerjee: *Give Canadian Workers the Tools to do theJjob! Why Canada Needs More Robust Capital Investment*, E-Brief, C.D. Howe Institute, Toronto, May 2007.

Although often used, these measurements of investment as a proportion of domestic income (according to graphs 20 and 21) or per worker (according to the calculations of the C.D. Howe Institute) create more confusion than clarity.

They make no distinctions among the three investment functions: replacement, adjustment to demographics and capital intensification. It is especially by means of this third function, i.e., by increasing capital intensity, that investment brings about an increase in productivity. In other words, production per worker is increased better by ensuring an overall increase in equipment per worker than by simply replacing depreciated stock or providing new workers with adequate equipment.

Replacement investment, investment in capital intensification and productivity growth

It cannot be denied that replacement investment often involves technological improvements and results in organizational changes and external spin-offs that cause an increase in productivity.

But it seems that a high proportion of productivity growth is associated with the part of investment that causes an increase in capital intensity.

- For example, cumulative investment in Canada from 1930 to 1939 was barely sufficient to replace structures and depreciated equipment and to equip new workers. There was no increase in capital intensity. As a result, Canadian productivity stagnated: 4.3 billion dollars per worker in 1939 compared to 4.4 billion dollars in 1929 (constant 1971 dollars).
- On the contrary, the periods 1926-1929 and 1939-1949 were marked by a great deal of investment, strong capital intensification and average productivity growth rates of 3.4% and 3.8% per year respectively. Madsen (op. cit.) provides statistical proof showing that this applies to all industrialized nations for the period 1870-1999.

This observation reveals an important consequence. It means that if one region spends more than another one on the extremely important function of capital intensification, it will increase in its productivity, even if it spends less on all three investment functions combined.

A region benefits from this growth if it is able to devote less investment than another one to the replacement function or the demographic function and thus can invest more in the capital intensification function.

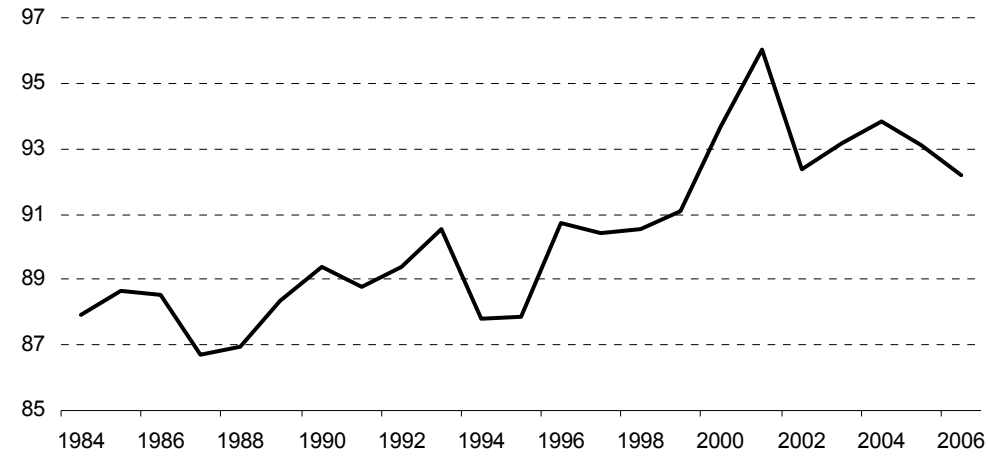
This is exactly what the situation is like in Québec regarding business investment in equipment, compared to the situation in Ontario.

— Graph 21 showed that in recent years, Québec businesses overall invested proportionally less in production equipment than did their Ontarian counterparts; this has been the case for at least the last fifty years.

— Graph 22, however, gives a more cheerful view of their performance. It traces the evolution of their accumulated stock of production equipment per worker (the amount of production equipment available to workers on average) as a percentage of the evolution in Ontario businesses. When the line rises from one year to the next it means that capital intensity is increasing more strongly in Québec than in Ontario; when the line descends, it means the opposite.

GRAPH 22

Evolution of Québec businesses' stock of production machinery and equipment per worker as a percentage of the evolution in Ontario: 1984 to 2006
(in percentages)



Note: The value of equipment and machinery stock is expressed in 1997 constant dollars. Workers in the business sector are given in full-time equivalent units, with full-time is defined as a 1920-hour year (240 eight-hour days).
Source: Statistics Canada.

The long-term trend shown in Graph 22 is clear: for the 25-year period covered, capital equipment intensity grew faster in Québec than in Ontario. The Quebec-to-Ontario ratio increased from 86% in 1983 to 92% in 2006.

In Québec, the annual equipment depreciation rate and demography have been slower than in Ontario. Therefore, equipment replacement and demographic adjustment took up less investment. This enabled Québec businesses to increase their capital equipment intensity at a higher rate than Ontario businesses did, despite lower total equipment investment than in Ontario.

We can take some comfort in knowing that Québec business investment was enough to allow its capital equipment intensity per worker grow faster than in Ontario for the last 25 years.

But three aspects of the evolution traced out in Graph 22 indicate that the battle is not over for Québec businesses.

— The first is that the gap which remains between Québec businesses and Ontario businesses is not negligible. Québec's capital equipment intensity as a proportion of that in Ontario was 92 % in 2006; Québec must still make up the remaining eight-point difference.

— The second is that Québec businesses are bridging the gap too slowly. They gained 6 points over 25 years, in going from 86% to 92%. At this rate, they will still be behind Ontario businesses in 2030.

— The third is that the last ten years have not produced very vigorous efforts in catching up. By 2006, the relative position of our businesses had barely improved by 1 point compared with 1996.

Regardless of Québec's performance in comparison to Ontario regarding production equipment per worker, Graph 21 shows that both Québec and Ontario both trail the United States in their investments.

— On average, from 2001 to 2006, American businesses invested the equivalent of 7.6% of their country's domestic income in production equipment and machinery.

— In Ontario, the corresponding percentage was 6.8%, and in Québec, it was 6.2%. This is not the time for complacency.

There can thus be no doubt that if we want to accelerate Québec's production per worker in the future, in other words, increase our productivity, we will need a bigger effort by businesses to increase their investments in production equipment.

In Chapter 3, we will try to understand what is preventing Québec businesses from investing more than they do and to identify what levers could be used to help improve the situation.

2.2 Five specific dimensions of investment

But before we get there, we need to spend the rest of this chapter discussing five specific and important dimensions of investment:

- investment in information and communication technology (ICTs);
- investment in research and development;
- foreign investment;
- distribution of investment among the various industrial sectors;
- distribution of investment among the regions of Québec.

2.2.1 The United States' superiority is based on information and communication technologies

The last 25 years have been marked by enormous progress in technological innovations such as the microcomputer, mobile telephones and the Internet. There has been a remarkable increase in investment in information and communication equipment in all countries. But progress has been slower in Canada than in the United States.

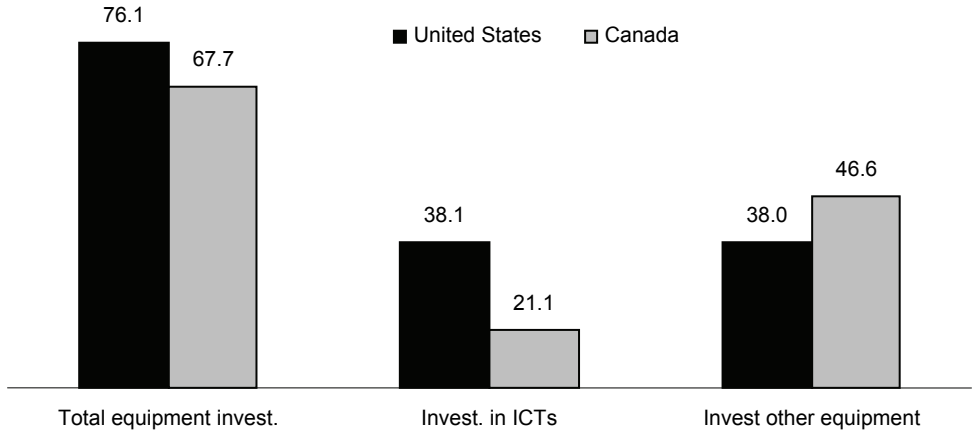
Graph 23 shows that Canada's relative weakness in investment in ICTs is the main reason for the gap between the two countries regarding investment in production equipment.

- In the United States, between 2001 and 2006, an average of $38 per $1,000 of GDP was invested in ICTs compared to $21 in Canada, or just 55% of the investment level in the US.[20]
- The graph also shows that investment in ICTs by American businesses came to exactly half of all their capital equipment expenses. On the other hand, with regard to expenditures in all areas other than ICTs, Canadian businesses led the way. They invested $47 per $1,000 of GDP, compared to $38 in the US.

[20] The figures we show here have just been confirmed by Andrew Sharpe and Jean-François Arsenault in their study entitled *The Canada-US ICT Investment Gap: An Update*, Research Report 2008-1 (Centre for the Study of Living Standards, Ottawa, 2008). The authors make the following conclusion: "…there remains a massive gap in ICT investiment between Canada and the United States, with the level of PPP – adjusted ICT investiment per worker in Canada still only 58.0 percent that of the United States in 2006."

GRAPH 23

Annual amount of business investment in information and communication equipment and other types of production equipment per $1,000 of domestic income in the United States and Canada (2001-2006 average)
(per $1000)



Note: Other production equipment includes industrial equipment, transportation equipment (trucks, automobiles, etc.), office equipment and various types of machines.
Sources: Statistics Canada and US Department of Commerce.

The bigger push by American businesses to invest in production machinery and equipment is essentially due to the vigour of their investment in ICTs.

The partial data available on investment in ICTs in Canada's provinces show that the weakness in such investment compared to the situation in the United States is a reality shared by all regions of Canada. And, like the other regions of Canada, Québec does better than the United States when it comes to expenditures on equipment other than ICTs.

2.2.2 Investment in R&D: Québec is doing quite well

Another important dimension of business investment is its overall involvement in research and development.

R&D activities have mainly to do with science and technology. They precede commercial activities – which they nourish – and strongly complement business investment expenditures.

If a great deal of attention is given to business R&D, that is because it is often associated with the development of new products or new production processes. Companies that engage in R&D thus find that it contributes directly to their productivity and indirectly to progress in other businesses in Québec, Canada or abroad that are able to copy or imitate their results.

Business R&D therefore has a social return that may exceed several times over the gains it brings to the business that initiated it. That is why R&D is an important component of a country's innovation system.

Current research generally confirms that there is a close correlation between business R&D and improvements in productivity and income per capita.[21] That is why every state gives grants and tax credits to companies for R&D.

— In 2007, through federal and provincial financial aid, Québec businesses were able to reduce every $1,000 spent on R&D to an amount ranging from $275 to $425, depending on whether they were SMEs or large companies.

— Relatively speaking, Québec is one of the most advantageous regions in North America when it comes to business R&D.

But now, we must ask what the business R&D situation is in Québec.

The answer is that business R&D in Québec is doing very well compared to other provinces and other countries.

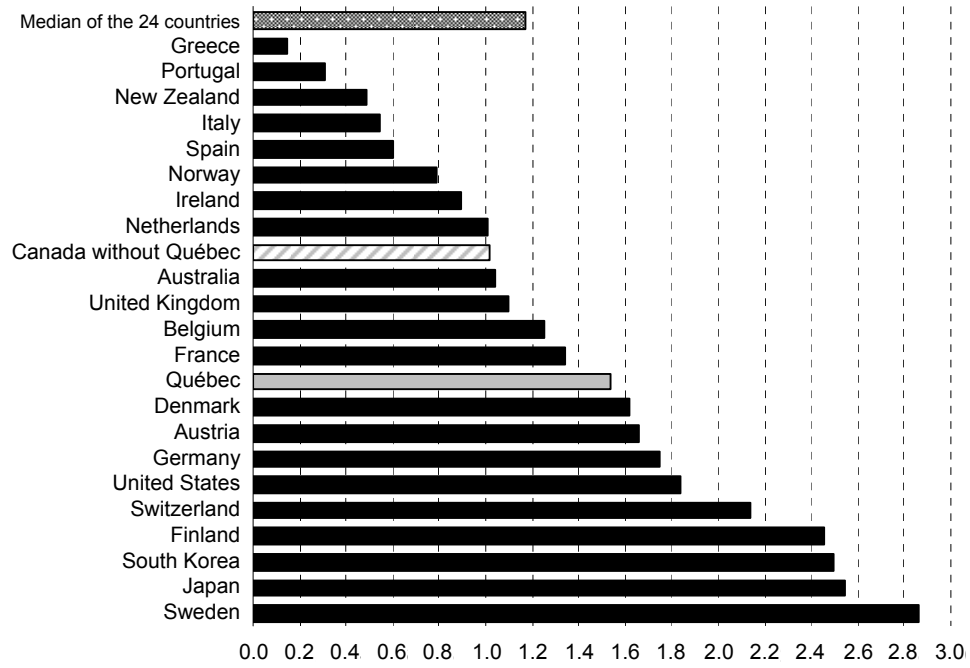
— In 2005, the total amount spent on business R&D in Québec came to 4.2 billion dollars, the equivalent of 1.5% of the province's domestic income. This was the highest rate of all Canadian provinces, which has been the case for several years.

[21] See OECD: *The Sources of Economic Growth in OECD Countries*, Paris, 2003; or the Canadian study by Ram Acharya and Serge Coulombe: "Research and Development Composition and Labour Productivity Growth in 16 OECD Countries," Working Document 2006-02, Industry Canada, 2006.

— Graph 24 shows that this performance ranks Québec 10th among 22 OECD members, for which the median rate was 1.2%.

GRAPH 24

Intramural business enterprise expenditures on research and development (BERD) as a percentage of domestic income in Québec and 22 OECD members from 2004 to 2006
(in percentages)



Note: Statistics are from 2004 for Switzerland, from 2005 for Australia, Canada and Québec, Japan, the Netherlands, New Zealand, Portugal, Spain and the UK, and from 2006 for the remaining countries.
Sources: OECD and Statistics Canada.

Table 8 shows the ten industrial sectors where this activity is particularly vigorous in Québec. Among these sectors, the aerospace and pharmaceutical industries are without a doubt the most important, with expenditures between them approaching 1 billion dollars, or 23% of the Québec total.

Business R&D spending increased considerably in Québec from 1997 to 2004. It increased by 50% in the manufacturing sector and it doubled in the service sector (i.e., an increase of 100%).

TABLE 8

Intramural research and development expenditures of the ten industrial sectors most active in R&D in Québec in 2004
(in millions of dollars)

Industrial sector	Amount ($M)	Percentage (%)
Aerospace industry	517	12
Pharmaceutical industry	459	11
Various types of scientific R&D	269	6
Medical diagnostic analyses	255	6
Engineering	253	6
Pulp and paper	241	6
Computer systems	239	6
Communication equipment	175	4
Measuring instruments	164	4
Metal processing	138	3
Total of the 10 industries	2,712	63
ALL INDUSTRIES	**4,307**	**100**

Source: Compilation of the Institut de la statistique du Québec using Statistics Canada research data

2.2.3 There are few multinationals in Québec, but they are performing very well

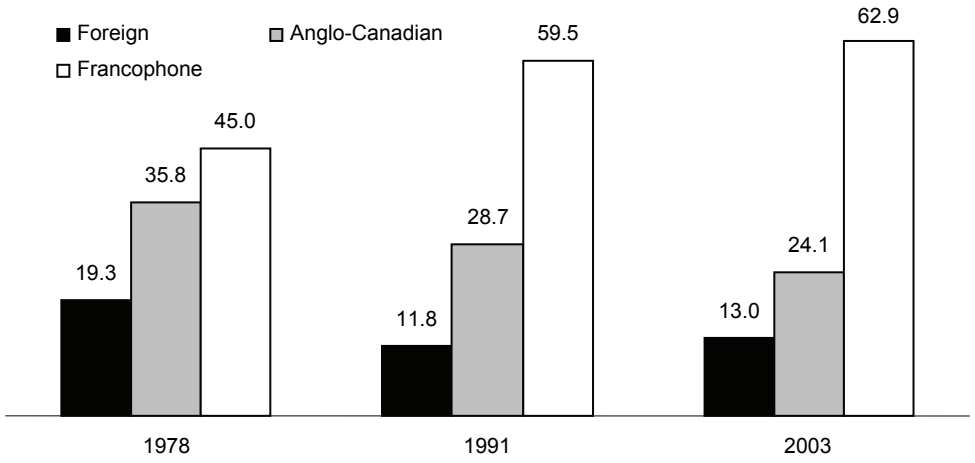
What contribution do foreign-controlled businesses in Québec make to investments in R&D, information and communication technologies, and other types of production equipment?

To answer this question, we must first assess the importance of the foreign control of businesses in Québec.

Graph 25 presents an estimate of the percentage of business employment controlled by foreign, Anglo-Canadian and Francophone companies as part of total business employment in Québec in 1978, 1991 and 2003.

GRAPH 25

Percentage of business employment controlled by foreign, Anglo-Canadian and Francophone companies as part of total business employment in Québec in 1978, 1991 and 2003
(in percentage points)



Sources: Estimates using Statistics Canada data and the study by François Vaillancourt and Luc Vaillancourt, *La propriété des employeurs au Québec en 2003 selon le groupe d'appartenance linguistique*, Conseil supérieur de la langue française, Québec, 2005.

❑ A rather modest presence

Foreign control of businesses in Québec is not extensive.

— It accounted for 19% of total employment in 1978, but dropped to 12% in 1999 and then rose slightly to 13% in 2003.

— During this time, Francophone control rose steadily from 45% in 1978 to 63% in 2003.

— Anglo-Canadian control declined throughout during this 25-year period.

Foreign companies have a stronger presence in the other Canadian provinces, Ontario and Alberta in particular, than in Québec. In 2005, 30% of business assets in Canada were under foreign control. This means that employment is controlled by foreign businesses in the other provinces at a much higher rate than the 13% in Québec.

❑ A far better than average performance

Businesses that have operations spanning several countries, what we call "multinationals," all perform at much the same level, whether they be Québec-owned (e.g., Cascades, Bombardier and Aldo), Canadian-owned (e.g., Royal Bank and Magna International) or foreign-owned (e.g., IBM, Alcoa and Best Buy).[22]

In general, their performance is better than that of local businesses which limit their activity to Canada. In the economy, just as in sport, science and culture, international competition provides a strong impetus towards dynamism.

The dynamism of multinationals in Canada has been confirmed by two decades of intensive research on the subject by Statistics Canada. Table 9 summarizes the results of this research.

— It shows that multinationals are more productive, pay better salaries, are more involved in R&D, innovative more, and are more willing to use leading-edge technology than companies whose activities are limited to Canada. This holds true even if we adjust the figures for size and length of time in the country.

— The productivity advantage that multinationals have over non-multinationals (51%) is particularly noteworthy. According to researchers at Statistics Canada, "over two-thirds of labour productivity growth during the last three decades came from foreign-controlled firms, despite the fact that they accounted for less than 40% of employment."[23]

[22] John Baldwin and Petr Hanel: *Multinationals and the Canadian Innovation Process*, Research Paper, catalogue no. 11F0019MIE2000151, Ottawa, 2000.

[23] John Baldwin and Guy Gellatly, *Global Links: Multinationals in Canada, an Overview of Research at Statistics Canada*, catalogue no. 11-622-MIE, no. 14, Ottawa, 2007, p. 36.

TABLE 9

Various advantages that Canadian and foreign multinationals have over companies that are not multinationals
(in percentages)

Performance criteria	Advantage of multinationals
Productivity (production per hour worked)	+ 51%
Average blue collar salary	+ 14%
Average white collar salary	+ 5%
Probability of engaging in R&D	+ 14%
Probability of innovating	+ 10%
Use of leading-edge technology	+ 5%

Note: These are average advantages calculated for companies of the same size and age.
Source: John Baldwin and Guy Gellatly, *Global Links: Multinationals in Canada*: *An Overview of Research at Statistics Canada*, catalogue no. 11-622-MIE2007014, Ottawa, 2007, p. 36.

To measure the contribution of foreign multinationals to investment in Québec, Table 10 divides investment in Québec business production equipment in recent years into three large economic sectors, according to type of company (foreign-owned or Canadian-owned).[24]

There are three observations to make about this table.

— First, nearly two thirds of equipment investment by all businesses, 10.4 billion dollars out of 16.6), took place in the commercial services sector (mainly in ICTs), while one-quarter took place in the manufacturing sector (3.9 billion dollars).

— Secondly, although only 13% of business employment in Québec is under foreign control, as we saw in Graph 25, foreign multinationals in Québec account for 39% of business investment in machinery and equipment in the province (6.5 billion dollars out of 16.6). That means that in the period covered, they annually invested four times more in equipment than locally-owned businesses did.

[24] Foreign multinationals invest relatively little in structures. In the business sector, they accounted for only 12% of such expenditures in Québec in 2004-2006. The reason for this is that new multinationals are not coming here very quickly. Estimates put the entry rate of foreign multinationals to be, on average, three times slower than the rate of new local business creation. See John Baldwin: *The Dynamics of Industrial Competition*, Cambridge University Press, London, 1995.

— Thirdly, equipment investment per worker by foreign multinationals is not highest in the manufacturing sector, but rather in the service sector.

TABLE 10

Distribution of Québec business investment in production machinery and equipment in three large sectors of the economy, according to business ownership (2004-2006 average)
(in billions of Canadian dollars)

Industrial sector	Foreign-controlled	Canadian-controlled	Total
Primary, energy, construction	0.03	2.3	2.3
Manufacturing	1.5	2.3	3.9
Services (commercial)	5.0	5.4	10.4
TOTAL	**6.5**	**10.1**	**16.6**

Note: The primary sector includes agriculture, fishing, forestry and mining. Energy includes electricity and natural gas production, transportation and distribution, and water management. Services include wholesale and retail trade, transportation, information and communications, the cultural industry, arts and entertainment, the financial and real estate industries, professional and technical services, administrative support, hotels and restaurants, and personal services of all types.
Source: Statistics Canada.

❑ A remarkable contribution to the service sector

Graph 26 confirms this observation.

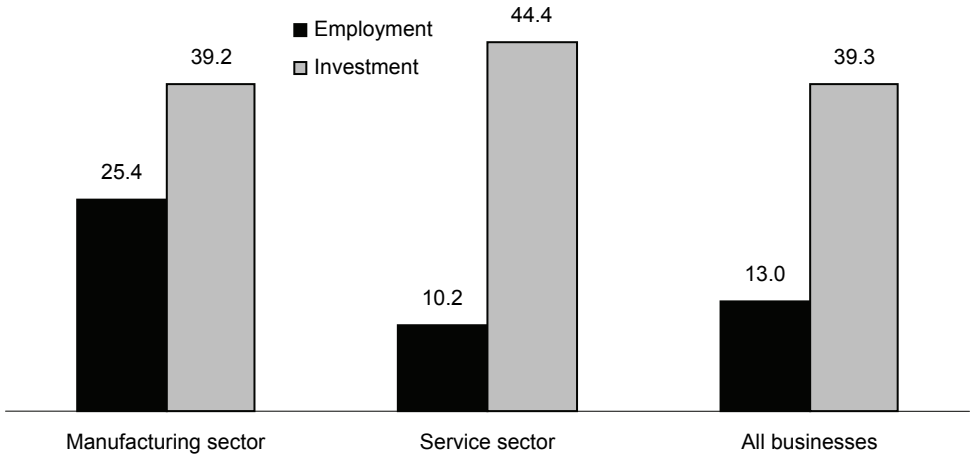
— In the manufacturing sector, multinationals accounted for 39% of equipment investment (1.5 billion dollars out of 3.9), whereas 25% of employment in that sector was under their control.

— But in the service sector, they accounted for 48% of equipment investment (5 billion dollars out of 10.4), while accounting for just 10% of the employment in this sector.

That means that per worker investment by multinationals was three times higher in the service sector than in the manufacturing sector.

GRAPH 26

Percentage of production equipment investment by foreign multinationals and percentage of employment under their control in the manufacturing sector, the service sector and in all businesses in Québec (2004-2006 average)
(in percentage)



Note: Employment under foreign control applies to the year 2003. The category for all businesses excludes health, education and public administration. The service sector also excludes them, along with agriculture, forestry, mining, construction and the manufacturing sector.
Sources: Statistics Canada; François Vaillancourt and Luc Vaillancourt, *La propriété des employeurs au Québec en 2003 selon le groupe d'appartenance linguistique*, Conseil supérieur de la langue française, Québec, 2005.

Nevertheless, investment by foreign multinationals remains absolutely vital to the manufacturing sector, particularly in light of the difficult transition that sector is going through right now.

The information that is currently available tells us that multinationals effectively responded to the call for help from this sector. From 2004 to 2006, investment in production equipment by local manufacturing businesses fell by 20%, compared to an increase of 29% in investment by foreign multinationals.

In what segment of the service sector did foreign multinationals concentrate their investment in machinery and equipment? Without a doubt, it was in the financial industry and the real estate industry, both of them large users of ICTs, which received the lion's share in 2004-2006; 78% of all equipment spending by foreign multinationals was in financial services and real estate services.

It is also worth pointing out that investment by foreign multinationals in the professional and technical services sector, the cultural industry, arts and entertainment, all knowledge-based industries, is much more widespread in Québec than in the other provinces.

❑ Investment as solid as anywhere else in Canada

Graph 27 shows that investment by foreign multinationals in Québec compares very well with the performance of foreign multinationals in other parts of Canada.

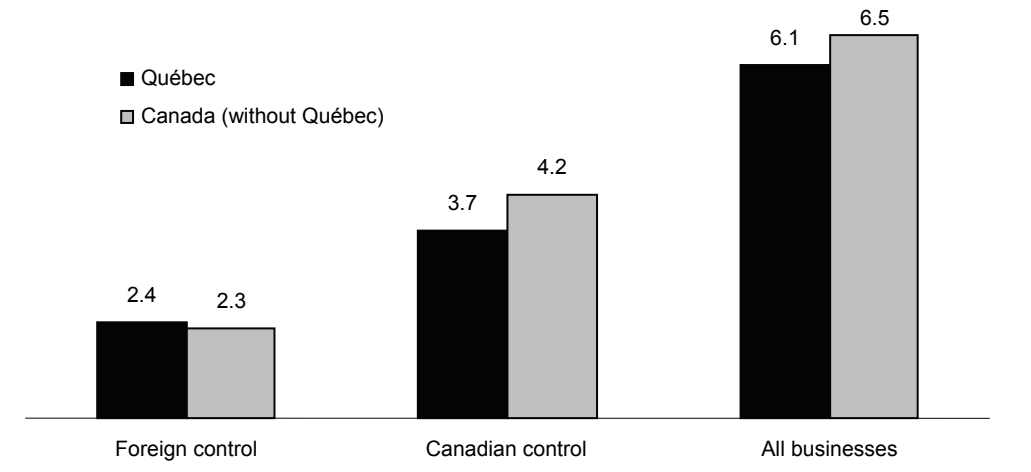
— In Québec, production equipment investment by businesses under foreign control came to 2.4% of the province's total domestic income in 2004-2006.

— The figure for foreign multinationals in the other provinces, including Alberta, was 2.3% of domestic income.

The lower level of investment by local businesses in Québec compared to that of the other provinces (3.7% of domestic income vs. 4.2%) is the reason for the weaker performance by all of Québec's businesses combined during this period (6.1% of domestic income in Québec compared to 6.5% in the rest of Canada).

GRAPH 27

Business investment in production machinery and equipment as a percentage of domestic income in Québec and the other provinces, according to business ownership (Canadian or foreign-controlled) (2004-2006 average)
(in percentages)



Source: Statistics Canada.

In short, foreign multinationals play a positive role in Québec's economy. In Québec, their weight is rather modest compared to their presence in the rest of Canada. Intensive research by Statistics Canada has confirmed that their performance in productivity, R&D and ICTs is, like that of multinationals under Québec or Canadian control, superior to the performance of local businesses with operations only in Canada.

In recent years, the pace of per worker investment in production equipment by foreign multinationals operating in Québec has clearly exceeded that of local businesses and it compares favourably with the pace of foreign multinationals in the rest of Canada.

Furthermore, this strong performance in per worker investment by multinationals was more marked in the service sector, particularly in the financial industry, real estate, the cultural industry and the knowledge economy, than in the manufacturing sector.

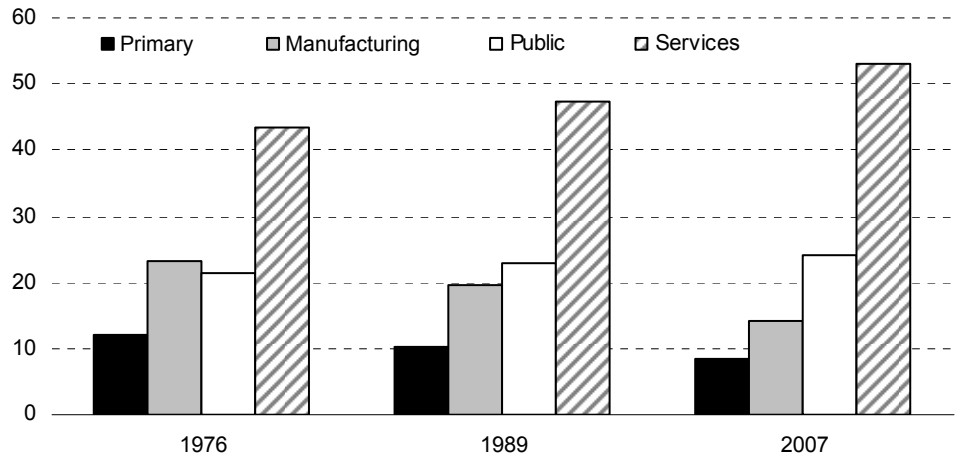
2.2.4 The service sector is dominant, but must accelerate its level of investment

Apart from the question of foreign control, what does the distribution of business investment among the industrial sectors tell us?

Graph 28 presents the evolution of the four major sectors' share of total employment in Québec since 1976. These sectors are the primary sector, the manufacturing sector, the service sector and the public sector. Snapshots were taken of these sectors in three different years of good economic growth: 1976, 1989 and 2007.

GRAPH 28

Distribution of employment in the four major industrial sectors in Québec in 1976, 1989 and 2007
(in percentages)



Note: The primary sector includes energy, construction, agriculture, fishing, forestry and mining. The public sector includes education, health, and public administration. The service sector includes only commercial services; it excludes public services.
Source: Statistics Canada.

❑ A growing service sector over the past 30 years

We have seen that the primary and manufacturing sectors have experienced a decrease in their share of total employment over the past 30 years.

— The share of the primary sector, defined here to include agriculture, fishing, forestry, mining, energy and construction, dropped from 12% to 8.5% of the total, particularly due to employment decreases in agriculture and forestry.

— The share of the manufacturing sector, which is going through a rough time right now, fell to 14% of total employment in 2007, versus 23% in 1976.

  But the employment drop in the manufacturing sector is not a new phenomenon. We have seen such decreases as part of an overriding trend in Québec, Canada, the United States and Europe since the end of the Second World War, with recovery occurring from time to time, as in 1992-2002, followed in a more less synchronized way by relapses, such as the one which began in 2002. This trend has hit the manufacture of traditional consumer goods (leather, textiles, furniture, etc.) harder than the manufacture of investment goods (metals, machinery, electronic products, transportation equipment, etc.).

— The public sector's share, which includes public administration, education and health, increased by two percentage points over the past 30 years and today stands at 24% of total employment.

— The commercial services sector created more than 70% of the jobs in Québec during this period. Its employment share increased sharply, going from 43% of total employment in 1976 to 53% in 2007. While total employment in Québec increased by 50% in 30 years, employment in the service sector increased by 85%.

  This too is an important trend that is affecting Québec along with other industrialized societies. For example, in 2007, the service sector accounted for 54% of all employment in Ontario and 52% in the United States.[25]

[25] Employment in education and health are not included in American data in order to make that data comparable to Québec and Ontario figures. These two areas form part of the public sector in Québec and Ontario.

❑ The United States has gained a tremendous advantage in the service sector

The fact that employment in the service sector has increased as much in Québec as elsewhere in North America does not answer the question whether the same level of business investment in Québec went to this sector as it did in the other regions of the continent.

Unfortunately, the answer to this question is, it did not. The rate of business investment in services has been slow to take off in Québec and Ontario, and has remained weaker in these two jurisdictions than in the United States.

This comparative weakness in Québec's and Ontario's service sectors is important for two reasons.

— First, researchers have shown that the technological and organizational progress in the United States that resulted from equipment investment in the service sector, particularly in ICTs, played a key role in the extraordinary increase in American productivity after 1995.[26]

— Secondly, other researchers have identified slow growth in Canada's productivity as the main reason why Canadian productivity has not grown along with American productivity.[27]

Graph 29 sums up the situation for the first five years of this decade (2000 to 2004). It compares the amount of investment in production equipment by businesses in Québec, Ontario and the United States in the primary sector, the manufacturing sector and the service sector, for every $1,000 of added value per sector.

The graph enables us to make three observations.

— First of all, Québec's underperformance in the primary sector stands out loud and clear. It reflects in particular the severe difficulties experienced by the Québec forestry industry – the softwood lumber dispute, the increasing remoteness of the resource, excess capacity, an increase in foreign competition, etc.

[26] Barry Bosworth and Jack Triplett: "The Early 21st Century U.S. Productivity Expansion is *Still* in Services," *International Productivity Monitor*, no. 14, Spring 2007, pp. 3-22.

[27] Robert Inklaar, Marcel Timmer and Bart van Ark: "Canada's Productivity in Goods Production and Services in International Comparative Perspective," Working Paper 2007-01, Industry Canada, 2007.

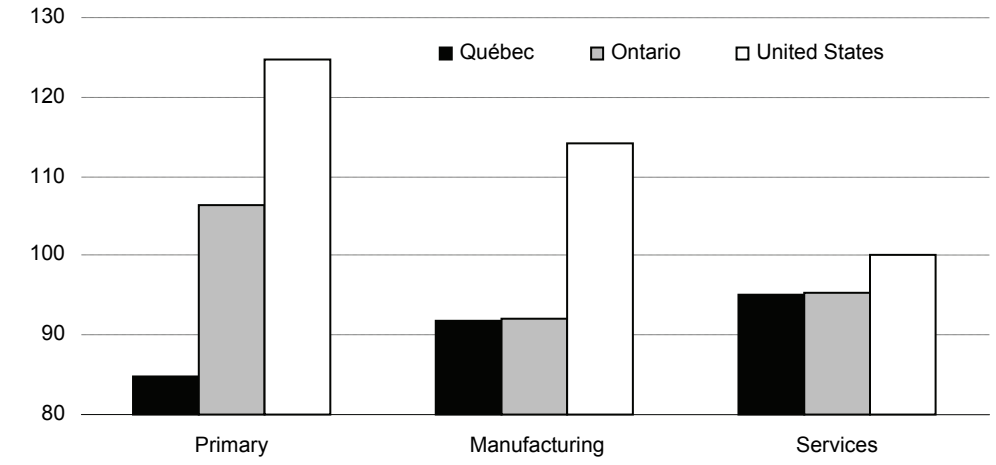
— Secondly, in the service sector, there does not appear to be a very significant gap between the United States, Québec and Ontario regarding equipment investment by businesses. We must remember, however, that the US has been considerably in front for the past 15 years, particularly in ICTs, as we previously saw. Graph 29 shows that the already wide gap between the two countries is continuing to grow, but not as quickly as before.

— Thirdly, Graph 29 shows that American businesses are well ahead of Québec and Ontario businesses in all of these three major sectors, while Québec and Ontario are at about the same level in the manufacturing and service sectors.

This confirms the general observation we made earlier: *Québec's fundamental challenge lies not so much in catching up to Ontario and the Canadian average as it does in finding the means to catch up with the rate of investment, level of productivity and standard of living in the United States*.

GRAPH 29

Annual amount invested in production machinery and equipment by businesses in three major sectors for every $1,000 of added value per sector in Québec, Ontario and the United States (1998-2004 average)
(per $1,000)



Note: The primary sector includes energy, construction, agriculture, fishing, forestry and mining. Education, health and public administration are not included in the service sector in the three regions. Added value is the difference between a company's sales and the cost of its current purchases of energy, raw materials, supplies and services. Added value is what enables the company to pay its employees, creditors and stockholders, and to put aside funds for reinvestment.
Sources: Statistics Canada and the U.S. Department of Commerce.

❑ Investment in Québec is holding its own, especially in finance, culture and transportation

Graph 30 completes the study of the various sectors by presenting the investment rate in Québec of the ten industries that invested the most as a proportion of their resources from 2004 to 2006.

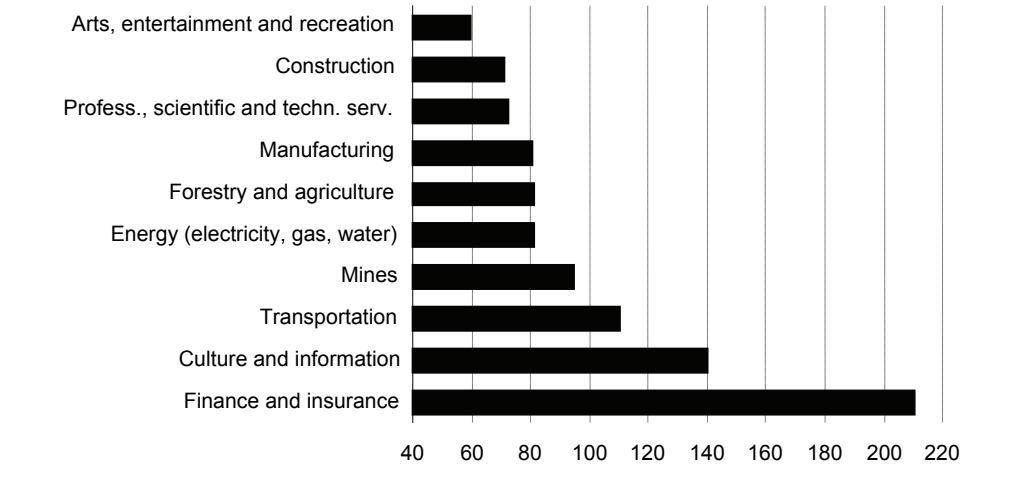
— In the service sector, three industries were responsible for the highest investments as a proportion of their added value: the financial (finance and insurance), cultural and transportation industries.

— They were followed by three primary industries: mining, energy, and forestry and agriculture.

— Bringing up the rear were the following sectors: manufacturing; professional, scientific and technical services; construction; and arts, entertainment and recreation.

GRAPH 30

The ten industries in Québec that invest the most as a proportion of their resources, based on the annual amount invested in production equipment per $1,000 of added value (2004-2006 average)
(per $1,000)



Note: Added value is the difference between a company's sales and the cost of its current purchases of energy, raw materials, supplies and services. Added value is what enables the company to pay its employees, creditors and stockholders, and to put aside funds for reinvestment.
Source: Statistics Canada.

Graph 30 contains several bits of valuable information.

— First, it clearly demonstrates that the service sector has taken the lead regarding investment in production equipment, the type of investment that is most successful in contributing to our economy's productivity.

— Secondly, it shows that the financial industry occupies a very important place in our economy. Montréal is not a major financial centre like London, New York or Tokyo, and is only half the size of Toronto. But employment in finance and insurance increased by 27% in Québec from 2000 to 2007, compared to 26% in Toronto. Montréal has become an innovative regional financial centre, specializing in certain important niches such as fund management, venture capital and complex stock market products.

— Thirdly, the graph shows that wealth creation can suddenly appear in any sector. For example, Québec's cultural industry has reached an imposing size and it shows a surprising propensity for investing. In 2004-2006, it made reinvestments in equipment equal to $140 of every $1,000 of added value it created in the economy. This investment rate was the second highest among Québec industries, as the graph shows.

  In absolute terms, the cultural industry annually invested 1.3 billion dollars in equipment during this period, placing it third among Québec industries, behind the large manufacturing sector (3.9 billion dollars) and the financial industry (3.5 billion dollars).

— Finally, Graph 30 tells us that Québec's primary industry is still very robust. Mining, energy, forestry and agriculture combined made annual investments in equipment totalling 1.3 billion dollars in 2004-2006, nearly the same level of investment recorded by the cultural industry. The problems that forestry and agriculture faced were partly compensated for by a new spurt of growth in the mining sector and a similar recovery that got underway in the energy sector.

2.2.5 The regions: Good news and bad news

The last topic to be dealt with in this chapter concerns the distribution of business investment among the various regions of Québec.

First of all, Graph 31 shows the variation in the employment rate of the adult population among the regions from the period of the economic peak in 1988-1989 to 2006-2007. The variation in the employment rate is seen here as an indicator of the general trend in the increase of the regions' standard of living.

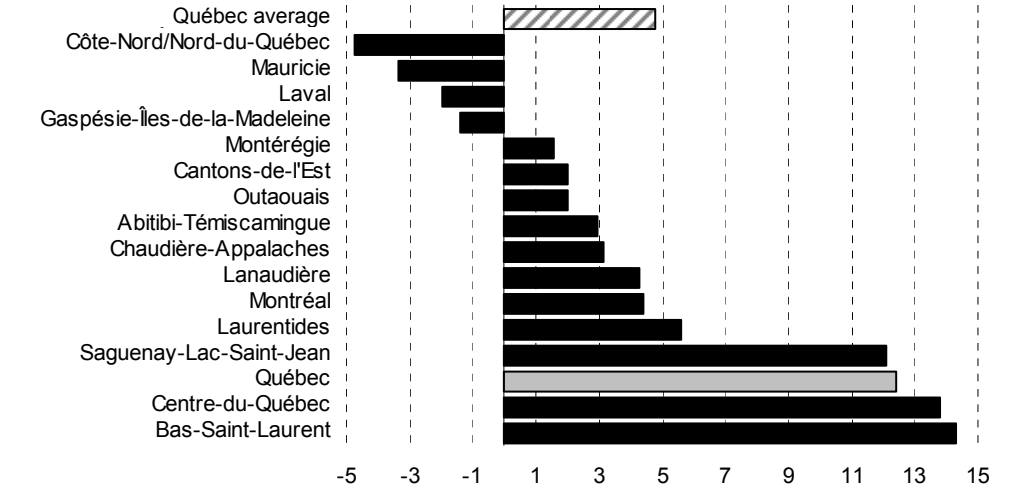
— Four regions stand out from the rest of Québec by the impressive jump in their employment rate over the course of this 18-year period: a 14% increase in Bas-Saint-Laurent and Centre-du-Québec, and a 12% increase in Capitale-Nationale and Saguenay–Lac-Saint-Jean.

— Four others saw a decrease in their employment rate: Côte-Nord, Nord-du-Québec, Mauricie, Laval and Gaspésie–Îles-de-la-Madeleine.

The impressive vitality being shown today by Centre-du-Québec and the Québec City region is well known, but so too are the persistent difficulties facing Côte-Nord, Mauricie and Gaspésie. It is also interesting to note that two resource regions, namely Bas-Saint-Laurent and Saguenay–Lac-Saint-Jean, are among the four best performing regions, and one urban region, Laval, is included among the four that saw a decrease in their employment rate.

GRAPH 31

Cumulative variation in the employment rate of the population aged 15 and older in Québec's 16 economic regions from 1988-1989 to 2006-2007
(in percentages)



Source: Statistics Canada.

How do the regions of Québec compare with regard to their business investment rate?

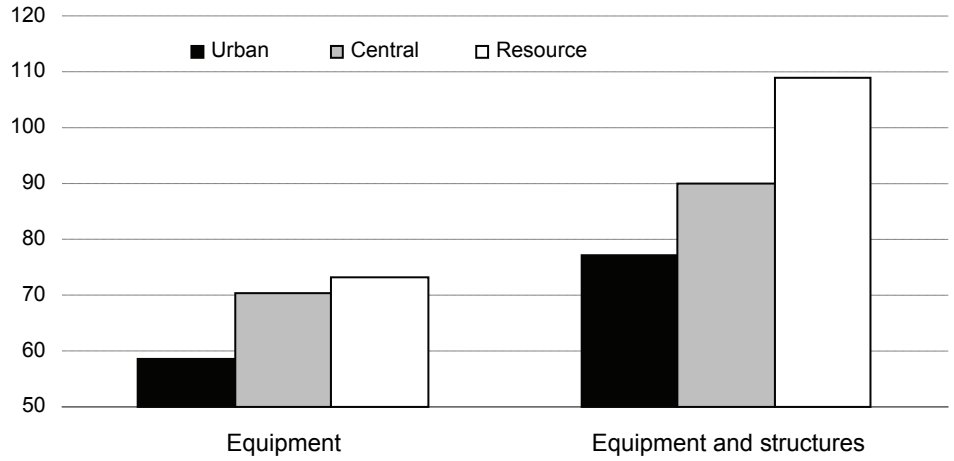
— Graph 32 shows that during the six years from 2001 to 2006, the resource regions[28] are the ones in which Québec businesses invested the most in proportion to domestic income: $73 per $1,000 of added value for production equipment and $109 for all equipment and structures. Projects generated by Hydro-Québec, Alcan and the Alouette consortium in Nord-du-Québec, Saguenay–Lac-Saint-Jean and Côte-Nord had a strong influence on these results. They benefited from the support of Québec's energy policy and from major government tax assistance.

[28] There are seven resource regions, which are home to 15% of Québec population: Bas-Saint-Laurent, Saguenay–Lac-Saint-Jean, Mauricie, Abitibi-Témiscamingue, Côte-Nord, Nord-du-Québec and Gaspésie–Îles-de-la-Madeleine.

— Unfortunately, the production of value per hour worked in the manufacturing sector in the resource regions does not appear to have increased in the period from 1998 to 2005, despite the efforts.[29] In 2006, the per capita income of these regions came to 79% of the per capita incomes in the urban centres of Montréal and Québec City.

GRAPH 32

Total business investment in production machinery and equipment in Québec's three regional groupings, per $1,000 of added value (2001-2006 average)
(per $1,000)



Sources: Statistics Canada and the Institut de la statistique du Québec.

Overall, the so-called central regions have done better than the large urban centres.[30] They invested almost as much in equipment as the resource regions did, but obviously much less when we include investment in structures. Graph 32 indicates a total investment of $90 per $1,000 of added value by the central regions, compared to $109 as invested by the resource regions.

[29] According to Robert Gagné, Luc Godbout and Guy Lacroix: *On Equal Terms*- Report of the Task Force on Tax Assistance for the Resource Regions and the New Economy, Government of Québec, 2008, p. 55.

[30] Further to Montréal and the Capitale-Nationale region, the urban regions include Laval and Montérégie. The urban regions are home to 56% of Québec's population. The central regions, which make up 29% of the population, are as follows: Estrie, Outaouais, Chaudière-Appalaches, Lanaudière, Laurentides and Centre-du-Québec.

At the regional level, three phenomena have appeared within the past two decades.

— The first is that economic growth in the resource regions is far from being a desperate situation. In particular, employment rates in Bas-Saint-Laurent and Saguenay–Lac-Saint-Jean are doing very well.

  The high global demand for natural resources should remain firm for the next few decades, which augurs well for the regions dependent on activity in mining and energy. Even forestry activities should pick up at some point in the future. Gaspésie lost its giant paper mills in Chandler and New Richmond and its mine in Murdochville, but it is getting back on its feet again, particularly by getting involved in developing wind energy and seafood products.

— The second phenomenon is the emergence of very solid economic performance in cities like Québec City, Drummondville and Rivière-du-Loup.

— The third phenomenon, on the other hand, is the comparatively slow productivity growth in the resource regions, as well as in the greater Montréal area, where business investment is not very impressive at all.

CHAPTER 3 – INVESTMENT IN QUÉBEC: WHAT IS HOLDING US BACK?

As we have seen from the beginning of this report, the members of the Task Force have focused their attention above all on the prosperity of the Québec economy. In the coming years, the number of Quebecers of working age will stabilize and then decrease, as will the total number of hours worked each year. We could hope for the discovery of two or three billion barrels of oil beneath the Château Frontenac, but it would be foolhardy to count on that for our well-being.

Therefore, increasing our production of value per hour worked will be the only sure means for improving our standard of living in the future. And, as we showed in Chapter 1, business investment will be required to play a key role in achieving that objective. It is with such a need in mind that the situation of under-investment described in Chapter 2 is cause for concern.

Investment is important if we are to make progress in our standard of living, but it is not the fundamental cause of our progress. In this chapter, the Task Force develops the idea that investment must be seen more as a conduit for productivity and the process of growth rather than as the root source of that growth.

We have seen that certain types of business investment stimulate growth more effectively than others. They include investments in production equipment (e.g., industrial equipment, transportation, information and communication technologies, etc.) But in the end, the low level of investment in Québec is a symptom of deeper causes.

The Task Force will thus focus its analysis on the underlying forces that can put a brake on investment in Québec, particularly in comparison to other jurisdictions in North America.

There are a number of direct levers that the Québec government can use as means for acting on these underlying forces. Taxation is one such lever. But the government unfortunately does not have access to direct levers for addressing many of the forces which underlie investment. It is important to understand, then, that apart from taxation, several recommendations of the Task Force will be based on levers that can act indirectly on investment, i.e., by helping to create a competitive and open environment which fosters investment.

The objective of this chapter is therefore to present a framework for analysis that will permit the selection of certain levers instead of others.

At the heart of this framework is the idea, or rather the fact that a business will invest in a project only if the expected return is seen as being greater than the estimated cost, after account is taken of the risk involved and of other existing investment possibilities. Only very reckless or poorly informed people will invest in a company when the expected return is lower than the interest rate on government treasury bonds.

This simple fact illustrates how investment in Québec is hampered, i.e.:

— the expected return may be considered to be too low, or

— the estimated cost may be considered to be too high.

The Task Force thus developed the idea according to which the importance of a company's income depends on the company's employment level and on its propensity for innovation as well as for technological and organizational imitation, in other words, on its human capital and its business environment.

Investment costs, for their part, lead to a consideration of costs in terms of running construction projects or acquiring equipment, as well as in terms of financial capital and taxation. Taxation plays a crucial role because it is the most direct lever the government can use to influence the level of business investment.

3.1 How can we increase return on investment?

To answer this first question, we must begin by specifying the sources of return on investment, at the same time elucidating the concept of "pure productivity".

3.1.1 Where does return on investment come from?

The income that a company hopes to obtain when it buys new equipment – an industrial machine, a truck, a computer or software program, etc. – depends first of all on its level of productivity. Work productivity, which we discussed at length in Chapter 1, is measured as the production accomplished by a worker during one hour's work. Similarly, capital productivity corresponds to the production that a unit of capital – the piece of equipment involved– generates in an hour's use.

For example, if a snowmobile manufacturer installs an automatic painting machine that paints 40 snowmobiles in one hour, the productivity of this machine is, quite simply, 40 painted snowmobiles per hour.

Further to productivity as defined this way, a second (and obvious) element comes into play to determine the income obtained by a company. That element is the price of the product being sold. If our snowmobile manufacturer makes $2,500 from the sale of each of the 40 snowmobiles painted every hour, the income received for these units will be $100,000 per hour of operation.[31]

Why is it a good thing when capital productivity increases, i.e., when capital is able to produce more per hour of operation?

A business makes investments because it wants to maintain or increase its stock of productive capital. In so doing, it hopes to maintain or increase its production capacity and thus its ability to generate income.

Consequently, the more production per hour of operation allowed by the use of new capital, the greater the income created for the company by the investment, provided, naturally enough, that a corresponding increase in the cost of the capital does not nullify the benefit of this increased productivity.

If the new automatic painting machine used in our example above is 50% more productive and can paint 60 snowmobiles an hour instead of 40, the manufacturer who continues to sell each snowmobile for $2,500 will obtain $150,000 per hour rather than $100,000 from this investment. The company would then be even more interested in making this investment, on condition that the new machine was not 50% more expensive for the company.

[31] Here, we are simplifying things somewhat. In reality, there are costs involved in acquiring new equipment (e.g., costs for training employees on how to operate and maintain the new device). We will look at this aspect later on.

❑ More employment can increase capital productivity

Where does capital productivity come from?

We must begin with an obvious point: if equipment is to produce, it must be run by workers. Qualified workers are needed to run automatic painting machines. In general, we see that a company with a larger and more highly qualified workforce enjoys a higher level of capital productivity per hour of production; in other words, its capital is more productive. Two automatic painting machine operators who work together can get more production per hour from their machine than an operator working alone.

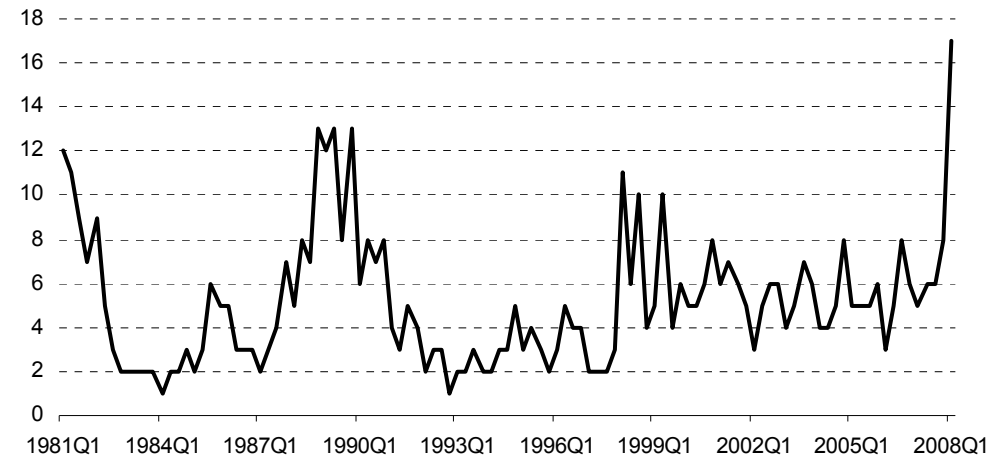
It follows that one way of increasing capital productivity is to focus more intensively on labour input (i.e., more hours worked or more employees) as a part of production.

But this approach for creating greater productivity, and with it higher investment levels, is today more difficult for Québec to follow than it was in the past. As shown by Graph 7 in Chapter 1, the employment level in Québec has increased tremendously during the past 25 years. Today, it stands at 50% of Québec's total population, compared to just 40% in 1982. Unemployment is at a 35-year low.

Indeed, we are seeing a severe labour shortage today in several economic sectors. As Graph 33 illustrates, 17% of Québec manufacturers indicated in January 2008 that they are experiencing production difficulties due to the lack of qualified workers. This is the biggest labour shortage we have seen since 1981.

GRAPH 33

Percentage of Québec manufacturing companies experiencing production difficulties due to a shortage of qualified workers from 1981 to 2008
(in percentages)



Source: Statistics Canada

Today, we are much closer to the enviable situation of full employment. But for demographic reasons, we will have to deal with a drop in the number of workers. Therefore, we cannot expect in the coming years to see an increase in capital productivity and investment based on growth in employment.

Immigration is the only potential source of an increase in our employment and capital productivity levels. Just as we must continue to combat the lingering unemployment, we must also enhance the support that immigration can give to our economy.

Potential lever

Encourage, more strongly than in the past, the recruitment of immigrants with worker qualifications, as well as immigrant entrepreneurs and investors. In particular, we must improve the effectiveness and rapidity of our mechanisms for recognizing immigrants' professional qualifications and skills.

❑ But "pure productivity" plays the most fundamental role of all

Fortunately, it is often possible to increase capital productivity per hour of operation by ways other than increasing the quantity of work (number of employees or level of work intensity), which are also factors in capital productivity.

As we stressed in Chapter 1, we must leave Charlie Chaplin's *Modern Times* where it belongs, in the world of fiction. Most of the time, there is a way for production systems to produce more per time unit with the same amount of capital and the same quantity of work. Doing so requires brainstorming to find better ideas for getting more effective use out of the limited resources available to us.

Some companies, and, more generally, some entire economies are better at doing it than others. They simply produce more per hour with the same amount of work and capital. By accomplishing more with the same quantity of resources or, if they choose to, with fewer resources, they perform at a higher level than others.

The ability to produce more with the same amount of work and capital is the very foundation of true economic progress. This idea is deemed to be so important by economic research today that it has been given a special term all its own – "pure productivity improvement", with "pure" at times replaced by "fundamental" or "multifactorial."[32]

Pure productivity plays a fundamental role in the determination of investment and, more generally, of the prosperity of an entire economy. Contemporary research based on the experiences of hundreds of countries over two centuries of history has revealed that at least 60% of the gaps in prosperity seen among these countries and during different periods are ultimately due to differences in pure productivity.[33]

---

[32] US economist Robert Solow was the first to define pure productivity. He did so more than 50 years ago in a landmark article which subsequently earned him the Nobel Prize for Economics in 1987. Researchers today continue to call pure productivity improvement "Solow's residue" (see Robert Solow: "A contribution to the theory of economic growth." *Quarterly Journal of Economics*, vol. 70, May, 1956, pp. 65-74).

[33] For a summary of this research finding, see Elhanan Helpman: *The Mystery of Economic Growth,* Harvard University Press, Cambridge, MA, 2004 (chapter 3).

The meaning of pure productivity

It is important to gain an overview of what the concept of pure productivity means.

To explain the main reasons for the gaps in prosperity seen among countries today or between periods within a single country, we cannot point simply to differences in the quantity of natural resources available, the quantity of structures or equipment implemented, or the number of hours worked. The reasons are found more in differences at the technological and organizational levels, i.e., the ingeniousness shown by the people in each country and during each period in combining all these quantitative factors as part of their respective production systems.

We must analyze and understand technological and organizational differences in order to take clear-headed action that will promote investment, productivity and a higher standard of living.

We may illustrate this idea by comparing Canada with the United States.

— According to researchers with Statistics Canada, pure productivity in Canada's business sector overall increased at a rate of 30% less than in the US from 1961 to 2006.[34]

— Researchers at Industry Canada have estimated that in 2004, the level of pure productivity in Canada's business sector was equal to 76% of the corresponding level in the US.[35] This means that if the Americans produced a value of $100 with a certain number of work hours and machine hours in 2004, Canadians were able to produce just a value of $76 with the same amounts of capital and work.

  This also explains, as we noted in Chapter 1, that productivity level is a major concern for economic policy not just in Québec but in all of Canada.

Investments made in a more productive environment create higher production and income levels for businesses. Thus, it is not surprising to know that there is more investment in the US than in Canada, as we found earlier.

---

[34] Statistics Canada, *Long-term Productivity Growth in Canada and the United States: 1961-2006*, catalogue no. 15-206-XWE, Ottawa, 2007, Graph 3.

[35] See Someshwar Rao, Jianmin Tang and Weimin Wang: "What explains the Canada-U.S. TFP Gap," Working Paper 2006-08, Industry Canada, Ottawa, 2006, Graph 1. Statistics Canada is a bit more optimistic; it estimates that pure productivity in Canada's business sector came to 85.5% of the level of pure productivity in the United States in 1999.

The Task Force stresses the need for us to be aware of how crucial increasing pure productivity is for greater prosperity. The beauty of it all stems from the fact that improving pure productivity allows us to improve our standard of living without being required to use more work, capital or natural resources, and thus without endangering the environmental.

Now we must try to understand the forces that can promote or block pure productivity in Québec.

3.1.2 Where does pure productivity come from?

What factors explain why Québec and Canada lag behind the US in terms of productivity, a topic we covered extensively in chapters 1 and 2? By what means can an economy succeed at producing more without having to increase the amount of work or capital that it uses?

We note from the outset that a company wishing to produce more without using more resources can take one of the two following paths:

- imitate the technologies developed by others; or
- become directly involved itself in the process of technological and organizational innovation.

Obviously, imitation and innovation are processes that will take hold faster and more successfully if the employees and managers are highly skilled and if the business environment encourages good decisions. From this observation emerges the importance of two other factors, namely human capital and the business environment.

We will analyze these four factors in turn.

❑ Imitate others

Some technologies are more versatile than others. We see this in part regarding the use of production machinery and equipment that is developed to provide increasingly higher performance levels.

For example, the introduction of electricity in the late 1800s and early 1900s fostered the development of several generations of electrical equipment increasingly adapted for use in factory production. More recently, the invention of the microprocessor (or integrated circuits) several decades ago has led to the development of more and more powerful computers, allowing successive generations of machines to accomplish increasingly complex tasks.

The diffusion of advances in the case of *versatile technologies* occurs through the acquisition of ever-evolving production equipment. This is how omnipresent information and communication technologies (ICTs) got their start with the discovery of the microprocessor, the celebrated computer chip. Investing in this type of production equipment is able to create a "virtuous circle" by which increased productivity itself leads to a new round of investing.

We saw in Chapter 2 that research over the past 20 years has amply demonstrated the important and direct support investment in production equipment contributes to productivity growth in all countries and during all periods. To give just one relevant example, let us refer to the recent study by three Industry Canada researchers who compared the performance of Canada and the US in 41 industries. They found that Canada lags behind in pure productivity due in large part to its a lower investment rate in production equipment.[36]

ICT spending plays a key role with regard to investment in production equipment.

— First, over the past few decades, ICT spending in Canada has increased much more rapidly than spending on other types of equipment and spending on equipment attributable to ICTs has subsequently also grown rapidly. ICT spending jumped from 17% of all equipment spending in 1981 to 30% in 2006.[37]

— Secondly, when all equipment spending is taken into consideration, ICT spending fully appears to be the most beneficial for growth. From 1963 to 1971, ICTs accounted for just 5% of growth due to the increase in capital, but their share was 40% for the period of 1989 to 2002.[38]

[36] Rao, Tang and Wang, op. cit.

[37] Source: Statistics Canada.

[38] John Baldwin and Guy Gellatly (2007), *Innovation Capabilities: Technology Use, Productivity Growth and Business Performance: Evidence from Canadian Technology Surveys*, catalogue no. 11-622-MIE, no. 16, Statistics Canada, Ottawa, 2007.

— Thirdly, it was found that businesses which invest more in ICTs than others are systematically more productive, over and above the fact that they have more equipment per worker.[39] But to be able to produce more with the same amount of work and capital entails, by definition, a higher level of pure productivity. This confirms that ICTs have a positive impact on productivity. In addition, contrary to what we might think, computers and software are not the only form of ICT beneficial to productivity. Automation and other forms of progress in production technologies and communication technologies appear to play an important role as well.

— Finally, we have seen that companies which invest more in ICTs are also more competitive and able to increase their market shares. This forces their competitors to adopt ICTs as well or, to put it simply, be left behind. Statistics Canada researchers have estimated that this "jousting" in the area of ICTs accounts for more than 50% of the productivity growth in the entire Canadian economy.[40]

The problem, as illustrated by Graph 23 in the previous chapter, stems from the fact that it is exactly in the area of ICT spending that business investment in Canada is lagging far behind business investment in the US. Canadian businesses have devoted just 30% of their spending to ICTs, compared to 50% in the US.

ICT spending in the US has grown with lightning speed. Canada is lagging behind particularly in the service sector.

But there is more to the story of Canada's trailing the US with regard to investments in production equipment. It has fallen behind primarily because of its low level of investment in ICTs, i.e., the type of equipment investment that is most closely linked to productivity.

---

[39] Baldwin and Gellatly, Ibid.

[40] See two articles by John Baldwin and Wulong Gu: "Plant turnover and productivity growth in Canadian manufacturing," *Industrial and Corporate Change*, Vol. 15, June 2006, pp. 417-465; and Idem, *Competition, Firm Turnover and Productivity Growth*, catalogue no. 11F0027MIE, no. 42, Statistics Canada, Ottawa, 2006.

We have made some progress in our analysis to this point. We have established that Canada's comparative weakness (even more pronounced in Québec) regarding business investment in equipment is concentrated in certain types of investments that could have positive impacts on the overall productivity of the economy, i.e., through ICT spending.

This suggests that if we were able to increase ICT investments in Québec and Canada, we would create a "virtuous circle," leading to the stimulation of other types of investment in turn.

But one nagging question remains: if ICT investment is so promising and beneficial, why do Québec and Canadian companies invest less in ICTs than their counterparts in the US, particularly in the service sector?

If it were all just a matter of investing in ICTs, which is possible everywhere in the world, that is, if ICT investment is highly profitable, why has there not been a rush to ICT investment followed by fabulous productivity growth in all countries since the mid-1990s, similar to what has been observed in the US?

We have no definitive answer that explains why Québec, Canada and other countries lag behind the US in ICT investment. Perhaps it has to do with human capital or the business environment. We will look at these issues a bit later on.

One thing is certain – the US has enjoyed rapid productivity growth since the start of this new decade, even after the burst of the technology bubble. This growth is a sure sign that the ICT boom is not the only source of the strong US performance. Québec must not look solely to ICTs in order to increase its productivity.

Still, our analysis to this point allows us to consider using taxation to support ICT investments in all sectors, including the service sector, and to bridge the real productivity gap Québec is showing in the area of ICT investment.

One possibility for the Québec government would involve extending to ICT investment (encompassing all economic sectors) the capital tax credit which is currently restricted to the production and processing equipment of companies in the manufacturing and forestry industries and is applied to the amount of the capital tax established for these companies.

But we are dealing here with a lever the effectiveness of which must be evaluated in comparison to other possible modifications of the business tax system. We will return to this possibility in the last part of this chapter. In Chapter 4, we will look at taxation overall and will present the final recommendations of the Task Force.

❑ Companies should innovate on their own

The other way businesses can improve the return on their production processes is to get directly involved in technological and organizational innovation. This consists of developing and implementing new ideas about the types of products to make, their production processes, and their work organization.

One can never run out of ideas, contrary to finite resources such as labour, buildings, production equipment and raw materials. The electricity used by a citizen is indeed used up and is not available for her neighbour. But if this citizen uses an idea, nothing prevents the neighbour from taking full advantage of it. When the political, economic and social environment allows ideas to flourish freely, prosperity is limited only by the creativity of the population.

One important aspect of a company's direct involvement in the creation of new ideas is its work in research and development. R&D consists of using the sciences and technologies for the ultimate purpose of developing and marketing new products or implementing new production processes. Depending on the circumstances, a company may also find it valuable to forge partnerships with the post-secondary community (universities or colleges) or with government research facilities.

As we noted in Chapter 2, there is a close connection between R&D and increases in productivity and income per inhabitant, and this connection has been confirmed by current research.

This is not surprising. Indeed, R&D contributes in two different ways to business productivity.[41]

— Its first contribution is its direct effect on the invention of new products and the development of new production processes. An example here is the discovery of the beneficial role played by statins in the treatment of heart disease. This led to the creation of new drugs for treating patients.

— Its second contribution is indirect. Companies that engage in R&D find that it spurs their interest in acquiring knowledge and engaging in technological innovations. At the same time, they find R&D easier and easier to do. R&D transforms these companies into technological sponges, figuratively speaking.

R&D does more than improve business productivity. The ideas it comes up with can be imitated; it therefore promotes competition among companies (at home and abroad), that can copy or imitate its results.

Even the companies in a country that are less involved in R&D than those in another one end up most of the time by assimilating the ideas that have been developed elsewhere, albeit after a certain lag.42 Business R&D thus provides a social return that can be several times greater than the return enjoyed by companies that have done the groundwork in a particular area of R&D.

That is why R&D is an important part of a country's innovation strategy. All jurisdictions, including Québec and Canada, provide businesses with grants and tax credits for R&D.

As with the idea of extending the capital tax credit to cover ICT investment and the services sector, an increase in Québec's tax credit for business R&D could be considered. But we saw in Chapter 2 that an important level of assistance is already available from the two levels of government (Canada and Québec). With business R&D investment at 1.5% of our GDP, Québec ranks well in comparison to the member nations of the OECD.

In view of the path already taken in R&D and of the limited resources of the Québec government, the Task Force does not consider this lever to be among the most promising ones. It would appear instead that the current tax system for R&D should be preserved in its entirety. Stability is always a good thing.

---

41 Rachel Griffith, Stephen Redding and John Van Reenen, "Mapping the Two Faces of R&D: Productivity Growth in a Panel of OECD Countries," *Review of Economics and Statistics,* vol. 86, December, 2004, pp. 883-895.

42 Ram Acharya and Wolfgang Keller, "Technology Transfer through Imports," Working Paper No. 13086, National Bureau of Economic Research, Cambridge, MA, 2007.

Most of the new ideas that stem from R&D do not lead to concrete applications. This setback can be explained in some cases by commercial reasons. But at other times, it is due to gaps in our mechanisms for knowledge transfer. Innovation is a complex process requiring several steps. To ensure that R&D works effectively, transfer mechanisms must be adequately supported; i.e., we must foster the exchange of ideas between the academic research community (colleges and universities) and the industrial research community.

Potential lever

Promote knowledge transfer between the academic research community (colleges and universities) and the industrial research community.

This intervention lever is already in place. The Québec Research and Innovation Strategy, which the government submitted in 2006, has already led to additional funding for R&D enhancement and transfer.[43] Out of a total commitment of $888 million for 2007-2010, an envelope of $111 million has been allocated for that purpose.

■ Organizational research

When we think of innovation, we think first of scientific research at university or government labs and of industrial research by companies which may lead to the creation of a new product or the improvement of an existing one. Indeed, this is the type of R&D activity that government policy encourages.

But business innovation is a much broader phenomenon. One important discovery by contemporary research is that organizational innovation is an important source for improving pure productivity.

Here, we are referring to changes in business models, management practices, work organization, funding sources and types, strategic alliances, and the nature and degree of outsourcing. In implementing these changes as means for ensuring their progress, companies can also get their employees, customers and suppliers involved.

[43] Ministère du Développement économique, de l'Innovation et de l'Exportation: *An Innovative, Prosperous Québec*, Québec, 2006.

In other words, productivity is far from being a purely technological phenomenon; it is also a social phenomenon. The proof of this is simple. We generally see important and persistent differences in the productivity levels of companies that make nearly identical products within a shared economic and technological context.[44] This very high disparity can have only social causes at its root.

But this point of view is new and not widely known. Therefore, we present here four examples of recent research that convincingly shows the link between management quality, involvement of employees and business productivity.

— The first example is a 2004 study which measured the managerial practices at 732 medium-sized companies in the US, France, Germany and the United Kingdom. It found marked differences among companies' managerial practices and among the countries surveyed.[45] It also showed a close connection between productivity and quality of management.

  The authors of the study found that a high proportion of companies were very poorly managed and that two factors in particular significantly increased the risk of poor results, namely, protection against competition and transmission of family businesses through inheritances,.

— The second example is the work of American researchers who have estimated that up to 30% of the growth in US manufacturing during the 1980s can be explained by managerial and organizational innovation.[46]

---

44 Regarding the automobile industry, see the now-classic study by James Womack, Daniel Jones and Daniel Roos: *The Machine that Changed the World: The Story of Lean Production*, Harper, New York, 1990. For a more general demonstration filled with Canadian examples, see John Baldwin: *The Dynamics of Industrial Competition*, Cambridge University Press, London, 1995.

45 Nicholas Bloom and John Van Reenen: "Measuring and Explaining Management Practices across Firms and Countries," *Quarterly Journal of Economics*, vol. 122, November 2007, pp. 1351-1408. Managerial practices were measured in four areas: operations, control, presence of targets, and implementation of incentives.

46 Sandra Black and Lisa Lynch: "What's Driving the New Economy? The Benefits of Workplace Innovation," *The Economic Journal*, vol. 114, February, 2004, pp. F97-F116; see also by the same authors: "Measuring Organizational Capital in the New Economy," in C. Corrado, J. Haltiwanger and D. Sichel (dir.), *Measuring Capital in the New Economy*, University of Chicago Press, Chicago, 2005.

One US researcher also found that factors such as willingness to develop external business networks, managers' and employees' education levels, intensity of ICT use and of R&D activity, and quantity of equipment all increase the probability that the business is innovative at the organizational level.[47]

— The third example is a survey conducted in 2006 by IBM of 765 international business leaders. The survey confirmed that there are countless ways for a company to ensure ongoing productivity improvement, without being constantly forced to change its equipment or technology through new investments. Changes in business model have become a major source of innovation, as seen especially among the most highly performing companies.[48]

— The fourth example is a Québec survey conducted among leaders of fast-growing SMEs by the Université du Québec à Trois-Rivières. The author showed that the ways for improving business performance include making adjustments to business plans, providing ongoing formation for employees, ensuring employees' real involvement in decision-making, and strengthening relations with customers, suppliers and external networks.[49]

Organizational innovation as practiced by individual companies depends on the context of each company and the organizational culture it has developed over time.

Our economy is more the offspring of sociology and culture than of government intervention. But with specific regard to this observation, there are ways in which the government can promote the evolution of our society and culture.

---

47 Lisa Lynch, "The Adoption and Diffusion of Organizational Innovation: Evidence for the U.S. Economy," Working Paper no. 13156, National Bureau of Economic Research, Cambridge, MA, 2007.

48 IBM Global Business Services: *Expanding the Innovation Horizon*, The Global CEO Study 2006, New York, NY, 2006.

49 Pierre-André Julien, "Des *gazelles*, de la métaphore du jazz d'improvisation et d'autres choses: comment gérer l'improvisation de façon cohérente," *Revue Gestion 2000*, nº 5, September-October 2002, pp. 135-165.

The Task Force was particularly impressed by the efforts of the Ministère du Développement économique, de l'Innovation et de l'Exportation to build awareness among SMEs concerning the importance of managerial, technological and organizational innovation. We are referring here to the program on best business practices, the Défi Innovation training program, workshops given at companies' premises, and seminars on the competition from Asia. The November, 2007 action plan for the manufacturing sector calls for several new measures of this type, including spending of $44 million over five years to fund access to productivity experts.[50]

It is also through its impact on human capital and the business environment that the government can exert a positive influence on organizational culture and from there, productivity. We will now take a closer look at human capital and business environment.

❑ People are the economy

People are the very source of our wealth and productivity. Wealth is created by ideas, work, machines and natural resources. But it is the people who have the ideas, who do the work and make the machines and who use our natural resources. Human capital is the foundation of everything else.

Education represents the main form of investment in human capital. Whether at home or school or in the community, it serves as the primary vehicle for the transmission of culture. But education is also the engine of economic growth. It plays a pivotal role in the development of entrepreneurial and managerial aptitudes, the transmission of knowledge, the proper functioning of production processes, technological innovation and diffusion, the intelligent organization of work, and adaptation to change. In addition to having a cultural impact, a higher level of education results in a faster expansion of knowledge and its economic use.

Business productivity and consequently the profitability of investment depend directly on the availability of qualified and skilled entrepreneurs, managers and employees. Education is likewise an extremely important factor. We will now look at how Québec compares to other jurisdictions with regard to education and training.

[50] Ministère du Développement économique, de l'Innovation et de l'Exportation: *Invest in a Winning Manufacturing Sector –Action Plan to Support the Québec Manufacturing Sector*, Québec, 2007.

The changing face of education in Québec and our comparative position today

Québec has made enormous progress in education over the past 60 years in what we may rightly call a revolutionary turnabout no less astonishing for the speed in which it was accomplished. In the late 1950s, young Quebecers spent an average of eight years in school, compared to an average of 15 years today. As we saw in Graph 8 in Chapter 1, the proportion of the Québec population aged 25 to 44 with a high school diploma jumped from 36% in 1961 to 88% in 2007. The drop-out rate for this age group thus stands at just 12%.

Table 11 below gives a more up-to-date and detailed picture of the education levels of young adults in Québec, compared to the education levels in the US and Ontario. We note four findings in this regard.

— The first is that despite the enormous progress made over recent decades, the proportion of people who do not finish high school continues to be higher in Québec than in the US and Ontario. We see that 12% of Quebecers have not completed 11 years of school, while 12% of Americans and 8% of Ontarians have completed 12 years of school.

— The second finding does not appear in Table 11, but has to do with a statistic related to Québec's 12% drop-out rate. Among the 25-44 year-olds, the high school dropout rate is higher for young men (14%) than for young women (10%).[51]

— The third finding is that Québec's specific college structure (the Cégeps) allows Québec to post an overall post-secondary graduation rate of 70% (43% at the college level and 27% at the university level). The corresponding figures for this overall rate are 42% in the US and 67% in Ontario.

— Fourthly, we see that Québec still lags behind the US and Ontario regarding its university graduation rate; 27% of young adults in Québec have a university degree, versus rates of 32% in the US and 31% in Ontario.

[51] Source: Statistics Canada.

TABLE 11

Education levels of 25-44 year-olds in the US, Québec and Ontario in 2007
(in percentages)

Highest diploma or degree obtained	US	Québec	Ontario
None	12	12	8
High school	46	18	25
College	10	43	36
University	32	27	31
TOTAL	**100**	**100**	**100**

Note: In the US and Ontario, a high school diploma is awarded after 12 full years of study, versus 11 years in Québec. Colleges here include trade schools, community colleges, Cégeps, nursing schools, etc. People with a university-level certificate lower than the Bachelor's level are also included in the category for colleges. The category for universities includes degrees at the Bachelor's, Master's and Ph.D. levels.
Sources: U.S. Census Bureau and Statistics Canada.

■ Québec youths are doing well in math compared to their peers in other countries

It is extremely important to ensure that our education is of the highest possible quality.

In that regard, Québec youths aged 15 obtained encouraging results in a series of surveys – the Programme of International Student Assessment (PISA) – held by the OECD in 60 countries.

Graph 34 shows that in the 2006 wave of the survey, Québec teenagers were ranked fifth in the world in mathematics and first among the ten Canadian provinces. Their results were also strong in the sciences and reading.

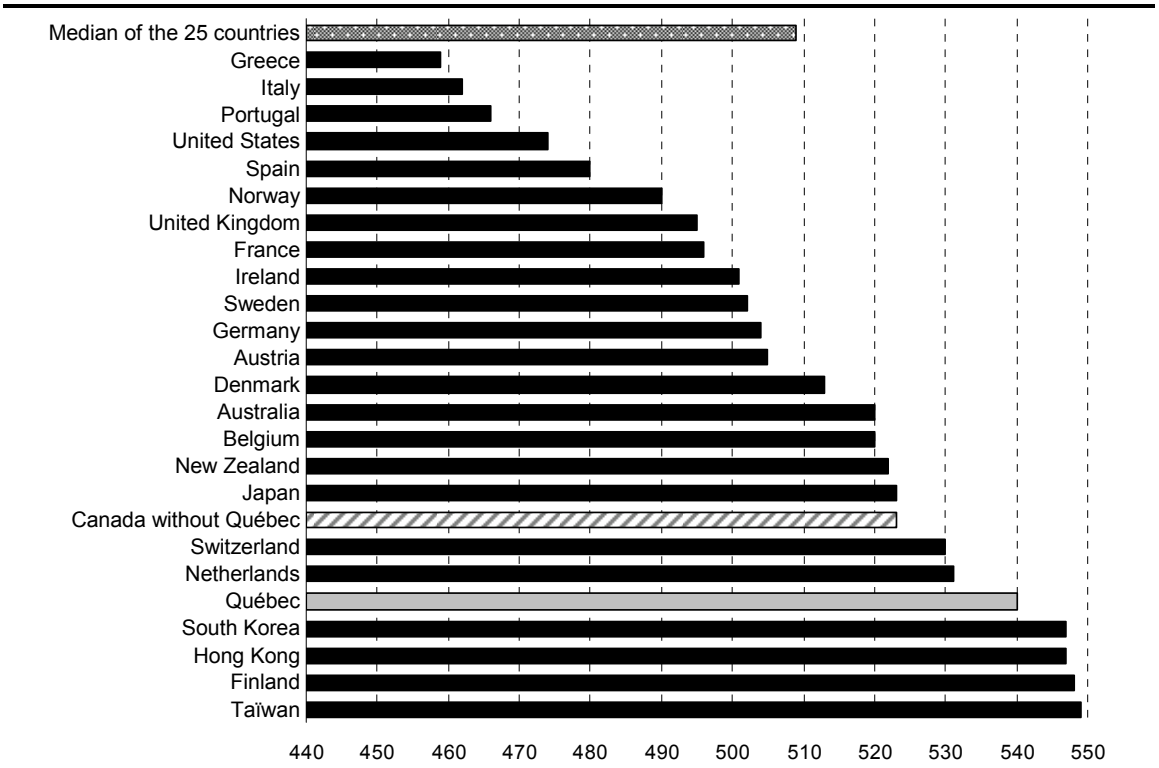
These results bear importance for our economy. Recent research has shown that among the various elements of academic performance, the acquisition of basic competencies in reading, writing and math are most closely associated with the level of a society's standard of living.[52]

[52] See in particular: Serge Coulombe, Jean-François Tremblay and Sylvie Marchand: *Literacy scores, human capital and growth across fourteen OECD countries*, catalogue no. 89-552-MIE, Statistics Canada, Ottawa, 2004.

The possession of good calculating, reading and writing skills constitutes the first key to success in the effort to combat poverty and to ensure financial autonomy and economic prosperity for our citizens. Québec must use all the means at its disposal to make sure its education system continues to produce strong results.

GRAPH 34

Average math scores obtained by 15-year-olds in Québec and 24 industrialized countries in the international PISA survey of the OECD in 2006
(average score = 500, standard deviation=100)



Sources: OECD and Statistics Canada

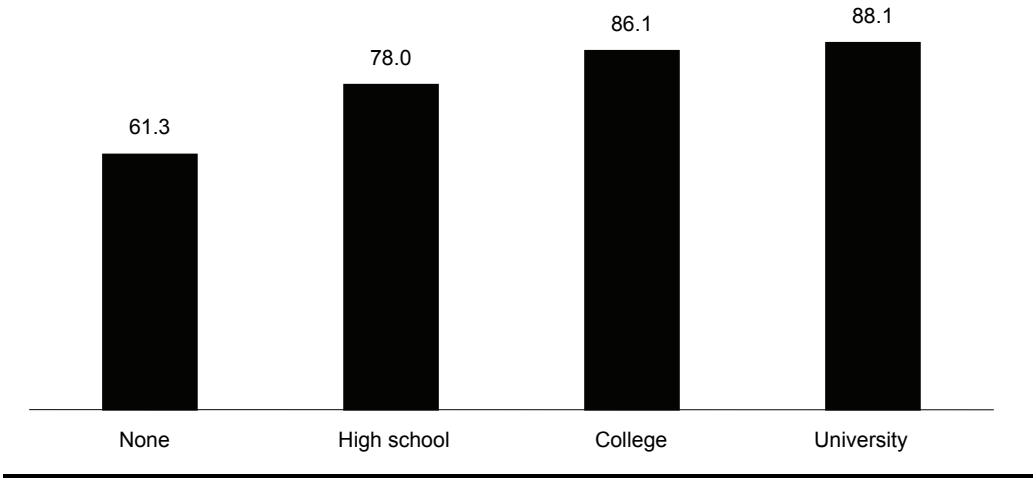
■ Education has an enormous impact on the economy

Graphs 35 and 36 illustrate the strong impact that education has on employment and salaries.

— Graph 35 shows that in 2007, when the economic situation was particularly favourable to employment, only 61% of Quebecers aged 25 to 54 and without a diploma were working, compared to a rate of 78% for those with a high school diploma. Possession of a college diploma takes the rate even higher, to 86%.

GRAPH 35

Percentage of the Québec population aged 25 to 54 and employed in 2007, according to highest diploma or degree obtained
(in percentages)



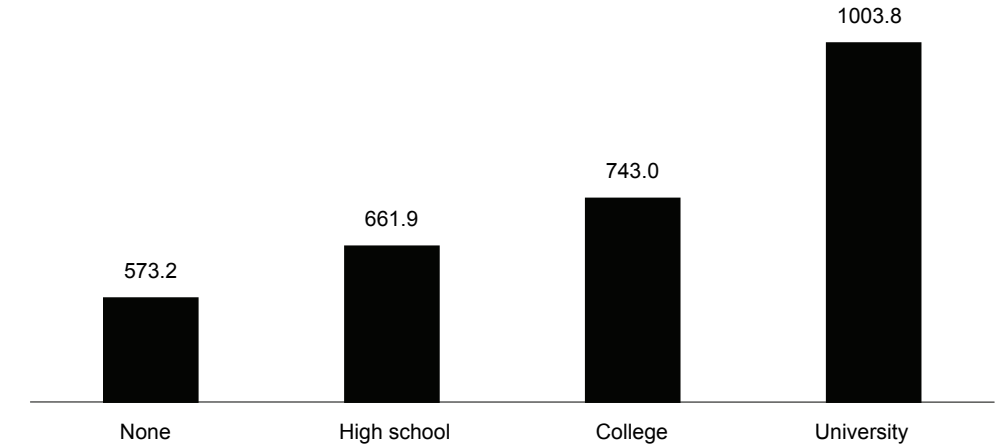
Source: Statistics Canada.

— Graph 36 shows that salaries increase as level of education increases.

As we saw in Graph 35, there is just a two percent difference in the employment figures for college graduates and university graduates (86% and 88% respectively). However, the difference in wages is striking. Graph 36 shows that a university degree brings an average weekly salary of $1,000 compared to $740 for a Cégep diploma, a difference of 35%.[53]

GRAPH 36

Average weekly salary of full-time workers in Québec in 2007, according to highest diploma or degree obtained
(in dollars)



Source: Statistics Canada

[53] Coulombe and Tremblay show in greater detail the importance of a university degree as a factor explaining differences in income per resident in Canada's provinces. See: Serge Coulombe and Jean-François Tremblay, *Human Capital and Canadian Provincial Standards of Living*, catalogue no. 89-552-MIE, no. 14, Statistics Canada, Ottawa, 2006.

■ Business investment in human capital

Investment in human capital certainly does not stop at formal education. Companies must pursue this type of investment on a continuous basis. Current-day research is perfectly clear on this subject: an improvement in a company's productivity will be effective and sustainable only if the company invests in its employees, gets them involved, provides them with job security and uses a transparent salary structure.[54]

Earlier, we stressed the fact that a large part of productivity improvement was based on organizational innovation. Human capital obviously plays a key role in the ability of a company to adapt. In fact, the 765 business leaders interviewed for the international survey run by IBM, to which we referred earlier, unhesitatingly indicated that their employees were the main source of innovative ideas for their companies.[55]

Innovation also consists in being able to recognize strong business opportunities, to choose sectors with the greatest growth potential, and to develop new markets. Entrepreneurial and managerial qualities are thus essential for innovation and productivity improvement.

Entrepreneurs in particular need to be able to appreciate the potential of new ideas. They thus play a key role in the innovation measures and the success of their companies. The demographic transition that Québec will soon be going through will constitute a challenge for the emergence of new entrepreneurs.

New entrepreneurs are concentrated mostly in the 25-44 age group. However, this age group's proportion of the total population will decrease from 28% today to 24% in 2031.[56] With fewer potential new entrepreneurs, it will be necessary to support every possible initiative that will allow them to develop their talents.

Potential lever

Give concrete support to educational institutions, non-profit organizations and other groups that promote the development of entrepreneurship.

---

54 Taken from Anthony Giles: "La productivité et l'emploi: un drôle de couple?" (presentation made at the Forum sur la productivité et l'emploi, Québec, 2005). See also: Eileen Appelbaum, Thomas Bailey, Peter Berg and Arne Kalleberg (dir.), *Manufacturing Advantage: Why High-Performance Work Systems Pay Off,* Cornell University Press, Ithaca, NY, 2000.

55 IBM Business Consulting Services: *The Global CEO Study 2006*, New York.

56 Source: Institut de la statistique du Québec (scenario "high-growth").

In the meantime, Québec will have difficulty recruiting new entrepreneurs to meet the important needs in business succession. Close to 90% of the companies in Québec have fewer than 20 employees, and half of them are family run.

— A survey in 2006 by the Canadian Federation of Independent Business showed that 60% of the owners of SMEs in Québec will retire by 2016.[57]

— A troubling fact here is that half of them indicate that they do not have a succession plan.

This situation could explain in part the lower level of business investment in Québec, where the population is ageing faster than elsewhere in Canada and in the US. When retirement approaches, we are naturally less inclined to take risks and to increase our business liabilities. These entrepreneurs need assistance, and often as much at the personal level as at the financial level.

Potential lever

Support the efforts of people and organizations (accountants, legal advisors, informal sources, etc.), working in business succession and helping the current generation of leaders to retire and ensure a smooth succession process.

■ Québec is facing numerous challenges in education

The contribution that investing in human capital provides to the profitability of public and private investment is vital because physical capital and human capital work in tandem within companies and organizations. We cannot stress enough its importance and the numerous challenges Québec must take on in this area.

The challenges identified by the Task Force include the following:

— complement the investment made in early childhood by focusing efforts on at-risk families;

— give full priority to the solid acquisition of basic reading, writing, math and second language skills at the elementary and secondary school levels;

— combat the school dropout rate more vigorously and with more resources at the high school level, with particular attention given to boys;

[57] Doug Bruce: "SME Succession: Update," Research Report, Canadian Federation of Independent Business, Toronto, 2006.

— promote occupational, scientific and technical training at the secondary and college levels;

— foster the development of entrepreneurship among young people by the schools and by various organizations involved in this endeavour;

— bridge the gap with the US and Ontario regarding the university graduation rate;

— encourage businesses to increase their investments in workforce training.

❑ The business environment

Pure productivity does not stem solely from business decisions. It depends also on the business environment surrounding the decisions that are made. It is likely that the relatively low rate of investment by Québec business in production equipment, along with the modest impact of investments in productivity, are symptomatic of more deeply-rooted problems.

The question that cuts to the heart of the matter is the following one: why don't our companies decide on their own to make these various types of investment to the same degree we see elsewhere, since doing so should be in their best interest, or to put it in plain terms, in their best financial interest?

If we do not understand the real sources of the problem and if we do not attack them directly, policies aimed at supporting certain types of investment run the risk of failure. When you have a fever, a cold bath will lower your body temperature but it will not bring any permanent relief. Your body temperature will soon rise again. Focusing solely on investments in production equipment, ICTs or R&D will not take us very far.

■ Competition leads to more productivity

Competition by itself is a strong incentive to innovate.

The work by Austrian-American economist Joseph Schumpeter[58] heralded the start of a long line of research in economics and management involving the analysis of the links between competition and innovation. At the core of Schumpeterian theory is the idea that by innovating a company can stand out from the competition and at least temporarily achieve a sort of monopoly. This situation will last until a new innovation comes to supplant the earlier one. Schumpeter called this process "creative destruction."

[58] Joseph Schumpeter: *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest and the Business Cycle [Theorie der wirtschaftlichen Entwicklung]*, Harvard University Press, Cambridge MA, 1934.

According to this logic, a more competitive environment should naturally lead to more innovation and thus stronger growth over the long term.

This logic finds an important echo in at least part of modern-day theory about economic growth. Some studies have shown that the most competitive sectors and economies are also the ones in which we see the most innovation, either in terms of new products or processes, or in terms of new forms of work organization.[59] If a business is like a racehorse, competition is the spur that makes it run faster.

But competition may be seen as having undesirable effects in certain cases. For example, if the risks or costs related to a certain type of innovation are high and if the innovation is easy to imitate once in place, cold water may be poured on the desire to innovate.

A classic example of this type of innovation is seen in the introduction of new and increasingly more effective types of medications. This example involves the ownership of intellectual property. But even when a drug patent is obtained, thus eliminating competition for a certain time, the possibility remains that a competitor will develop a higher-quality product. This will motivate the company that obtained the initial patent to continue its efforts to innovate.

Competition thus undoubtedly pushes companies to innovate and allows them no breathing space.

A fully human and understandable consequence is that various associations of companies or professions will be constantly lobbying the governments to take this pressure off them. They try to obtain by political means what would be difficult to do by means of an approach based on economics. Governments will bend to this lobbying when the political context allows them to do so and will impose regulations that give the groups in question the protection they are seeking from the competition.

Market regulation is absolutely necessary in many circumstances. Issues such as consumer protection, occupational health and safety, traceability of food products, soundness of financial institutions, and public health undeniably call for regulations. But in other cases, the only effect of regulations is to give a group favoured by the government exaggerated protection from the competition. The direct consequence is two-fold: higher prices for customers and less willingness to innovate.

[59] See in particular Stephen Nickell: "Competition and Corporate Performance," *Journal of Political Economy*, vol. 104, December, 1996, pp. 724-746.

A good deal of recent research has found that regulatory governance which restricts the entry of new companies into the marketplace has a harmful effect on productivity. For example, a study published in 2005 by Harvard University and OECD researchers concerning different industry sectors in several industrialized countries concluded that:

"The policy implication of our analysis is clear: regulatory reforms, especially those that liberalize entry, are very likely to spur **investment**.[60]"

Another study by OECD researchers involved a comparative analysis of the performance of OECD member countries in the 1990s. It showed that regulations which limit competition in the marketplace for products reduce the rate of investment in ICTs.[61]

That study adds that, in the case of Canada, the slowness of reforms in the electricity, rail transport, retail business and professional services sectors, along with barriers to inter-provincial trade, explain in part the weak growth of pure productivity in Canada during this period.

The situation of SMEs with respect to regulatory governance is of particular concern. In 2005, the Canadian Federation of Independent Business surveyed its members on that issue.[62] It comes as no surprise to learn that the majority of respondents complained about the burdensome nature of government regulations.

Two results of the survey are striking and must be taken very seriously.

- The first is that we find that the smaller the company, the greater the proportional cost of regulatory compliance. In Québec, the estimated cost of compliance per employee for a company with 15 employees is three times higher than for a company with more than 50 employees, and the cost is six times higher for a company with four employees.
- Secondly, respondent companies in Québec felt they were weighed down 20% more by regulations than companies elsewhere in Canada.

---

60 Alberto Alesina, Silvia Ardagna, Giuseppe Nicoletti and Fabio Schiantarelli: "Regulation and Investment," *Journal of the European Economic Association*, vol. 3, June, 2005, pp. 791-825.

61 Paul Conway and Giuseppe Nicoletti: "Product Market Regulation and Productivity Convergence: OECD Evidence and Implications for Canada," *International Productivity Monitor*, no. 15, Fall 2007, pp. 3-27.

62 "Prosperity Restricted by Red Tape," CFIB, 2005.

Potential lever

Reduce obstacles to competition in the Québec economy by keeping regulatory governance to the necessary minimum.

The government's economic strategy has already targeted a reduction in costs related to regulatory governance and red tape by 2010. We must ensure that this objective is achieved.[63] If new regulations are necessary, for example, in the area of the environment, they must not be allowed to interfere with the principle of competition and the additional administration burden must be minimal.

■ Openness to the world leads to greater productivity

Another way of increasing competition among companies is to promote openness to foreign markets.

The term "globalization" usually refers to the growing interconnectedness of the planet. But for our purposes here, it refers to the growing interaction between our local economy and the economies of other provinces and countries. Communication, transportation and travel are costing less and less, which means that merchandise, services, capital and people are circulating more and more freely among the different parts of the world.

These dramatic changes in our lives come with advantages and disadvantages.

What are the advantages of international economic integration for Quebecers? It offers above all a highly effective means for expanding our horizons, increasing our investments and productivity, and improving our standard of living. Several mechanisms work together to bring about these results. Here is a list of some of them.

A first mechanism

The first mechanism is openness to external markets which constitutes an extension of the internal competition in our economy. It leads to the same consequences that internal competition does, but at a higher level of intensity. It adds to the pressure by which internal competition compels businesses towards more innovation, more investment and more productivity.

[63] Government of Québec: *The Québec Advantage –The Québec Government's Economic Development Strategy*, Québec, 2005.

The phenomenon we are describing is the same in economic matters as in sports; Olympic diver Alexandre Despaties pushed himself even harder and was suitably rewarded when he stopped diving just from Québec diving platforms and went up against his competitors from around the world (who were also his friends) in Los Angeles and Beijing.

The Canada - US Free Trade Agreement, which has been in effect since 1989, provides a unique opportunity to evaluate the advantage a country gains in agreeing to eliminate tariffs on imports in bilateral trade with its neighbour.

To begin with, the advantage of the free trade agreement for Québec exporters and importers is obvious simply from what the statistics on Québec's foreign trade after 1988 tell us.

The US recession in 1990-1991 slowed the impact of the free trade agreement, but as Graph 37 shows, Québec's international exports and imports of goods and services rapidly grew when the US economy recovered in 1992.

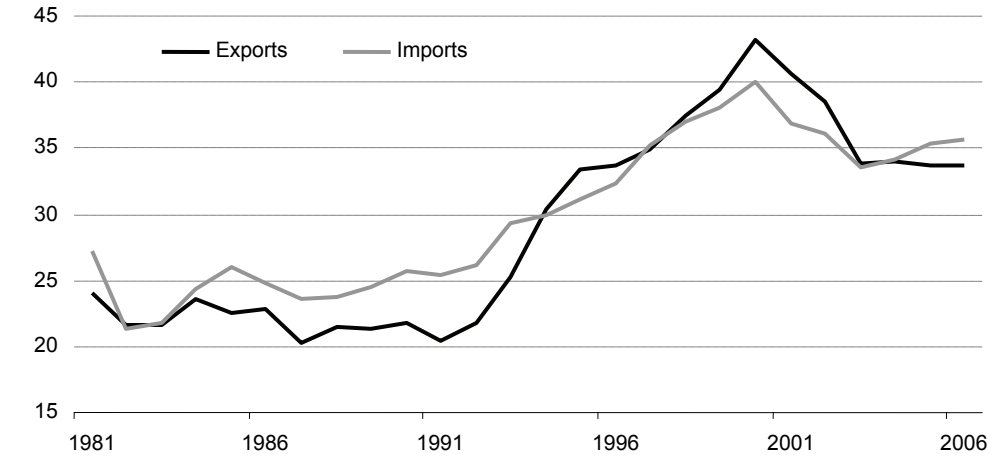
- Québec's imports and exports accounted for 40% and 43% respectively of its domestic income in 2000.
- This increase is due in particular to the growth in trade with the US; a proportionate drop in trade with other countries was seen during the same period.

The pronounced increase in exports is obviously due to the drop in the Canadian dollar's value from 87 cents US in 1991 to 67 cents US in 2000. This depreciation might have worked against imports, but neither did it prevent them from rising just as exports did.[64] Therefore, there must have been a factor other than the exchange rate behind the increase in both exports and imports. That factor is the easier access that Canadian and American companies have to each other's market thanks to the free trade agreement.

[64] In actual volume (constant dollars), exports increased by 130% and imports increased by 80% during the period from 1992 to 2000.

GRAPH 37

Evolution of Québec's foreign trade as a percentage of its domestic income, 1981-2006
(in percentages)



Source: Statistics Canada.

Beginning in 2000, the economic slowdown in the US, the flooding of North American markets by Chinese exports and the extremely rapid increase in the value of the Canadian dollar slowed down the expansion of Canada-US trade. But even in 2006, as Graph 37 shows, Québec's foreign trade easily surpassed the levels recorded in the years prior to the implementation of the free trade agreement.

The unfortunate story of the Canada-US softwood lumber dispute has led some to doubt the benefits of the free trade agreement for Canada. But these doubts are not based on logic. The reality is that, without the legal recourse permitted by the free trade agreement and its successor, the North American Free Trade Agreement (NAFTA), the effects of the conflict would have certainly been more severe for Canadian softwood producers. That being said, it is obviously desirable that NAFTA be improved in order to prevent or quickly resolve such disputes in the future.

The free trade agreement has not only led to an increase in the volume of our exports to the US; it has also had a highly beneficial effect on the productivity of Canadian companies which were forced to deal with the very sharp drop in tariffs.

The most comprehensive study on this topic is one the conducted by professor Daniel Trefler of the University of Toronto.[65]

— In comparing the performance of Canadian factories before and after the introduction of the free trade agreement, he estimated that Canadian factories which were competing with US imports and which had to cope with the biggest drops in tariff protection saw their production per worker increase by 15%.

— Trefler estimated that Canadian factories which exported their products to the US and benefited from the sharpest decreases in US tariffs increased their production by 14% per worker.

These effects, attributable solely to a greater openness to foreign markets, have been enormous. Even though Canada and Québec trail far behind the US in terms of productivity, the gap would be much wider if there were no free trade agreement.

A second mechanism

A second mechanism stemming from the liberalization of trade is the use of economies of scale which can give an advantage to companies and workers in smaller economies like those of Canada and Québec.

Some products may require a minimum volume of production in order to be profitable or they may become even more profitable if their production levels are already high. This occurs when costs go down as volume of production increases.[66]

By increasing the market size for our companies - in this case, the entire North American market - and allowing them to develop larger scales of production, liberalization of trade increases the profitability of some of our companies and thus their levels of investment and productivity.

---

[65] Daniel Trefler: "The Long and Short of the Canada-U.S. Free Trade Agreement," Perspectives on North America Free Trade Series, no. 6, Industry Canada, 1999. A revised version of this paper appeared under the same title in *American Economic Review*, vol. 94, September, 2004, pp. 870-895.

[66] An easy example to understand here is maple syrup production, for which a certain proportion of costs does not change much according to scale of production. One of the members of our task force took part in a recent study which found that, in 2003, the economic cost of producing a pound of maple syrup in Québec was as high as $4 in a small operation with less than 5,000 taps, but came to just $2 per pound in a large operation with 20,000 taps or more.

A third mechanism

Speeding up the pace at which Québec companies adopt new technologies is our third mechanism accompanying the greater liberalization of international trade.

Technology transfer is happening at a faster and faster rate. Québec companies can benefit from innovation that occurs elsewhere, for example, by importing production equipment developed in another country. Smaller players like Canada and Québec benefit enormously from being able to access innovations that they themselves have not developed.

The Canada-US Free Trade Agreement allows our companies to benefit from R&D conducted in the US, which is the country with the highest R&D spending in the world. It was recently estimated that the impact of American R&D spending on Canadian productivity is equal to 40% of the impact created by the same amount of spending in Canada.[67] The difference between the two is that American spending costs us nothing, or almost nothing, while free trade allows our companies to take advantage of American R&D.

Our fourth mechanism: The multinationals

Finally, technology transfer also occurs through the activities of the foreign multinationals that operate in Québec and through the activities of our own multinationals operating in other parts of the world.

This is one of the reasons why multinationals (Québec, Canadian and foreign) are more productive on average than local businesses are, as we mentioned in Chapter 2.

The globalization of our economy undeniably brings us important benefits. But it also raises concerns, often for legitimate reasons. We are concerned, for example, about the growing inequalities and the job losses that have accompanied the globalization of trade during the past 30 years.

[67] Ram Acharya and Wolfgang Keller, "Technology Transfer through Imports," Working Paper No. 13086, National Bureau of Economic Research, Cambridge, MA, 2007.

Does globalization really exacerbate income disparities? Recent research tends to say that it does not.

- In the US, inequalities are attributed primarily to home-grown factors: technological progress, which heightens the need for highly qualified employees; the drop in unionism; tax reductions favourable to upper income earners; greater use of performance-based pay; and increasing social tolerance of inequality.[68]

- Inequalities in Canada also increased in the 1990s (to a lesser extent than in the US) and in Québec (to a lesser extent than in the other provinces). Québec has a high and stable unionization rate; its tax system is more progressive; its minimum salary provides a purchasing power among the highest in North America; and its social policies are among the most advanced. Drug insurance, extended parental leave and subsidized childcare services are Québec innovations in North America. Québec is the most egalitarian jurisdiction on the continent.

Nevertheless, the globalization of trade has not turned everyone into a winner. By increasing the pressure of competition, it has hit some workers' groups hard, in particular those who have been subject to group layoffs.

A recent study by Statistics Canada shows that even during good economic times, such as the period from 1997 to today. For Canadian workers who have lost their jobs due to business closings, it has taken those who had been working an average of five years or more seniority at least three years to get back up to the income level they were at before they were laid off, no matter what the economic sector they were working in .

The pressure from outside competition is just one of the causes of business closings.[69] For example, Trefler estimated that after the signing of the free trade agreement, 14% of jobs disappeared, on average, from the least productive Canadian factories.[70] The important drop in forestry and manufacturing jobs in Québec since 2002 is due in part to increased competition from South America and Asia.[71]

---

68 See, for example, Thomas Lemieux: "The Changing Nature of Wage Inequality," Working Paper no. 13523, National Bureau of Economic Research, Cambridge, MA, 2007; or David Autor, Lawrence Katz and Melissa Kearney: "The Polarization of the U.S. Labor Market," *American Economic Review*, vol. 96, May, 2006, pp. 189-194.

69 René Morissette, Xuelin Zhang and Marc Frenette: *Earnings Losses of Displaced Workers*, catalogue no. 11F0019MIF, no. 291, Statistics Canada, Ottawa, 2007.

70 Trefler, op. cit.

71 Statistics Canada's *Labour Force Survey* indicates that from 2002 to 2007, the primary forestry sector lost 9,100 jobs (37% of all jobs) and the manufacturing sector lost 105,900 jobs (16% of all jobs).

But sitting on the sidelines is not a solution. Trying to make the problems of globalization disappear would be no better. It is better to try to get the most out of the advantages of globalization, at the same time ensuring that the process is civilized, assisting and compensating the losers, protecting the environment, combatting the exploitation of children, and preserving the sovereignty of states.

Potential levers

- **Facilitate inter-provincial and international trade, and direct investment of Québec multinationals abroad and of foreign multinationals in Québec.**
- **Ensure the security and openness of the Canada - US border.**
- **Ensure the sustainability of NAFTA.**
- **Support government efforts to promote mobility of people and free circulation of goods and services among the regions of Canada and between Canada and the rest of the world.**

❑ Be able to count on solid public infrastructure

Finally, good public infrastructure is also essential for supporting a solid business environment.

Public infrastructure includes highways, bridges and viaducts; energy infrastructure; schools and hospitals; environmental protection and water management infrastructure; government buildings; public transit; ports and airports; cultural and sports facilities; and public housing. Investments in public infrastructure serve as a complement to business investment in fostering productivity growth.

We know two things about investment in public infrastructure.

■ It plays an important role in the creation of wealth

The first thing we know is that, regardless of the region or country, investment in public infrastructure plays a significant role in the process for creating wealth.

Researchers at Statistics Canada recently estimated that an investment of one dollar more in public infrastructure, followed by the necessary maintenance and repair work, will save the typical company in Canada seventeen cents per year. According to these researchers, infrastructure investment was responsible for 15% to 20% of productivity growth in Canada's private sector for the period of 1961-2000.[72] With good infrastructure, we can do more in less time.

Infrastructure is very important for business, whether in transportation (highways, bridges, rail lines, airports, public transit), communication (telephony, Internet), energy (electricity, natural gas, fuel oil) or research. But education, health, security and recreational infrastructure is also important. It would be difficult for a company to attract and keep employees in Québec if the employees could not count on quality education and medical/hospital services.

■ Governments are lagging behind in infrastructure reinvestment

The second thing we know – as illustrated by Graph 38 – is that, after having shown a remarkable spurt in growth until 1975, investment in the Québec public sector[73] fell dramatically as a percentage of the gross domestic product (GDP) from 1976 to 1986. It has only begun to rise again since 2000.

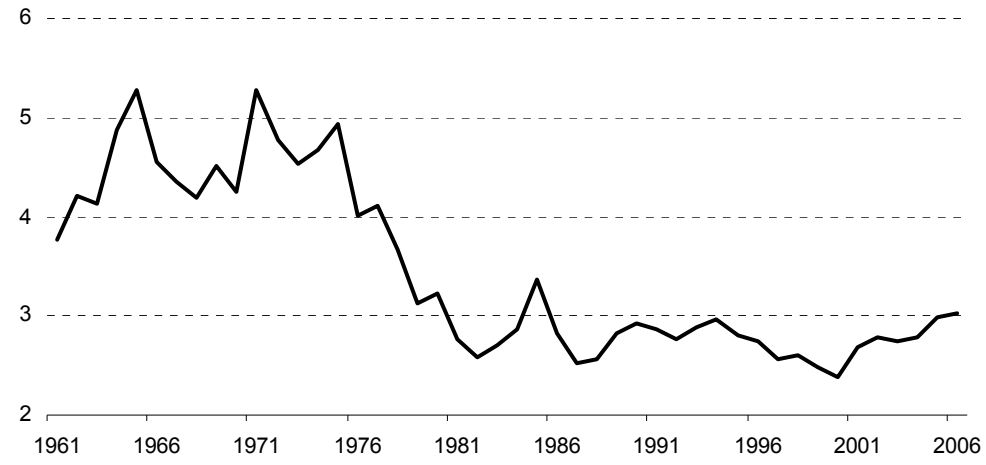
[72] Tarek Harchaoui, Faouzi Tarkhani and Paul Warren: "Public Infrastructure in Canada, 1961-2002," *Policy Analysis*, vol. 30, September 2004, pp. 303-318.

[73] This encompasses the three levels of government and the health and education systems.

The other Canadian provinces have undergone a similar evolution. Graph 38 shows that Québec's public sector invested amounts in the range of 5% of Québec's gross domestic product between 1965 and 1971, but the percentage of investment has not gone above 3% since 1985.[74]

GRAPH 38

Total investment in Québec public infrastructure from 1961 to 2006, as a percentage of GDP
(as a percentage of Québec's GDP)



Source: Statistics Canada.

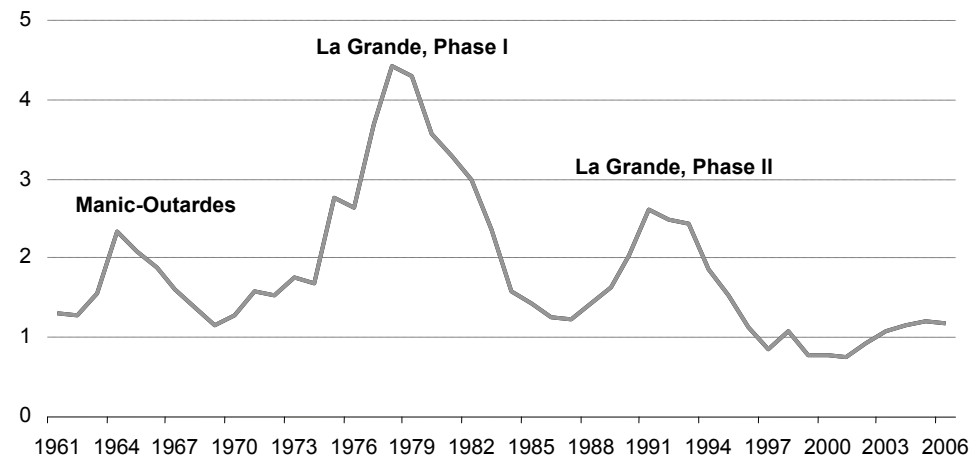
[74] Each percentage unit of Québec's gross domestic product is the equivalent of $3 billion dollars in 2008.

Graph 39 shows that the massive capital investments of Hydro-Québec supported Québec's economy with the Manicouagan-Outardes project (1964-1967) and the two phases of the La Grande project (1975-1983 and 1990-1993). But it also shows that hydroelectric development stopped with the suspension of the Grande-Baleine project in the mid-90s. Work was resumed on this project on a more modest scale beginning in 2002.

Overall, the drop in public investment in Québec has particularly affected the highway system, the health and education systems, municipal infrastructure and more recently, energy development.

GRAPH 39

Capital investments by Hydro-Québec as a percentage of Québec's GDP from 1961 to 2006
(in percentages)



Sources: Hydro-Québec and Statistics Canada.

■ Québec's energy strategy and infrastructure plan

All governments in Canada are aware of the scope of the problem regarding the deterioration of infrastructure during the past decade. Most of them have recently developed programs to restore their infrastructure over a period that will cover several years.

Québec made public a new energy strategy in 2006 and an infrastructure reinvestment plan in 2007.[75]

— The objectives of the energy strategy include speeding up hydroelectric development and efforts to develop the potential of wind energy, as well as strengthening energy security and efficiency.

  Construction has begun on the Eastmain-1-A-Sarcelle-Rupert complex. It should provide 900 MW of power and an annual amount of 8.5 billion KWh of energy at a cost of 5.1 cents per KWh by 2011. The various wind energy projects could bring 4,000 MW of additional power into service by 2015.

— Québec's new infrastructure plan will add $3 billion per year until 2012, or 1% of Québec's annual GDP, to the previously set expenditure budget. The Task Force considers the development of the energy strategy and infrastructure plan to be excellent news for the overall efforts in speeding up productivity in Québec.

[75] Ministère des Ressources naturelles et de la Faune: *L'énergie pour construire le Québec de demain* (Energy for building the Québec of tomorrow), Québec, 2006; and Conseil du trésor: *Québec Infrastructures Plan: Foundations for Success*, Québec, 2007.

3.2 How can we reduce the cost of investment?

We have undertaken the analysis in this chapter with the idea in mind that a company will invest in a project only if it sees the anticipated return as being greater than the estimated cost.

To this point, we have considered one half of the picture, namely the anticipated return on investment. We have insisted on the fact that if we want to maintain or increase the return on investment, companies must be striving constantly to improve their pure productivity. In other words, they must continually be able to produce more with the finite material and human resources available to them, and to do so more and more effectively.

We have identified five ways and conditions that will allow companies to achieve that objective; i.e., they should:

- implement best practices in their respective sectors;
- become technologically and organizationally innovative;
- have access to more and more highly trained human resources;
- operate in a competitive business environment that is open to the world;
- be equipped with strong infrastructure.

We will now deal with the other half of the picture, namely estimated cost of investment. Here, we identify three types of costs:

- cost of acquiring production facilities and equipment;
- cost (and availability) of financial capital;
- cost of taxation.

3.2.1 Build better in Québec

The first type of cost involves the acquisition of investment goods.

The Task Force did not find any particular problem regarding the cost of production equipment.

- Companies that manufacture such products as industrial machinery, measuring instruments, transportation equipment, computers, computer-related equipment and software, are essentially following the dictates of the North American market and are offering prices closely enough in line with their manufacturing costs.

— However, the situation may be different regarding the cost to acquire structures such as factories, commercial buildings or offices, and civil engineering projects. This is because the construction industry in all regions is closely regulated by local legislation.

The construction industry in Québec is subject to a fundamental piece of legislation, namely the *Act respecting labour relations, vocational training and workforce management in the construction industry* (R.S.Q., chapter R-20).

Workers covered by the Act must be unionized and must belong to a provincial union of their choice. In addition, companies must be accredited and must belong to a provincial association of employers. Under the Act, a single and centralized collective bargaining agreement is negotiated (with allowances for certain sectors). The Act also sets out provisions concerning regional workforce management and supervision of trades and vocational training by a provincial construction commission (Commission de la construction du Québec).

The Québec construction industry went through serious difficulties in the 1970s. The passing of Bill R-20 was due in large part to the submission of the 1975 report by the Cliche Commission of Inquiry, which was created after the James Bay debacle of 1974. Over the past two decades, we have seen an improvement in work relations in the construction industry, along with a reduction in conflicts. Owners and workers are showing competence in their respective duties.

But there is room for more improvement. The construction industry in Québec is not risk-free. When we review the performance of recent construction projects, we are struck by the fact that it has been difficult for them to follow their work calendars and to ensure that the final costs come in near the original estimates.

Some construction projects stick closely to their initial budgets, while others present wide discrepancies. Risk is involved, and any risk is harmful to investment. When the cost is more uncertain, people will think twice before going ahead with the investment. This goes for government, local companies and foreign multinationals.

The Task Force considers that the time is right to bring all industry stakeholders together in order to reflect on how it's working and to study future prospects.

— On the one hand, relations inside the industry are good and a climate of collaboration exists.

— On the other hand, a large number of major construction projects are already underway or will get started within the next few years. We are thinking here, in particular, of the construction of mega-hospitals in Montréal and the work to carry out the government's infrastructure plan.

Québec must successfully manage this accelerated construction activity without harming investment (public or private, local or foreign), at the same time minimizing the risks of conflicts, shortages and cost overruns.

Thirty-five years after the Cliche Commission, there are still many issues to deal with, such as the inter-regional mobility of workers, the balance between vocational training and industry needs, the roles of management and unions, management of workforce placement, the scope and authority of the various trades, issues involving overtime, the ratio of apprentices to mentors, etc.

Potential lever

Bring together construction industry partners to develop the best methods for reducing conflicts, shortages, and schedule and cost overruns for construction projects in Québec.

3.2.2 Boost savings

The second type of cost is the cost of loan capital that allows investments.

To get to the root here, we must understand that the money used to buy shares in a company or to lend the company money allowing it to invest in structures and equipment comes from the savings of someone somewhere. When a financial institution lends to a company, the money comes from the people who have deposited their money with that financial institution.

❑ Is there a shortage of savings in Québec?

The question to ask is therefore: do we lack the savings in Québec necessary for funding business investment?

The answer is that Québec businesses can borrow the money they need in order to invest, even if Quebecers are not saving enough to contribute to such loans

This is possible because companies can borrow from outside Québec. The financial markets are awash in a sea of international funding, and capital moves freely among countries. World markets today are overflowing with money for lending. This is due primarily to the strong economic growth of Asia and of the oil exporting countries which, as we all know, are making mountains of money.

The result is that there is no shortage of money to lend at affordable interest rates in Québec and elsewhere. Naturally, there may be market segments in which lending and investment are more difficult. The venture capital segment for business start-up or growth is one of them; we will return to this topic a bit later on.

However, an important consequence awaits a country that saves more than it lends, we are speaking here of the impact on foreign-owned debt. By itself, this debt is not a problem provided that the performance obtained from business investment in structures and equipment in Québec brings in more than the amount of interest or dividends that must be paid on that investment to foreign lenders.

Saving too little also comes with a price. If we are not saving, it means we are consuming too much. This price affects our society overall, because foreigners rather than Quebecers are pocketing the profits.

— Ireland provides the most striking example to date among industrialized countries. As Table 2 in Chapter 1 shows, Ireland is the second wealthiest country in the world today after Luxembourg. However, from 2001 to 2006, 15% of Ireland's GDP left the country in the form of net foreign payments on interest and dividends. This means that Ireland actually ranks seventh among countries in terms of income per inhabitant, and not in second place as the table would appear to show.[76]

— An example closer to home is that of Alberta, which also pays significant amounts in interest and dividends to foreigners, especially Americans.

In other words, if Quebecers are not saving very much, Québec can still develop without major financial constraints, as is the case with Ireland. However, the income created by economic growth will make foreigners wealthy instead of our own citizens, by an amount equal to the difference between our level of saving and our level of public and private investment.

[76] Source: OECD.

❑ Should Québec be saving more?

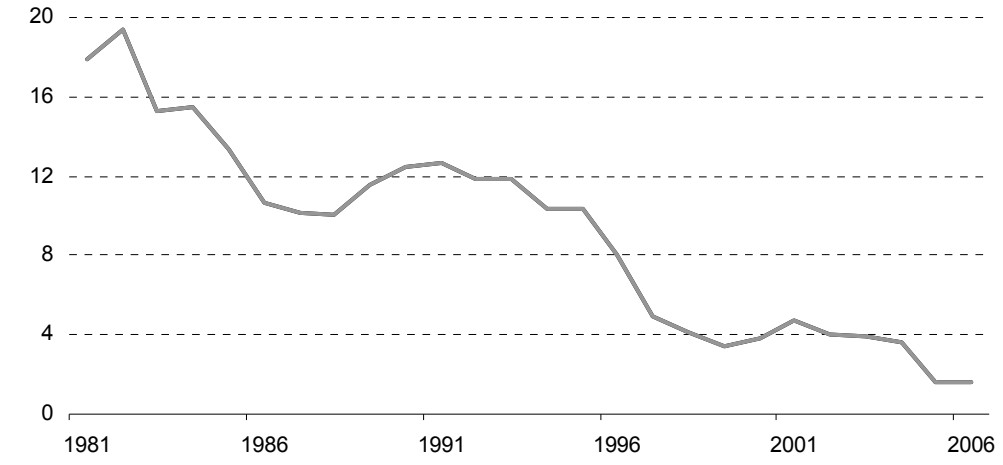
Should Québec save more? The answer is a resounding yes.

The profits that our companies set aside for reinvesting in their buildings and equipment are a form of savings. But as Graph 40 shows, Québec families are saving almost none of their money today. Twenty five years ago, they were saving 18% of their available net income; that proportion shrank to 1.5% in 2006.

Like many other industrialized nations, we consume a great deal and if we lack money, we go into debt in order to keep on consuming. We often get into this situation in early adulthood, with the help of financial institutions that are looking after their own interests. The younger generations in particular are very much at risk of a high debt load. Their population figures will be lower due to demographic changes, but they are the ones who will have to bear the growing financial burden of health care in a few years.

GRAPH 40

Saving rate of Québec households, as a percentage of available personal income from 1981 to 2006
(in percentages)



Source: Statistics Canada.

The Task Force's mandate did not include a detailed examination of the reasons behind the disappearance of savings among Québec families or the attempt to find solutions in that regard.[77]

But we are concerned by this problem.

— The elimination of government deficits beginning in 1996 is a step in the right direction. By borrowing less, the Québec government absorbs a smaller proportion of all savings, which leaves more for business investment.

— But much more must be done to get Quebecers to start saving more.

Potential lever

Increase the means for encouraging Quebecers to save, including taxation of consumption, if the tax burden has to be restructured, and continue to rigorously comply with the *Balanced Budget Act* and the *Act to reduce the debt and establish the Generations Funds*.

3.2.3 Recognize the contribution of foreign investment

A traditional means for countering the lack of savings in order to promote business investment is to turn to direct foreign investment. This type of investment occurs when a foreign company gains control of a local company or builds a new one in Québec with the intention of running it for the long term.

— For example, the American giant Alcoa built an aluminum smelter in Deschambault.

— Of course, direct foreign investment may also go in the other direction. For example, Québec's Cirque de Soleil set up shop in Las Vegas.

For many years in the 20th century, Canada was the most important country for receiving direct foreign investment, especially from England and the US.

[77] One such solution is the innovation in the federal government's 2008 budget, i.e., the Tax-Free Savings Account. There are others, such as automatic savings deductions from pay cheques, prohibition of unsolicited credit offers, education on economic matters in the schools, taxing consumption, etc.

Today direct foreign investment is widespread in almost every country of the world. From 2003 to 2006, it increased by an average of 32% per year in the member nations of the United Nations, yet another sign of the increasing connectedness of the planet.[78] China and India are two countries in particular where direct foreign investment is growing rapidly. For now, Canada is ranked fifth in the world as a destination of direct foreign investment. In 2006, direct foreign investment in Canada stood at $79 billion (Canadian dollars), or 5% of the world total.

Unfortunately, there are no data showing how this amount is distributed among Canada's provinces. But the data we presented in Chapter 2 indicate that just 13% of jobs in Québec are controlled by foreign interests. This is lower than the Canadian average, which is probably higher than 20%.

Statistics Canada has conducted extensive research for more than 20 years on foreign companies. One conclusion which clearly emerges from this research is that multinationals (Québec, Canadian or foreign) perform at much higher levels than the average level of companies operating solely in Québec, in terms of productivity, salaries, research, and technological and organizational innovation.

— Despite their relatively modest presence in Québec, foreign multinationals were, from 2004 to 2006, the source of 40% of equipment investments in Québec companies and of nearly 50% of investments in our service sector.

— Foreign multinationals contribute more to investment in Québec than in the rest of the country.

❑ Foreign takeovers

Takeovers of Canadian companies by international companies have increased in recent years, bringing back fears that have periodically haunted the Canadian psyche for the past two centuries.[79]

— First of all, these takeovers raise political concerns which the Task Force considers to be entirely legitimate, in such matters as national identity, strategic national defence interests, finance, energy, communication, transportation, and public services.

[78] Source: Databank of the United Nations Conference on Trade and Development (UNCTD).

[79] Fears about direct foreign investment in Canada reached their peak in the 1950s, leading to the creation of the Royal Commission on Canada's Economic Prospects, which was chaired by Walter Gordon. The commission's report was published in 1957 (Queen's Printer, Ottawa).

— Secondly, in terms of economics, there may be fears that giving foreign multinationals too rapid a foothold would compromise the development of a dynamic network of Québec and Canadian multinationals inside our own economic space, which is already narrow enough in scope.

But this consideration is countered by one fact and two principles.

— The fact is that right now, foreign multinationals occupy a relatively limited place in Québec's economy.

— The first principle is that of competition. Protectionism may appeal to us over the short term, but it brings with it an important cost over the longer term, as we stressed earlier. If we protect our businesses too much from outside competition in order to nurture their growth, they will lack the incentive that would normally give them the drive to excel and achieve world-class status.

— Reciprocity is the second principle. Our good sense tells us we should give foreign multinationals that want to bring their operations to Québec the same freedom that we hope other nations, as our economic partners, would give to our multinationals wishing to implement operations in their country.

Foreign takeover of local companies is a legitimate concern and is understandably a sensitive one. What is important here is to establish rules and then stick to them.

Potential lever

Establish simple and transparent rules governing the takeover of local companies by foreign multinationals.

❑ Foreign investment prospecting

On the whole, Québec's attitude towards direct foreign investment has traditionally been positive. For many years, Québec has actively tried to attract foreign investment at the international level.

But foreign investments are highly mobile and competition is fierce the world over to attract as much foreign investment as possible. Even the subsidiaries of a single multinational will compete with one another in order to increase their share of the parent company's investments. For example, the Montréal subsidiary of the French multinational Ubisoft might seek to obtain greater investment by the company for Montréal or Québec City. This is the same as the competition we see among countries or among the different regions of the same country.

This competition is played out among thousands of investment promotion and prospecting agencies in 150 countries. With the emergence of the Asian countries and their new-found power, success is more difficult than before and requires new approaches.

Québec still has important advantages that will allow it to attract direct foreign investment.[80]

— Leaders of Québec subsidiaries of foreign-owned multinationals consider the Québec market to be quite narrow, but they are very interested in the relatively free and easy access to the North American market. This access is by far the biggest advantage Québec has among the factors that companies use as the basis for deciding where to set up operations.

— Our quality and affordable workforce is also highly appreciated, despite the current shortages. The increase in the value of the Canadian dollar has also begun to chip away at this advantage.

— A less important advantage is the availability of affordable energy; it is obviously more attractive to companies that are big consumers of energy.

— Financial aid and tax credits from government get a good report card, but business taxation, i.e., business income taxes, capital taxes and payroll taxes, get a failing grade.

How can Québec reinforce its ability to attract foreign multinationals? It can do so in three ways: strengthen the advantages it already possesses, correct the shortcomings of these advantages, and develop new ones.

— In the first case, Québec must make it a high priority to ensure security of its access to the US market through ongoing and effective lobbying of the US and through solid support of federal government initiatives which seek that same objective. Indeed, the future of the entire Canadian economy depends on how this issue plays out.

  Québec must also make a strong effort to develop its labour force through the education system and training, as well as through an immigration policy that is open to qualified workers.

[80] Much of the information presented here is taken from a CAI Global survey entitled *Why reinvest in Québec?* (Westmount, 2006). This 2006 survey gathered information from 92 leaders of Quebec-based subsidiaries of foreign multinationals.

Québec must also guarantee a certain level of stability in its financial aid and tax credit systems for business R&D, which have already earned it a good international reputation. The availability of stable support for R&D is an important strategic advantage for Québec, because close to 75% of direct foreign investment in Québec is in the form of reinvestments by Québec subsidiaries of foreign multinationals.

— With regard to the shortcomings that must be corrected, one appropriate measure here would be to lighten the tax burden on businesses.

  The announced elimination of the capital tax is a step in the right direction, but its implementation date could be moved up.

  With regard to payroll taxes, we note that they are four times higher in Québec than elsewhere in Canada. We must, at minimum, prevent any further expansion of these taxes.[81]

— Concerning new advantages to develop, here we must think of promoting the emergence of technological or specialized niches in such areas as finance, culture, transportation, multimedia, solar energy and so on, while remaining open to unexpected developments that could arise thanks to our economy of dynamic entrepreneurship.

  This does not mean in any way that we should neglect traditional activities such as the aeronautics and pharmaceutical industries.

Potential levers

— **Make preserving access to the US market a high priority.**

— **Work steadfastly on workforce development.**

— **Stabilize the R&D tax system.**

— **Move up the date of the elimination of the capital tax**

— **Avoid increasing the payroll tax.**

— **Promote the emergence of new specialized industrial or technological niches.**

[81] Besides paying mandatory employment-related costs, Québec employers paid $4.8 billion in taxes on a total payroll of $125 billion in 2005, or 38 dollars on every $1,000 of payroll. In all the other provinces, employers paid $4.5 billion in taxes on a total payroll of $480 billion, or 9 dollars on every $1,000 of payroll. In addition, one mandatory employment-related cost, occupational health and safety, cost Québec employers 38% more than in the rest of Canada.

Along with the release of its 2006 survey which encompassed 92 leaders of Québec subsidiaries of foreign multinationals, CAI Global summarized the stakes for Québec in lucid terms as follows:

"[...] **it is essential that the Québec government develop a clear, comprehensive and easy-to-understand policy. The current policy is not necessarily bad, but it is often poorly communicated to economic stakeholders, which prevents them from being able fully to understand it** [...] **This leads to uncertainty among investors and when it comes to direct foreign investment, uncertainty is fatal.** [...] **The political stakeholders need to be more creative, innovative and clear concerning the economic direction in which they want to take the province, so that investors will know their roles and the actions they can take through their involvement in this effort. To succeed in this matter, Québec must, with regard to the multinationals, develop a brand strategy that will place the province and its attributes in the forefront of investors' minds. It is necessary to let investors know about the strengths of Québec and all it represents."**[82]

A key element of this diagnosis by CAI Global is that Québec is not currently succeeding at fully communicating its policy and advantages to the international community. The Task Force shares this feeling.

— The results of studies by KPMG, which clearly show the exceptional competitive advantages enjoyed by Québec, are not sufficiently known and used to their full extent.[83] Yet these studies indicate that several Québec cities are ranked very high at the international level in terms of business implementation and operation costs, and maintain their ranking even after the necessary adjustments are made to account for the increase in the value of the Canadian dollar in recent years.

— Québec also suffers from the fact that there is a multitude of interveners providing services in foreign investment prospecting and assistance for foreign investment in Québec, along with others working on behalf of subsidiaries already operating in Québec. The absence of coordination of these interveners only aggravates the problem.

  In the greater Montréal region, for example, we find Investissement Québec, the Société générale de financement du Québec, Montréal International, the International Financial Centre of Montréal, the local development centres, regional branches of the Ministère du Développement économique, de l'Innovation et de l'Exportation, and sectoral branches of that same department.

  All of this is costly for the government, but even more importantly, creates confusion and a weakening of Québec's credibility in the eyes of foreign clients.

---

82 CAI Global, *op. cit.*, p. 83.

83 KPMG, *Competitive Choices,* 2006 Edition, Montréal.

The Task Force does not doubt for a moment the good will and dedication of all these stakeholders. But the overall image presented by this jumble of efforts is that of an uncoordinated free-for-all.

Potential lever

Review and clarify the functions of the various departments and organizations involved in foreign investment prospecting and reduce the numbers of these departments and organizations, if possible.

Québec's international voice must be clear, simple, unified, competent, convincing, competitive and well coordinated.

3.2.4 Venture capital: Hold the course

Venture capital funds provide capital, with the support of their networks and experience, for the creation of concepts (seed capital) the launch of new companies (start-up capital) and capital for future phases of new companies' development (growth and expansion capital). These new companies are usually technological companies that show good development potential.

As their name indicates, these funds operate in a context where business risk is extremely high, but the return can also be very high if the investment works out.

The venture capital industry is active and dynamic in Québec. Since 2003, it has invested an average of $600 million per year.[84]

In 2003, a task force created by the Québec government and headed by Pierre Brunet noted the predominant role of the public sector in Québec's venture capital industry, the absence of foreign capital, the difficulties specific to each region, and certain shortcomings that required funding of $20 million or more.[85]

— It proposed refocusing the roles of the Société générale de financement du Québec and Investissement Québec within this market to allow more room for the private sector and to create funds for regional initiatives based on public and private ownership in place of the former Innovatech companies.

[84] Source: Thomson Financial.

[85] Ministère du Développement économique et régional, *Rapport du groupe de travail sur le rôle de l'État québécois dans le capital de risque*, Québec City, 2003.

— The Brunet Report also gave a nod of approval to the ACCORD project (Action concertée de coopération régionale de développement), which involves developing consensus in the regions on niches of excellence in partnership with regional business communities.

Since the release of the Brunet Report, funds for regional initiatives have been made available by way of the Fonds d'intervention économique régionale (FIER), under the aegis of Investissement Québec.

— Government funding is playing a more modest role.

— Tax-advantaged funds such as the Fonds de solidarité FTQ and Desjardins Venture Capital are taking on more importance.

— In addition, the Caisse de dépôt et placement du Québec, the Fonds de solidarité FTQ and Investissement Québec are working jointly to encourage the development of private funding and to attract foreign funding to Québec.

The recommendations of the Brunet Report are being heeded and the strategic choices by the Québec industry since 2004 are starting to bring verifiable results. However, these changes take time and the achievements made to date must be further consolidated.

Furthermore, a recent report by SECOR has shown that the industry tends to prefer downstream investment (growth and expansion capital) to upstream investment (seed capital) due to the high risk of failure in the seed capital phase.[86]

— SECOR is concerned that with less seed capital investment, there will be fewer project start-ups and fewer opportunities for projects to grow.

— It concluded that the private sector in Québec, like elsewhere, cannot provide the necessary seed capital on its own. SECOR recommended the creation of a specialized seed capital fund for investments under $1 million dollars, to be funded in equal parts by the government and the private sector.

The Task Force believes that the concern expressed by SECOR about the difficulties of ensuring profitability in seed capital investment and about the tendency of industry to ignore this niche is well-founded.

But it would be better, for the moment, to let the current main stakeholders, several of which are from the government sector, continue the work begun to reorganize the industry and jointly seek solutions, before any call is made for the government to intervene directly. These stakeholders include, among others, the Caisse de dépôt et placement du Québec, Investissement Québec, Fonds de solidarité FTQ, Desjardins, iNovia, Montréal Start Up, and Anges Québec.

[86] SECOR Conseil, *Capital d'amorçage* [seed capital], Montréal, 2007.

Potential levers

- **Support restructuring efforts by the Québec venture capital industry through the approach proposed by the Brunet Report.**
- **Continue supporting research on regional niches of excellence as part of the ACCORD project (Action concertée de coopération régionale de développement).**
- **Closely follow the evolution in the availability of venture capital for seed financing and project start-ups.**

3.2.5 Financial aid: End the discrimination against the service sector

Financial aid from the government is an important source of funding for business investment in Québec.[87]

- Investissement Québec is the government's primary agency for business investment. Its mandate is both simple and broad in scope: contribute to the growth of investment in Québec. It is not hampered in any way regarding its role in prospecting and supporting investment in Québec companies, here at home or abroad. Its incorporating act gives it the explicit mission to be the government's authorized financial agency for the funnelling of investment and to serve as the government's primary liaison with businesses.
- Investissement Québec manages many programs. In 2006-2007, it authorized total funding of $850 million for Québec companies, with 37% going to the resource regions; of the total amount allocated, 82% went to the manufacturing sector.[88] Investissement Québec is a self-funded public financial intermediary and has accumulated a surplus of $54 million for this financial year.
- The regional distribution of Investissement Québec's interventions is balanced.

[87] With regard to the issue of financial aid for investment discussed in this section, Pierre Fortin took part in a 2007 study by the Montréal firm Analysis Group, as mandated by Investissement Québec. The purpose of the study was to analyze the historical evolution of the manufacturing sector and the operational structure of Investissement Québec.

[88] Investissement Québec, Rapport annuel 2006-2007, Québec, 2007.

— However, with 82% of its activity in the manufacturing sector, which accounts for just 20% of Québec's GDP, its interventions suffer from severe sectoral imbalance. Investissement Québec is not itself directly responsible for this situation, which is instead imposed on it by government programs that it is obliged to implement. At root, it is the government's intervention philosophy for economic development that is responsible for this narrow sectoral approach. This must be corrected, in our opinion.

In addition to the Caisse de dépôt et placement du Québec, whose mission is primarily to manage the savings of its depositors, there are several other government departments and organizations that intervene in economic development, public financing and business financing. These include the Société générale de financement du Québec, Financière agricole du Québec, the Société de développement des entreprises culturelles, the Ministère du Développement économique, de l'Innovation et de l'Exportation, the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation and the Ministère du Tourisme.

Potential lever

End the out-dated discrimination by government programs against the service sector and treat all economic sectors on the same footing.

With this lever, the Task Force is not trying to minimize the difficulties that have affected the manufacturing sector for the past five years, difficulties we covered extensively in Chapter 2. In the present economic situation, the manufacturing sector needs financial support from government to modernize operations (e.g., processing) and to manage the necessary changes and transitions. This support must be given unreservedly.

But the principle of non-discrimination put forward here is seen as being fundamental to government action in economic development over the mid- and long terms. An additional dollar of revenue for Québec is the same as any other one, no matter what sector of the economy it comes from.

The Task Force could not examine in detail, within the time available, the financing and investment assistance provided by the Société générale de financement du Québec, Financière agricole du Québec, the Société de développement des entreprises culturelles, the Ministère du Développement économique, de l'Innovation et de l'Exportation, the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation, the Ministère du Tourisme, and others.

— The Task Force is concerned, however, about the overall logic behind this superstructure of levers and organizations that has been built up haphazardly over time, with highly diverse governance forms, clienteles, action strategies, levels of self-funding, and accountability procedures as the result.

— The objectives and functions of each organization should be reviewed and clarified, which would include establishing a hierarchy for their activities and ensuring division of their work in ways that would benefit clients and businesses in Québec.

— It is not necessary for this review to lead to the creation of a sole authority, as we saw with the bringing together of the various financial regulatory agencies in 2002 under a single umbrella, the Autorité des marchés financiers. But it should be undertaken as soon as possible.

Potential lever

Review and clarify the objectives and functions of the various government departments and agencies involved in providing financial support for business investment and economic development.

3.2.6 Taxation: Reduce investment taxes

Further to the cost of acquiring investment goods and the cost of financial capital, taxation is the third factor that influences the cost of investment.

— We have already noted that taxation can be used to improve the expected return on certain types of business investment. For example, tax credits have long been used at the federal and provincial levels to encourage R&D spending.

— We also mentioned, but without supporting it, the possibility of transforming the capital tax credit now being applied to the purchase of manufacturing and processing equipment by forestry and manufacturing companies into an investment tax credit that would cover broader categories of investment goods (including spending in ICTs) and more sectors of the economy (including the service sector).

We will now look at the tax burden as an element of the cost of investing. There are two major taxes which target business investment.

— The first one is the corporate tax, which is paid as a percentage of the annual income earned on capital. This tax has a federal portion and a provincial portion.

The federal portion in 2008 comes to 19.5% of income, while the provincial portion comes to 11.4%. The combined federal-provincial corporate tax is thus 30.9%. Taxes are lower for SMEs, at 11% federally and 8% provincially, amounting to a total of 19%.

— The other major tax is the capital tax that a company pays annually on its accumulated assets.

  There is no federal capital tax to pay in 2008; this tax was eliminated in 2006. But a capital tax still exists in Québec. The general capital tax rate in Québec is 0.36% of assets. SMEs having total assets of less than $1 million are exempt from this tax. The exemption rate gradually decreases until assets reach $4 million.[89]

Following is an example to explain this hodgepodge system.

— Assume that a large Québec company records net taxable income of $1 million in 2008.

  — It will pay a federal tax of $195,000 (19.5% of $1 million) and a provincial tax of $114,000 (11.4% of $1 million).

  — If the value of its accumulated assets comes to $15 million, it will also pay the Québec capital tax of $54,000 (0.36% of $15 million).

  — It will therefore pay a total of $363,000 in taxes to the two levels of government.

— If, on the contrary, the company records a loss of $1 million, it will obviously not have to pay any tax on its income (no income means no tax), but it will still have to pay the Québec capital tax of $54,000, which will increase its after-tax loss to $1,054,000.

When we include the initial acquisition cost and investment financing cost (for structures or equipment), we see that the taxes applied to profits and capital value increase the total cost of investing and reduce the expected net after-tax return on the investment, i.e., the return, which is what counts for the company at the end of the day.

If their taxes are too burdensome, investment is less profitable. The result is less business investment. That is why we must be attentive to taxation when we analyze business investment.

[89] Financial institutions are subject to additional specific conditions regarding the calculation of their capital taxes.

❑ Tax the right amount the right way

We would all be happy if we did not have to pay taxes. But what we think is free isn't free at all.

If we want to benefit from public services, as seen in a universal and free health system, a free or modestly-priced education system, free highways, bridges and viaducts, low-cost childcare services, a universal drug plan, a reasonable income security system and an adequate pension plan, we have no choice but to pay income tax (and other taxes, tariffs and contributions). This is because the people who provide these public services receive salaries as well.

We can avoid paying income tax for a while by borrowing, but we will then have to pay the interest on the debt incurred, which means we end up paying more income tax. In other words, debt is simply a way of delaying paying income taxes, to which must be added payment of the interest on that debt.

But just as we suggested with regard to investment, people's behaviour is changed by how much tax they pay and by how they are taxed. The more citizens are taxed, the more they will look for ways to avoid paying taxes, and the greater the risk of undesirable consequences, e.g., less investment, more black market activity, more smuggling, more under-the-table work, more bartering, etc. The level of taxation is very important.

In Québec, the tax burden comes to 39% of our annual GDP, versus 32% in the rest of Canada. Québec is among the top-third of OECD member countries that provide the most public services and are thus the most heavily taxed.[90]

It is perfectly legitimate for Québec to provide more public services than are provided elsewhere. But as soon as we have decided to do that, the second question demands an answer: how should we tax? Income taxes and other forms of taxation do not all have the same undesirable effects on people's decisions and behaviours. There are several ways in which governments can act, with each one leading to the same amount of tax revenue, and some ways are better than others.

[90] Source: OECD and Statistics Canada.

❑ Tax consumption instead of investment

Three general principles have guided our evaluation of the current tax system and the possible changes that could be made to it in order to promote investment in Québec, despite the relatively high overall tax burden that we have collectively decided to bear so that we might have more public services:

— To the greatest extent possible, we should tax what we take from the economy rather than what we bring to the economy to develop it In other words, we should tax consumption instead of investment.

— The long-term stability and credibility of tax policies are fundamental to allowing business investment to flourish. When a company decides to invest, it is making a commitment not just in keeping with the current economic environment but it is also envisioning where it will be in ten, twenty or thirty years.

— Because the planet is becoming more and more interconnected, our business tax system must be able to stand up well in comparison to the tax systems in other regions and countries. If our taxes are not competitive, foreign companies will not invest here and many of our own companies will invest elsewhere. As a consequence, it may be necessary for our taxes to be lower than in another region if for some reason or another, e.g., stronger productivity or lower risk, that region shows a stronger return on investment than Québec does.[91]

Why tax consumption?

People can do one of two things with their income – consume or put money aside for the future, in other words, save their money. In saving money, people are postponing consumption until the future and at the same time earn interest on the principal.

[91] An example very close to home illustrates this consequence. In 2007, the overall investment tax rate in the US was 37.8%, the fourth highest in the world. In Canada, the rate was 30.9%, putting Canada 11th in the world. But because pure productivity growth is faster in the US, the before-tax return on investment is higher in the US than in Canada. This allows Americans to tax investment at a higher rate than Canada does but still show a higher investment rate. Another factor is that individual taxpayers in the US pay less tax on dividends than do their counterparts in Canada. For the tax rates in the US and Canada, see: Jack Mintz, "2007 Tax Competitiveness Report," Commentary no. 254, C.D. Howe Institute, Toronto, 2007, p. 9.

Obviously, when we tax consumption, we make it more expensive. This encourages people to consume less and to save more. Graph 40 shows the dramatic decline in personal savings in Québec over the past 25 years. There is less national savings for public and private investment than before, meaning we must turn more to foreign saving. The result is that a larger portion of investment will produce wealth for foreigners rather than Quebecers.

By taxing consumption more, we can reverse this problem, at least in part.

We can do this through a general consumption tax like the GST or the QST,[92] or through specific taxes on certain goods such as gasoline, cigarettes, harmful products, luxury goods and so on, the consumption of which we would like to limit.

With its reduction 18 months ago of the GST from 7% to 5%, the federal government has taken the opposite approach. The Task Force considers this to be a bad decision. Our rationale here is based on the common good. We are aware that nobody would welcome an increase in consumption taxes. When a tax goes down, we all applaud and when it goes up, we protest. But that takes us to the real question: do we have to choose between the common good and our personal well-being?

When investment rather than consumption is taxed, for example, when corporate taxes or capital taxes are increased, the result is an increase in the cost of investment. In becoming more costly and less profitable, investment goes down and with it an interest in implementing new technologies, reorganizing work, training employees. In short, there is less desire do more with the available resources and our capacity to maintain and enhance our standard of living in the future is diminished.

The public often tends to favour corporate tax increases or capital tax increases, because it finds the idea of making the rich shareholders of companies pay to be an attractive one. But the public is pointing a finger at the wrong people.

A company is defined by more than its ownership. It brings together several groups in addition to the owners, namely the employees, customers and suppliers. When a business tax is increased, its effects are felt by all, not just by the shareholders.

[92] One advantage of a general tax like the federal GST or the provincial QST is that it can be adjusted for income through the use of a refundable tax credit for people whose income is lower than average.

The owners may see a decrease in the return on their capital. It is also possible that employee salaries may increase more slowly, that customers may see a faster increase in prices or that suppliers will have to be satisfied with lower prices.

Business taxes affect everyone, including the employees and the shareholders. Indeed, as we will see later, the employees shoulder more of the burden than the shareholders.

In Québec, as elsewhere, consumption and investment are subject to taxation.

— Since January 2008, the GST has been 5% and the QST has been 7.5%. Quebecers thus pay sales tax totalling 12.9% on the purchase of every consumer item.[93]

— Further to these taxes, employees are subject to salary deductions for contributions to the employment insurance plan and the Régime des rentes du Québec, as well as for income tax purposes. All these deductions affect consumption seeing that consumer spending is largely dependent on salary and income.

[93] For each dollar spent, 5 cents is added for the GST and 7.5% of 1.05 dollars for the QST. This amounts to a total tax of 12.9 cents on every dollar.

❑ Investment taxes in Québec are close to the international median

Income taxes and capital taxes that Québec companies pay on their investments, as briefly described above, are framed by a number of complex definitions and conditions, including deductions for amortization, inventory rules and various tax credits. That is why it is helpful to use a synthetic rate, called the *effective tax rate on investment*, which summarizes the combined effect of taxes on the return made on a new investment.[94] This rate measures the total tax paid as a percentage of the investment's before-tax return. For example, if an investment's return before taxes and credits are applied is 10%, an effective tax rate of 40% reduces that return to 6%.[95]

Graph 41 shows that the effective tax rate on business investment has fallen in Québec since 1998 and should continue to fall between now and 2012.

— In 1998, the effective tax rate stood at 35% in Québec, a relatively high figure, but still less than in the rest of Canada (47%).

— Alerted by research which identified an important negative effect of taxation on investment, the Québec and Canadian governments began to reduce investment taxes. In 2006, the capital tax was eliminated at the federal level and reduced at the provincial level. In addition, the combined federal/provincial corporate income tax rate was reduced.

— These changes brought the effective tax rate on investment in Québec down to 24% in 2008. In its 2007 budget, Ottawa indicated its intention to continue reducing the federal corporate income tax rate, while Québec, in its 2007 budget, announced that its capital tax would be eliminated in 2011. If these planned changes are implemented, Québec's effective tax rate on investment will be 19% in 2012.

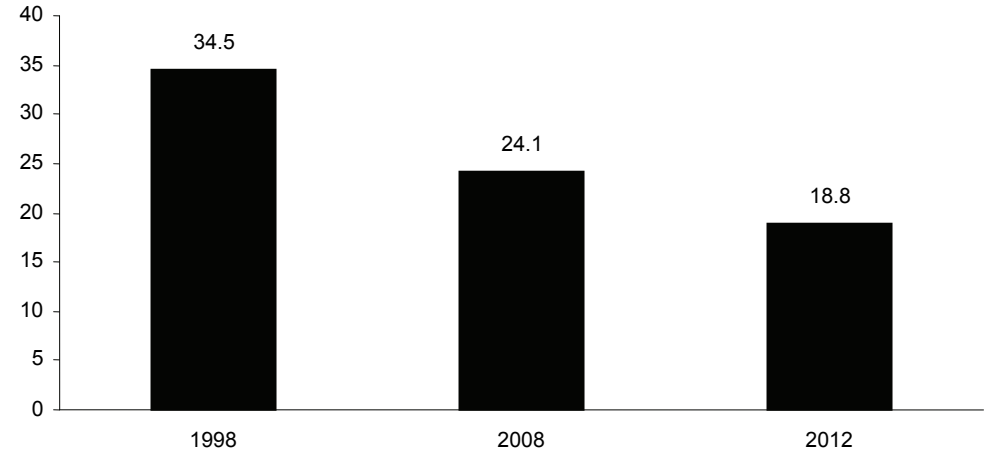
---

94 The technical term used to describe this investment rate is *marginal effective tax rate* (METR). Further to the other two taxes indicated, the METR is also calculated to take into account the equipment sales tax. In Québec, harmonizing the QST with the GST in 1991 allowed for a significant but not complete reduction in the equipment sales tax.

95 The METR varies according to industrial sector and company size, as stipulated by the provisions of income tax legislation. For purposes of international analyses, the effective tax rate on investment is compared using the average rate for all companies in each country.

GRAPH 41

Marginal effective tax rate (METR) on business investment in Québec in 1998 and 2008, and estimated rate in 2012
(in percentages)



Sources: C.D. Howe Institute and Department of Finance Canada

Will the effective tax rate on investment in Québec be internationally competitive in 2012?

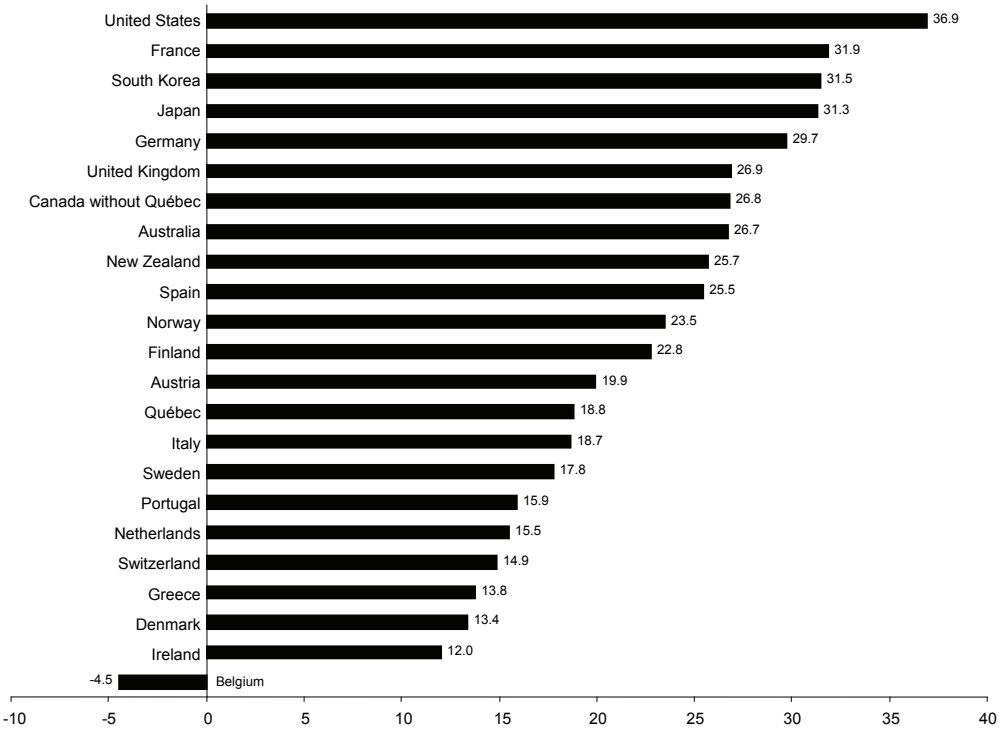
It is difficult to say. Everything will depend on the actual evolution of tax policy in Québec, in the rest of Canada and in other countries between now and 2012. But the C.D. Institute in Toronto has estimated that if the actions announced by governments do take place, the international distribution of the effective tax rates on investment will be as described in Graph 42.

— Québec will be ranked 10th among OECD member countries with regard to its effective rate. This position will put it close to the median for the 22 OECD members included in the graph.

— Its effective rate will be higher than the rates in Ireland, Denmark, the Netherlands and Sweden, for example, but lower than the rates in Finland, Norway, the rest of Canada, and the US.

GRAPH 42

Estimated marginal effective tax rate (METR) on business investment in Québec and 22 OECD countries in 2012
(in percentages)



Source: C.D. Howe Institute

The effective tax rate on business investment in Québec is higher than in Alberta (16.6%) and the Atlantic region (13.3%),[96] but lower than in Ontario (30.7%) and British Columbia (27.9%).

Graph 42 shows that the countries with larger economies such as the US, France, Japan, Germany and the United Kingdom tend to maintain higher effective investment tax rates, whereas the smaller open economies, which are highly dependent on international trade and foreign investment, present much lower rates.

[96] This is the weighted average rate of the four provinces in this region. The effective rates in these provinces are lower primarily due to the federal investment tax credit in the Atlantic region.

The reduction of the investment tax burden in Québec over recent years and the additional reductions announced by Ottawa and Québec City for the next several years will improve the prospects for business investment in Québec.

Can we still do more in the area of taxation to encourage investment? The Task Force believes we can. The taxes (income and other) that a company pays do not all have the same impact. If we want to find innovative ways to improve the effectiveness and fairness of the tax system in terms of investment, we must examine it in detail.

❑ The capital tax should be immediately eliminated

The capital tax is quite simply disastrous for investment.

— Assume that a company wants to invest $1 million to obtain production equipment and that the tax rate for the capital used this way is ½ of 1%. The company will thus have to pay a tax at a fixed rate of $5,000 per year on this equipment for the length of its useful life.

— The company will not only have to pay this $5,000 per year regardless of the profit level it achieves, but also in each year during which it experiences losses, even the first years in which the investment has not yet begun to produce a return. This increases the investment risk.

Knowing this, the company will either choose not to invest or if it does, it may invest less given the higher risk level and lower return. It may also decide to invest somewhere else, where it will not have to pay the capital tax as in Québec.

This is why the capital tax is so harmful to investment. The corporate tax is no cause for enthusiasm either, but at least it respects companies' ability to pay. It is applied only if they record profits, and does so in proportion to profits. Furthermore, if a company records a loss, it can deduct the loss from its taxable profits.

It was only after they learned about the discouraging effect of the capital tax that the Québec and Canadian governments started working on plans to gradually eliminate their respective capital taxes this past decade.[97]

— The federal government's general capital tax, which was 0.225% of the value of assets until 2003, was abolished in 2006 (except for the major financial institutions).

— Québec's general capital tax on assets was three times higher and stood at 0.64%. It was gradually reduced to 0.36% in 2008. It should drop to 0.24% in 2009, to 0.12% in 2010 and finally to zero in 2011. Financial institutions will also see their capital taxation gradually reduced to zero by 2011.

— Furthermore, between now and 2011, companies in the forestry and manufacturing sectors will benefit from a non-refundable tax credit of 15% on the acquisition of production and processing equipment. This credit is applicable to the amount of capital tax that they would otherwise have been required to pay; for this reason it is called a *capital tax credit*. It allows businesses in these sectors which make investments to get out more quickly from under the capital tax burden.

This is important progress that deserves acknowledgement. But uncertainty remains, despite the announcement of the complete elimination of Québec's capital tax by 2011. The government has postponed similar actions in the past and a postponement of the abolition of the capital tax by one year or more is possible.

This uncertainty reduces the impact that the announcement has on investments. If the government were to announce the immediate elimination of its capital gains tax, the measure's credibility would be greatly enhanced because it would be understood by all that a reintroduction of the capital gains tax would be very difficult. Before even considering other means for promoting business investment in Québec, the first thing to do is to remove this obstacle to investment.

Potential lever

Immediately abolish the capital tax in its entirety.

[97] The federal plan is from Ottawa's 2003 budget and Québec's plan is from its 2002-2003 budget.

An immediate elimination of the capital tax for companies (excluding financial institutions) will reduce government revenue by about $990 million in 2008-2009, $660 million in 2009-2010 and $300 million in 2010-2011.[98]

But the net financial impact on the government will be less than shown by these amounts, because about 40% of the drop in tax revenue will be compensated by assistance to be applied at the federal level and by the disappearance of the capital tax credit.

❑ The corporate tax reduces investment

The other major tax paid by companies on their investments is the corporate tax, which is broken down into a federal portion and a provincial portion.

As Table 12 shows, the amount of corporate tax paid by Québec companies at the two government levels combined went down overall as a percentage of taxable income during this past decade. From 2000 to 2008, the federal general corporate tax rate dropped by 9.6 percentage points, while the Québec general tax rate increased by 2.5 percentage points to offset the reduction in the capital tax. In total, there was a cumulative drop of 7.1 percentage points over that eight-year period.

TABLE 12

Federal and Québec corporate tax rates: 2000 and 2008 to 2012
(as a percentage of taxable income)

Year	Federal tax	Québec tax	Combined tax	Variation
2000	29.1	8.9	38.0	–
2008	19.5	11.4	30.9	-7.1
2009	19.0	11.9	30.9	0.0
2010	18.0	11.9	29.9	-1.0
2011	16.5	11.9	28.4	-1.5
2012	15.0	11.9	26.9	-1.5

Sources: Department of Finance Canada and Ministère des Finances du Québec.

[98] Source: Ministère des Finances du Québec.

The combined rate of the two governments should drop by another 4 percentage points over the next four years. This is based on the announcement that the federal rate will be reduced to 15% in 2012, as reported in the economic statement by Finance Minister Jim Flaherty in October 2007, and on the announcement by Québec's finance minister about the decision to increase the provincial rate to 11.9% in 2009.

The SME corporate tax rate should remain stable at 11% federally and 8% provincially, giving a combined rate of 19%. One consequence of this evolution is that larger companies will see their tax level dropping closer to the SME tax level.

The Task Force considers this evolution to be desirable. If the tax burden on SMEs is much lighter than the tax burden on the larger companies, fewer SMES will want to grow further. Discouraging growth is a secondary negative effect of our exaggerated but politically correct favouritism towards SMEs. We are all very proud of our SMEs but we must watch out for this negative effect!

In his October economic statement, Mr. Flaherty also called for "the collaboration of the provinces and territories to reach a 25 percent combined federal-provincial-territorial statutory corporate income tax rate, to make Canada a country of choice for investment."[99] With a federal tax rate of 15% and a provincial rate of 10%, Canada would become one of the "15-10" countries.

If Québec is to take up this invitation from the federal government, it must bring its general corporate tax rate down to 10% by 2012, rather than leave it at 11.9%. Québec would then see its effective tax rate on investment drop to 17.4%, which would place it 8th among the OECD members, close to the same level as Sweden (Graph 42).

The corporate income tax harms business investment. But how much harm does it cause?

[99] Department of Finance Canada, *Strong Leadership. A Better Canada,* Economic Statement, Ottawa, 2007, p. 11.

Economic research has struggled for more than 50 years to measure the negative impact of corporate taxes.[100] The proliferation of national and international databases today allows us to see things more clearly, as shown in recent research. For example, researchers from Harvard University and the World Bank recently approached this issue by using information on the differences in the effective corporate tax rate among companies in 85 countries in 2004.[101]

— They showed that corporate taxes have a major negative impact on business investment, direct foreign investment, entrepreneurship and economic growth.

— For example, they estimated that reducing the effective corporate tax rate by five percentage points[102] leads, on average, to a one percentage point increase in the business investment rate (investment to GDP ratio) and a one percentage point increase in the rate of economic growth per year

❑ Employees bear the brunt of corporate taxes

Citizens generally view a reduction in corporate taxes as a gift for the rich owners of companies to the detriment of the rest of society. Such a measure may thus raise a certain amount of reticence at the political level. Political leaders who lighten the tax burden of companies are often seen as playing Robin Hood in reverse, by taking from the poor to give to the rich.

This view is an entirely natural and tempting one – it is always nice to make the rich pay – but it is also a misguided one.

— The mistake is to believe that the owners are the ones who pay when their businesses are taxed. A company is not a one-man or one-woman show; it is an organization which requires interaction among its owners, managers and employees, and which buys from suppliers and sells to customers.

[100] In Canada, this issue was looked at in the 1960s. See the *Rapport de la Commission royale d'enquête sur la fiscalité provinciale, municipale et scolaire* (Québec, 1965) and the *Royal Commission on Taxation* (Ottawa, 1967), chaired respectively by Marcel Bélanger and Kenneth Carter. The first in-depth study on the topic was by John Helliwell (*Taxation and Investment: A Study of Capital Expenditure Decisions in Large Corporations*, Ottawa, 1966).

[101] Simeon Djankov, Tim Ganser, Caralee McLiesh, Rita Ramalho and Andrei Schleifer, "The Effect of Corporate Taxes on Investment and Entrepreneurship," Working Paper no. 13756, National Bureau of Economic Research, Cambridge, MA, 2008.

[102] In relation to Table 12, this reduction could take place through the lowering of the combined tax rate from 30% to 25%.

— An income tax increase leads to lower dividends for the owner or owners. But it also takes away the money that could otherwise provide better salary increases to employees, higher prices to suppliers and lower the price of products for customers.

— Increasing taxes reduces the net return that investment can bring and the amount of money that the company can re-invest in its production facilities or equipment. With less investment, employees will have less equipment or lower-quality equipment. They will thus produce less value per hour worked and will see their salaries rise more slowly.

The Task Force is not suggesting that an increase in corporate taxes by government leads to an economic meltdown, nor are we suggesting that a decrease in corporate taxes leads to economic bliss. We wish simply to stress that the widespread image of business taxation as a battleground between the people in white hats (those in favour of tax increases) and the people in black hats (those in favour of tax reductions) may be a compelling one, but it is disconnected from reality.

It is instead more probable that in the end, employees will shoulder more of the burden of a corporate tax than the shareholders, and that employees are also the ones who will enjoy more of the benefits brought about by a tax reduction.

The research today has no difficulty supporting this view. For example, researchers at Oxford University recently studied the behaviour of 23,000 companies in ten industrialized countries from 1993 to 2003.[103]

— They found that, in the short run, 54% of any corporate tax increase is passed on as lower employee salaries and that, in the long run, almost 100% of the tax increase will find its way into salary reductions, due primarily to the lower level of productivity accompanying the drop in business investment.

— They also estimate that the total value of the reduction of employee salaries is a multiple of the value of the tax revenue that the government takes in because of the tax increase.

[103] Wiji Arulampalam, Michael Devereux and Giorgia Maffini: "The Incidence of Corporate Income Tax on Wages", Working Paper no. 07/07, Oxford University Centre for Business Taxation, Oxford University, 2007.

❑ Québec's tax system must be competitive

In every country, the tax base is becoming less and less a prisoner of the local environment. We are also seeing greater and greater tax mobility across international borders. We do not want to speak here of tax fraud or the deplorable use of tax havens, but instead of two important phenomena we must keep in mind when considering tax reform.

— The first phenomenon is that companies have more and more choices as to where they should set up operations so they can be more competitive. Governments are thus finding themselves in tax competition with one another to attract foreign investment.

  The effect of the corporate tax rate on a company's choice as to where it should locate its operations, and consequently on the volume of direct foreign investment that a country is able to attract, is an important factor.

  A recent synthesis of the research on how direct foreign investment is influenced by taxation clearly indicates the extent of this relationship. The research as a whole shows that reducing the effective tax rate of investment by 1% would lead to a 3% overall increase of the direct foreign investment in a country or region.[104]

— The second phenomenon is that multinational companies have a certain amount of leeway for choosing the country and region in which they will declare their income and costs.

  Nobody will be surprised to learn that multinationals use this room for manoeuvre as much as they can; i.e., they will seek to declare their costs where the corporate taxes are highest and to declare their income where the tax rate is the lowest.

  This means it is possible for a government to increase the revenue it takes in through corporate taxation, even if it lowers the tax rate. A lower tax rate means less revenue, but the arrival of new businesses (foreign multinationals) which then have to pay taxes will expand the tax base so that in the end, the government's tax revenues will increase rather than decrease.

[104] Ruud de Mooij and Sjef Ederveen: "Taxation and foreign direct investment: A synthesis of empirical research," *International Tax and Public Finance*, vol. 10, November, 2003, pp. 673-693.

We have the example of Ireland which tells us this is not a merely theoretical speculation.

— The corporate income tax in Ireland has dropped from more than 40% in the late 1980s to 12.5% today, but the overall income tax paid by companies has increased sharply as a percentage of Ireland's gross domestic product. Ireland is getting more revenue from its corporate tax than most countries whose effective tax rate on investment is twice that of Ireland.

— Obviously, Ireland has enjoyed so much success because it was one of the first countries to play this game. If every country chose to play, none of them would attract any more foreign investment than the others. The only consequence would be a lower effective tax rate on investment everywhere and more investment everywhere, but not necessarily more tax revenue.

— On the other hand, countries that insist on keeping their business tax load at a higher than average level run the strong risk of being abandoned by international corporations and then by their own local companies that are looking for greener pastures.

❑ Should we expand the capital tax credit?

Investment taxation today is not as onerous as it was ten years ago. The effective tax rate on new investment is now 24%, compared to 35% in 1998.

The Québec government wants to eliminate its capital tax by 2011 and the federal government wants to reduce its corporate tax to 15% by 2012. If these two changes occur, they will reduce the effective tax rate on investment in Québec to 19% by 2012. This evolution over the next four years would put Québec near the median of industrialized countries.

The progress we have seen is encouraging but it is not enough. We urgently need to speed up our productivity in order to face the major challenges awaiting us in the years ahead. Thus, the Task Force proposes that we go even further to encourage business investment.

— Immediately eliminate the capital tax as a first step. The need to do this is self-obvious, because the capital tax is a debilitating one that kills investment.

— There are one of two paths we can take to go further:

  — reduce to 10% the general corporate tax rate, which now stands at 11.4%;

— transform the capital tax credit, which currently applies only to companies in the forestry and manufacturing sectors for purposes of acquiring manufacturing and processing equipment, into a generalized investment tax credit that would apply to all forms of tangible investment by all industrial sectors in all regions.

Reducing the corporate tax rate to 10% would reduce the taxes paid by companies, just as implementing a generalized investment tax credit would do.

How do these two measures differ?

— First, reducing the corporate tax rate from 11.4% to 10% would allow companies to enhance their overall profitability through such means as acquisition of tangible assets (buildings or equipment), organizational change, various innovations, workforce training, or market expansion.

  The generalized investment tax credit would be of benefit only with regard to acquisition of tangible assets (e.g., buildings or facilities, industrial equipment, vehicles, computers and software).

— Secondly, reducing the corporate tax rate would correspond exactly to what the federal government has invited the provinces to do, namely to lower their corporate tax rates to 10% by 2012, thereby bringing the combined federal-provincial tax rate to 25%.[105]

  The generalized investment tax credit would allow all sectors and regions to eventually be covered by an expansion of the current policy under which the Québec government is providing temporary support to the forestry and manufacturing sectors.

— Thirdly, the drop in the general corporate tax rate would cost approximately $625 million per year.[106] The generalized investment tax credit would cost about $1.05 billion dollars annually if it were set at 5% of the acquisition cost of investment goods and if it were to be applied to all acquisitions of buildings or equipment. This measure would cost about half that amount if it excluded the acquisition of buildings and vehicles.

The Task Force unhesitatingly supports a reduction in the general corporate tax rate rather than the implementation of a generalized investment tax credit. Following are the reasons for this choice.

[105] Department of Finance Canada, *Strong Leadership. A Better Canada*, Economic Statement, Ottawa, 2007, p. 9.

[106] Ministère des Finances du Québec.

An investment tax credit was introduced in the US by President Kennedy in 1962. After numerous alterations, it was abolished in 1986. President Bush introduced a new one in 2002, for a limited one-year period. Several researchers have sought to determine whether these experiments have had significant effects on investment, but all their efforts to date have been in vain.

The following quotation, although it dates back 11 years, still aptly describes the current status of the research:

"Although the economic policy makers show unshakeable faith in the ability of tax incentives [such as the investment tax credit] *to influence companies' decisions to make investments and to contribute to economic stability, there is no convincing factual proof of this link."*[107]

There are several reasons which explain the ineffectiveness of a generalized investment tax credit.

— The first one has to do with economic policy. As we have stressed several times, investment does not depend solely on the existing conditions but also on the conditions we will encounter over the next ten, twenty or thirty years. If tax credits are to be given the chance to exert their full influence over investment for the long term, they must first have been in place for several years. And history shows us that tax credits are anything but stable and sustainable.

[107] Austan Goolsbee: "Investment Tax Incentives, Prices, and the Supply of Capital Goods," *Quarterly Journal of Economics*, vol. 113, August 1997, pp. 121-148. An investment tax credit that is seen as being temporary can still have an important effect on the investment's short-term time profile, as was the case for the Bush government's tax credit introduced in 2002-2003.

Researchers with lengthy experience in US corporate taxation have brought this instability to light, not without a sense of irony:

"Business investment planning is a highly uncertain affair. One of the most reliable predictions we can make – and we cannot make very many – is that tax law will change long before any new investment has completed its life cycle. At the time of the US tax reform in 1986, which introduced broad changes to the business tax structure and to investment incentives, Congress was already at work that same year modifying the new investment tax procedures. This is hardly surprising. Just a short time earlier, Congress had introduced new laws with investment tax incentives in 1981, 1982, 1984 and 1985. Indeed, over the 32-year period from 1953 to 1985, such changes were introduced in 16 different years."[108]

The warning we get from these veteran observers of the US tax system is that tax credits and other investment-related provisions form a network of intrigue and that the political lobbyists in the US are backed by a never-ending stream of specialists ready to affirm how powerful and effective their proposed tax credits can be.

This is the lesson we learn from the astonishing history of investment incentives in the US over the past 45 years. Obviously, our parliamentary system does not lend itself as easily as the US Congress does to these political games. We would do better to adopt a general policy that would steer us away from this certain slide into tax instability.

— Here is a second reason that explains the ineffectiveness of a generalized investment tax credit: it is highly probable that suppliers of investment goods will grab up much of them.

In a context of good supplier-customer relations, if the supplier knows that the customer will obtain credit for a purchase, it is natural that both will share the windfall in the form of a higher price for the good being exchanged. There is solid proof that this type of arrangement is widely used and that it moderates or even eliminates the effect of an investment tax credit.[109]

[108] Roger Gordon and Dale Jorgenson, "The Investment Tax Credit and Counter-Cyclical Policy," in D. Jorgenson (dir.), *Investment, vol. 2: Tax Policy and the Cost of Capital*, MIT Press, Cambridge, MA, 1996, chap. 7.

[109] Goolsbee, op. cit.

— The third reason which helps to explain the ineffectiveness of generalized investment tax credits is that these credits must be defined for highly precise and tangible types of investments, such as investments in manufacturing and processing equipment (category 43), office equipment (category 8), computer equipment (category 45), and so on.

  But, as we stressed earlier, although investment in production equipment is accompanied most of the time by direct and indirect increases in productivity, the inverse is not true. A good part of the progress in productivity does not require physical capital. It is spurred by other means, including organizational change, creativity (e.g., scientific, artisanal or artistic), innovations in marketing and finance, on-the-job training and education, etc.

  This holds true in particular for several high value-added sub-sectors in the service sector (finance, culture, professional services, etc.), where productivity improvement is based on elements other than physical assets.

  To favour the investment tax credit would be to ignore the vast wealth of innovations that enhance productivity without being based on tangible investments. Such an approach would especially penalize the service sector, where the productivity challenge for Québec and Canada is the greatest, in comparison with the situation in the US.

For these reasons, the Task Force recommends by far that the government reduce the general corporate tax rate, rather than transform the capital tax credit into a generalized investment tax credit.

Potential lever

Reduce the general corporate tax rate to 10% as quickly as possible, rather than introduce a generalized investment tax credit.

Research shows that, contrary to an investment tax credit, an overall decrease in corporate taxation will provide solid support for investment overall and for direct foreign investment in particular.

— This option has the advantage of being simple. Applied in general to the tax system, it promises more stability and generates stronger credibility. Therefore, it will probably have a more positive effect on business investment.

— Furthermore, an overall decrease applied to the corporate tax rate will end discrimination against any particular source of productivity improvement, as does the investment tax credit, which applies only to specific physical assets (e.g., production equipment and machinery). This decrease applies to all sources of productivity improvement.

— Finally, given the fierce worldwide competition in taxation, it will be necessary to lower the corporate tax rate sooner or later. Québec would benefit if it left the starting gate before the others.

The negative verdict of the Task Force concerning a generalized investment tax credit obviously does not apply to any specific tax credit that might be the target of an important economic or social objective. Examples here include compensating the regions for distance-related costs,[110] providing one-time assistance to the forestry or manufacturing sector, promoting investment related to environmental protection, and so on.

The above three examples refer directly to tangible capital.

— The need to transport heavy merchandise over long distances proves costly for a region.

— Manufacturing companies need financial support for acquiring new equipment to upgrade their production systems in order to cope with difficult times.

— Companies in the chemical sector need financial support for acquiring equipment to manage toxic waste created by their operations.

[110] As suggested by Robert Gagné, Luc Godbout and Guy Lacroix in: *On Equal Terms*- Report of the Task Force on Tax Assistance for the Resource Regions and the New Economy, Government of Québec, 2008.

For all these reasons, the targeted investment tax credit can and should be included in the package intervention tools that the government uses to pursue certain major economic or social objectives. Tax policy needs this flexibility.

The Task Force also insists on the need to watch out for two types of danger:

— the danger of bending to the will of political lobbies;

— the danger of seeing the tax credit scooped up by suppliers of investment goods.

CHAPTER 4 – INVESTMENT IN QUÉBEC: WHAT SHOULD WE DO NEXT?

4.1 A general approach

Basically, we want to see Quebecers achieve a higher standard of living (income per inhabitant) so as to improve people's material comfort and allow more leisure time, reduce povertry, ensure the continued funding of health and other public services, and provide environmental protection.

We can create wealth in one of four ways:

- win the natural resources lottery;
- ensure the supply of a greater number of workers;
- work more hours;
- produce more value per hour worked.

Having a greater number of people working is one factor that has especially allowed Quebecers to become wealthier and to bridge a good part of the gap in their standard of living compared to that of Ontario over the past 25 years. But the coming demographic changes will make this path towards achieving wealth impractical by 2015. Our future will depend first and foremost on our ability to produce more value per hour worked, i.e., *by being more productive*.

Business investment in factories, buildings and production equipment and machinery is not the only cause of productivity improvement. The real cause of this progress comes from technological and organizational innovation. Innovation is not just technological in nature; it is also a social and cultural phenomenon. We must therefore see investment as an extremely important outlet for ideas and innovation leading to greater productivity.

A company will invest if it feels that the return on investment will outweigh the cost, in terms of the perceived risk to operations. It would be foolhardy to invest in a company if the expected return was lower than the interest rate on treasury bonds.

The most favourable economic environment for investment is thus one which allows a company to expect the greatest possible return, costs the least possible amount and minimizes the potential risk throughout the life of the investment.

The Task Force found that there are seven major factors which allow companies to obtain greater returns on their investments:

- dynamic entrepreneurs and well-trained, skilled employees;
- competitive economic environment open to the world;
- secure access to a wide market for their product;
- social environment open to new ideas;
- participatory management that involves employees and external networks;
- support from society based on good governance and honesty in business relations;
- good public infrastructure.

The Task Force also identified six factors that help to minimize the cost of investing:

- sufficient national savings;
- dynamic network of Québec-based and international multinationals;
- stable, sufficient and non-punitive taxation/regulatory framework;
- sufficient risk capital available at an affordable cost;
- government financial aid that is well-managed and simple to access;
- construction projects with well-defined cost estimates.

Over the years, Québec has instituted several policies in keeping with this agenda. The results include a higher level of education among young Quebecers, free trade agreements, tax policy that promotes R&D, loosening of the regulatory framework, balanced budgets, expansion of venture capital sources, an innovation strategy, an infrastructure plan, and an energy strategy. We must continue in this direction with conviction and determination.

Above all, we must not throw everything away and start again from zero. We must instead work harder at accomplishing the things we have already set out to do, with the resources available to us.

4.2 Recommendations

It is with the above-described logic in mind that the Task Force has formulated its recommendations. To avoid cluttering the landscape, we have grouped the recommendations under three overarching headings:

— lighten the tax burden on investment;

— make Québec more competitive and open to the world;

— accelerate our investment in human capital.

❑ Lighten the tax burden on investment

Here, the working group followed three core principles:

— tax consumption (GST, QST, specific taxes and user tariffs) instead of investment;

— avoid continually overhauling the tax system;

— make sure that business taxation is internationally competitive.

Recommendation

1. The Task Force recommends that the government completely eliminate the capital tax without delay.

— With this tax, a company finds it has to pay more income tax if it makes an investment, whether such investment is profitable or not. Before other means for stimulating investment are even considered, this insane tax must be eliminated.

— The immediate elimination of the capital tax would remove any doubt as to when it might actually disappear, enhance investment prospects in Québec and increase the government's credibility at the local and international levels.

Recommendation

2. The Task Force recommends that the government reduce the general corporate tax rate to 10% by 2012, rather than introduce a generalized tax credit on investment.

— Many different analyses confirm that the corporate tax has a highly negative impact on investment.

— Research on tens of thousands of companies indicates that the employees, not the shareholders, end up paying most of this tax.

— The federal government is planning to reduce its corporate tax to 15% in 2012. This would put Québec on the path towards "15-10" corporate taxation.

— A generalized investment tax credit presents several disadvantages:

  — there is no proof that it has a significant effect on investment in the US, despite the continuous political lobbying;

  — it is scooped up by suppliers of investment goods;

  — it gives an exclusive advantage to tangible capital.

— However, a targeted tax credit for a major economic or social purpose is a major intervention tool that allows for flexibility. The government should not abandon this type of tax credit if, for example, we want to reduce the distance-related costs experienced by the regions (e.g., Gagné Report) or to promote investment in the area of environmental protection.

Recommendation

3. The Task Force recommends that the government stabilize the research and development tax system.

— Québec's tax system is favourable to R&D and Québec does well in this regard at the international level. Ensuring the system's stability is the best strategy in these circumstances.

Recommendation

4. The Task Force recommends that the government avoid any additional increases in payroll taxes.

— Payroll taxes (apart from mandatory employment-related costs) on Québec businesses are four times higher than in the rest of Canada. Québec collects $5 billion in payroll taxes, more than half the total for all of Canada.

— Payroll taxes force salaries down. Any further increases to them could make it more difficult for Québec to attract and retain qualified immigrants to meet its labour needs.

Recommendation

5. The Task Force recommends that the government put an end once and for all to the out-dated discrimination in taxation and government programs against the service sector and treat all industrial sectors equally.

— The three industries with the highest investment rates in Québec today are in the service sector: financial industry, cultural industry and transportation industry.

— More than 80% of government financial aid to business is concentrated in the manufacturing sector. The difficulties of this sector must not be minimized, but basing aid on such a narrow sectoral scope is not acceptable in terms of fairness and is disproportionate in economic terms.

Recommendation

6. The Task Force recommends that the government support the spirit of the Gagné Report by levelling the playing field for all regions while encouraging productivity through a general policy based on neutral criteria such as distance and encouraging investment.

— The regional development policy must alleviate the disadvantage due to distance and must employ intervention means that encourage performance and do not set the regions of Québec against one another.

— It is necessary at the same time to continue supporting research on regional niches of excellence under the ACCORD project.

Recommendation

7. The Task Force recommends that the government continue efforts already underway to reduce regulation.

— In many cases, regulation is absolutely necessary, but unnecessarily additions to the regulatory burden can easily occur. We must continue to monitor this situation.

— The cost of regulatory compliance per employee is three times higher for a company with 15 employees than for one with more than 50 employees. This cost is estimated as being 20% higher in Québec than in the rest of Canada.

❑ Make Québec more competitive and open to the world

Recommendation

8. The Task Force recommends that the government make it an absolute priority to preserve access to the American market, while continuing in its efforts to promote the mobility of workers and free trade between Québec, the rest of Canada and the rest of the world.

Recommendation

9. The Task Force recommends that the government recognize the remarkable contribution of Québec and foreign multinationals to investment in the province, continue to welcome foreign multinationals, but adopt clear rules about takeovers of local companies.

— Foreign multinationals employ just 13% of Québec workers but are the source of 40% to 50% of investments in production equipment.

— Québec multinationals and foreign multinationals play a major role in the economy due to:

  — their high productivity levels;

  — their economies of scale;

  — their links with other countries;

  — their high levels of investment and R&D;

  — their incubation of new entrepreneurial talents;

  — reciprocity with our multinationals in other countries;

  — the business they do with Québec suppliers.

Recommendation

10. The Task Force recommends that the government review and clarify the objectives and functions of the various departments and agencies involved in seeking out foreign investment.

— Investissement Québec, the Société générale de financement du Québec, Montréal International, the International Financial Centre of Montréal, the local development centres, the regional branches of the Ministère du Développement économique, de l'Innovation et de l'Exportation, and the sectoral divisions of that department are all involved in the search for foreign investment.

— Québec's international voice must be clear, simple, unified, competent, convincing, competitive and well coordinated.

— The uncertainty that we are currently seeing with regard to the future of the International Financial Centre of Montréal is harmful to foreign investment in Québec. This organization must be rapidly integrated into Investissement Québec.

Recommendation

11. The Task Force recommends that the government subject companies more firmly to the discipline of competition.

— If a company is a like a racehorse, competition is the spur that makes it run faster.

— The government must not favour any group and must ensure that no economic sector is the exclusive preserve of any one group. The verdict from the research is clear: the absence of competition means higher prices for citizens and a slowdown in the desire to innovate.

Recommendation

12. The Task Force recommends that the government support structuring efforts undertaken by the venture capital industry.

— We must closely monitor the evolution of the availability of venture capital for developing and starting up projects.

Recommendation

13. The Task Force recommends that the government review and clarify the objectives and functions of the various departments and agencies involved in financial aid to investment.

— The departments and agencies involved in financial aid to investment include Investissement Québec, the Société générale de financement du Québec, La Financière agricole du Québec, the Société de développement des entreprises culturelles, the Ministère du Développement économique, de l'Innovation et de l'Exportation, the Ministère de l'Agriculture, des Pêcheries et de l'Alimentation and the Ministère du Tourisme.

— The Québec government must give voice to its financial role in a clear, simple, competent, unified and well-coordinated manner.

Recommendation

14. The Task Force recommends that the government encourage savings through various means, while avoiding increased income disparities.

— One possible means here would be to tax consumption more (QST, special taxes and tariffs), but this would necessitate adjustment of the GST credit.

— Allowing new savings accounts exempt from federal income tax would be a good idea, but there must be something as well for taxpayers whose incomes are modest.

— Continuing to balance the budget and to reduce the public debt will help increase savings.

Recommendation

15. The Task Force recommends that the government bring together partners in the construction industry to develop methods to reduce conflicts, shortages and schedule and cost overruns at Québec construction sites, particularly given the anticipated increase in construction activity.

— Québec industry is competent by any measuring stick. But we must take advantage of the current favourable climate to ensure achievement of the anticipated results, given the strong increase in activity being predicted for the near future.

❑ Accelerating our investment in human capital

Recommendation

16. The Task Force recommends that the government combat the phenomenon of young people dropping out of school (particularly boys) with greater conviction and that resources be made available at the high school level to help Québec catch up in the number of graduates it produces compared to the United States and Ontario.

— Education is above all a means for cultural transmission. But it also has an enormous economic impact, particularly on the employment rate and on salaries.

— Recent research has shown a very close connection between a society's standard of living and basic skills in reading, writing and math.

Recommendation

17. The Task Force recommends that the government bring the number of university graduates to the US level (32% of 25- to 44-year olds).

— A university degree has considerable impact on a graduate's employment prospects and working conditions. At present, 27% of Quebecers aged 25 to 44 have a university degree.

— Increasing the college and university graduation rates is, along with immigration, one of the most effective tools for combating the shortage of qualified workers.

Recommendation

18. The Task Force recommends that the government promote professional, scientific and technical training at the secondary and college level and continuous training of corporate employees, both staff and managers.

— In a recent IBM survey of 765 business leaders around the world, the respondents did not hesitate to identify their own employees as the main source of innovative ideas within their organizations, thanks to solid and ongoing staff training.

— "Companies can bring about effective and sustainable improvements to their productivity only if they invest in their employees, get them involved, provide them with job security and pay them in a fair and transparent manner," notes professor Anthony Giles of Université Laval in a good summary of the situation.

Recommendation

19. The Task Force recommends that the government continue to support knowledge transfer among university and college scientific milieus, government laboratories and industrial research milieus.

— The Québec Research and Innovation Strategy, which the government submitted in 2006, has already led to the injection of additional funding for R&D enhancement and transfer.

— The availability of external networks that can assist businesses in getting concrete and fast answers to their questions is of exceptional importance.

Recommendation

20. The Task Force recommends that the government offer concrete support to organizations that promote the development of entrepreneurship among young Quebecers and those that help outgoing managers groom the next generation.

— Ideas are the foundation of productivity and investment. Entrepreneurs take hold of these ideas and workers give them concrete shape.

Recommendation

21. The Task Force recommends that the government strengthen structures to receive immigrants, particularly qualified immigrants, immigrant entrepreneurs and immigrant investors.

— In particular, the effectiveness of structures for recognizing immigrants' skills and professional experience must be improved.

CONCLUSION

Québec's progress in recent decades is encouraging, but the Task Force is convinced that we must go farther without delay.

— On the one hand, faced with the challenges of Asia, demographics and public services (health, poverty, environment), time is at a premium. It is urgent that we accelerate our productivity and find the resources to face these three challenges.

— On the other hand, internationally, Québec needs to differentiate itself, in its own eyes and in the eyes of foreigners. The province is peripheral because of geography and the North American climate, but it has nonetheless achieved virtually the same productivity as central Canada. But Québec needs an additional push to achieve an American standard of living, which still exceeds ours by 30%,

We will not excel by remaining average, but by outdoing others.

APPENDIX 1
TASK FORCE ON BUSINESS INVESTMENT

❑ Members of the Task Force on Business Investment

Pierre Fortin – Professor, Université du Québec à Montréal

Andrée Corriveau – former President and Chief Executive Officer of the Centre Financier International de Montréal

Jean Boivin – Associate Professor, École des Hautes Études Commerciales

❑ Ministère des Finances

Brian Girard – Assistant Deputy Minister, Economic and Fiscal Policy

Luc Monty – Assistant Deputy Minister, Budgetary Policy and Economy

Éric Ducharme – Director General, Business Policy Branch

Marc Sirois – Director General, Economic Analysis and Forecasting Branch

Bertrand Cayouette – Secretary and Director, Business Taxation Branch

Michèle Dumais – Economist, Business Taxation Branch

Raymond Fournier – Economist, Québec and Canadian Economy Branch

Richard McIntosh – Economist, Economic Analysis and Forecasting Branch

Gaétanne Michaud – Secretary, Québec and Canadian Economy Branch

Valérie Roy – Secretary, Business Policy Branch

❑ Ministère du Conseil exécutif

Jean-Pierre Pellegrin – Deputy Clerk, Public Policy Planning Branch, Strategic Priorities and Projects Secretariat

Claire Fecteau – Administrative Assistant, Public Policy Planning Branch, Strategic Priorities and Projects Secretariat

Julie Morissette – Principal Secretary, Public Policy Planning Branch, Strategic Priorities and Projects Secretariat

❑ Ministère du Développement Économique, de l'Innovation et de l'Exportation

Michel-Marie Bellemare – ACCORD Project Coordinator, Economic Policy Branch

APPENDIX 2
PERSONS AND ORGANIZATIONS MET WITH OR CONSULTED

List of persons whom the Task Force met with or consulted

Person met with or consulted	Organization
Howard Silverman	CAI Global
Jean-Luc Trahan	Ministère de l'Éducation du Québec
Jacques Daoust	Investissement Québec
Bernard Landry	Former Premier of Québec
Louis Roquet	Desjardins
François Vaudreuil	Centrale des syndicats démocratiques
Louis Lévesque	Privy Council Office/Ottawa
Simon Prévost	Canadian Federation of Independent Business
Jean-Guy Frenette	Fédération des travailleurs du Québec/Fonds de solidarité FTQ
Pierre-André Julien	Université du Québec à Trois-Rivières
Robert Gratton	Power Financial Corporation
Robert Sauvé	Ministère des Affaires municipales et des Régions
Pierre Shedleur	Société générale de financement du Québec
André Chabot	Montréal International
Gilles Demers	Ministère du Développement Économique, de l'Innovation et de l'Exportation
Daniel Audet	Conseil du patronat du Québec
Françoise Bertrand	Fédération des chambres de commerces du Québec
Jean Saint-Gelais	Autorité des marchés financiers
Jacques Girard	International Financial Centre of Montréal
Claudette Carbonneau	Confédération des syndicats nationaux
Luc Boulanger	Association québécoise des consommateurs industriels d'électricité
Paul-André Lapointe	Université Laval (Industrial Relations)

Québec