

MB Check-Up 2007

INVEST section

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Indicators

INVEST

Research and development (R&D) intensity (industry and higher education share of R&D expenditure)¹ reflects innovation in its conception, early in the process;

Proportion of jobs in the sciences reflects the number of workers employed in Natural/Applied Sciences as a percent of the total labour force;

After-tax corporate profits to GDP ratio indicates the current earnings environment of each province. It takes into account the government influence (by taxation) on the ability of firms to earn a competitive rate of return on their investment. Private sector and government business enterprise profits are included in this measure.²

Provincial government net debt to GDP ratio captures concerns regarding the fiscal position or policies of a provincial government.³

Non-residential construction cost index: If increases in the cost of non-residential construction inputs (materials and labour) rise faster than the general price level in the economy (i.e., faster than the price increases that businesses can expect to receive for their goods and services), then there is a disincentive for businesses to expand or refurbish their plant capacity.

¹ Ratio of R&D Spending to GDP.

² Note that estimates of direct taxes are developed for 2005 and 2006 in the absence of national or provincial Statistics Canada data.

³ Note that this is a different concept from taxpayer supported debt, used in previous years.

MANITOBA AS A PLACE TO INVEST

Manitoba saw its third year in a row of rising after-tax profits/GDP in 2006. In fact, Manitoba ranked first in one year gains in both after-tax profits/GDP and R&D spending, with increases of 1.3 percentage points and 7 percent respectively. Rising profitability can be ascribed to growth in its energy exports and general improving economic activity, and it is reasonable to assume that there are links to real labour productivity gains in Manitoba in the past few years.

Manitoba's real investment share of GDP rose to 14.6 percent in 2006, the third year of increase in a row. This was close to the national average, and well above the BC and Ontario rates of 12.9 and 11.7 percent respectively. It is no surprise that Alberta's economy continued to lead investment activity, with a 2006 profit/GDP ratio of 31.4 percent. The largest share of these investment dollars is being spent on machinery and equipment. Manitoba's GDP share of machinery and equipment investment rose from 11.9 percent in 2001 to 14.6 percent in 2006, a gain of 23 percent over five years.

TABLE 3-1: SUMMARY OF INVEST KEY INDICATORS

INVEST Indicator	BC	AB	SK	MB	ON	CAN	
Ratio of R&D Spending to GDP ¹	1.24%	0.86%	0.77%	0.92%	2.05%	1.68%	2006 Value
Employment in the Sciences	6.9%	7.5%	4.5%	4.7%	7.2%	6.9%	
Non-Residential Construction Cost Index	1.045	0.837	0.968	1.103	1.202	1.080	
After-Tax Corporate Profits to GDP Ratio	10.31%	19.50%	18.79%	11.21%	9.34%	11.29%	
Net Provincial Debt as a Percentage of GDP²	11.5%	-2.7%	21.8%	29.3%	23.2%	24.4%	
Ratio of R&D Spending to GDP ¹	3.6%	-0.7%	0.5%	7.1%	2.8%	0.8%	2005-06 % Change
Employment in the Sciences	0.5 ppt	-0.1 ppt	0.1 ppt	-0.1 ppt	-0.1 ppt	0.0 ppt	
Non-Residential Construction Cost Index	-0.3%	4.9%	0.0%	0.9%	1.8%	2.6%	
After-Tax Corporate Profits to GDP Ratio	0.2 ppt	-1.0 ppt	0.7 ppt	1.3 ppt	-0.2 ppt	0.0 ppt	
Net Provincial Debt as a Percentage of GDP²	-2.1 ppt	-2.0 ppt	-3.8 ppt	-0.8 ppt	0.1 ppt	-1.5 ppt	
Ratio of R&D Spending to GDP ¹	9.0%	2.5%	-6.7%	-3.3%	-6.7%	-4.1%	2001-06 % Change
Employment in the Sciences	0.8 ppt	0.4 ppt	0.4 ppt	-0.2 ppt	-0.5 ppt	0.1 ppt	
Non-Residential Construction Cost Index	3.7%	-4.3%	-3.6%	6.7%	10.3%	5.5%	
After-Tax Corporate Profits to GDP Ratio	3.6 ppt	3.0 ppt	6.4 ppt	4.0 ppt	1.3 ppt	2.1 ppt	
Net Provincial Debt as a Percentage of GDP²	-0.5 ppt	-3.4 ppt	-6.8 ppt	1.7 ppt	-4.5 ppt	-4.9 ppt	

Notes: 1 R&D spending by business and higher education institutes. 2004 value presented and % change from 2001 to 2004 and 2003 to 2004

2 Net Provincial Debt as a Percentage of GDP.

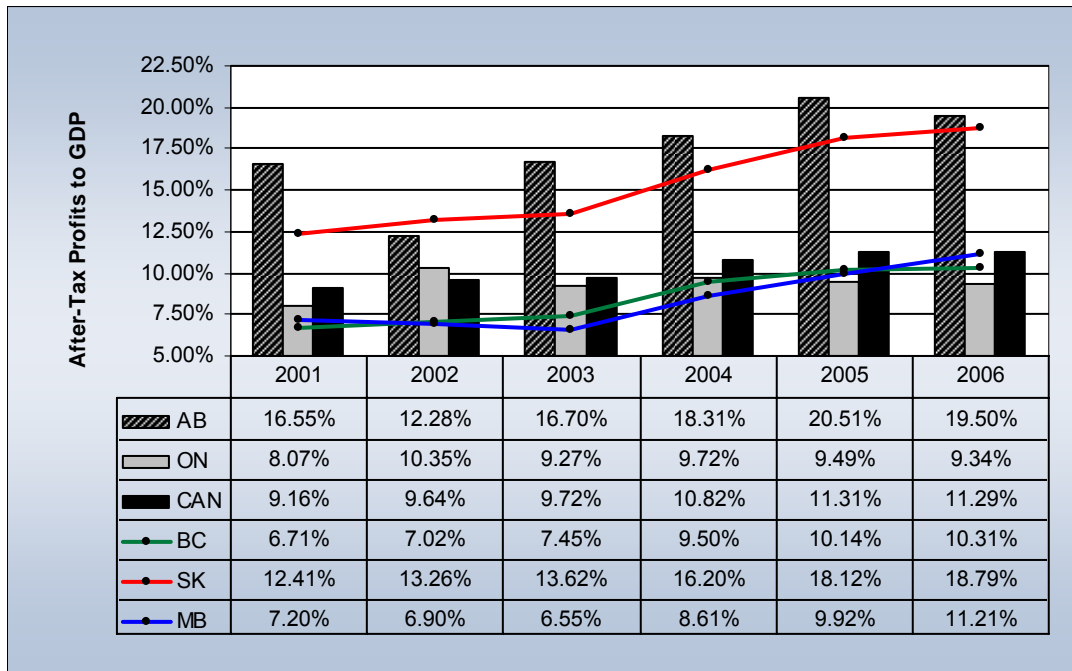
ppt = percentage point

After-Tax Corporate Profits to GDP Ratio

Corporate profitability is a strong indicator of current and future investment climate. We employ the ratio of after-tax profits to GDP as our indicator in order to be able to compare between jurisdictions. Our definition of profits includes those accrued in both private sector and government business enterprises.⁴ In Manitoba, private sector profits comprise the largest share at 85 to 90 percent of total profits.⁵

In 2006, Manitoba's ratio of after-tax corporate profits to GDP was 11.2 percent, just below the national average. Manitoba has consistently maintained a low level of profits to GDP vis a vis most of the other provinces since 2001, but has been improving, with the ratio increasing by a 4.0 percentage points between 2001 and 2006.⁶ In 2005-2006, Manitoba's profit/GDP ratio grew by 1.3 percentage points.

FIGURE 3-1: RATIO OF AFTER-TAX CORPORATE PROFITS TO GDP, PROVINCES AND CANADA, 2001 TO 2006



Source: Statistics

Canada

⁴ The government business enterprises are incorporated, "for-profit" organizations, which make them subject to income tax. They are legal entities separate from the parent government that created them. They differ in that they generally charge prices that are closely related to the cost of production, as in the case in private enterprises. For example, federal business enterprises are involved in activities such as postal services and seaports. Provincial and territorial government business enterprises are involved in activities such as hydroelectricity, gaming, and liquor sales.

⁵ Source: Statistics Canada. Note that the value of electrical power sales by Manitoba Hydro increases the share of government business enterprise profits.

⁶ Provincial public accounts estimate corporate profits by province based on the location of productive activity. The issues of revenues and profit flows to multi-provincial or multi-national corporations, and of constantly changing corporate structure, are complex and the resources do not currently exist to analyze CRA data by enterprise. Source: Statistics Canada (February 2007). *Canadian Economic Observer*. Cat. No. 11-010.

Manitoba's pre-tax profits grew at a faster rate than the national average between 2001 and 2006. While the after-tax profits/GDP ratio in Manitoba has been on an upward trend since 2003, there are factors which continue to suppress this indicator, particularly when comparing it with that of Alberta. These are discussed as follows.

The general corporate tax rate is still high. The western provinces have all seen their corporate tax rates decline in the past five years, including Manitoba, nevertheless Manitoba's general corporate tax rate continues to be the highest of all jurisdictions at 14.5 percent, on a par with that of Saskatchewan. Between 2001 and 2004, the general corporate taxation rate in Manitoba declined from 17 percent to 15.5 percent; and it declined again on January 1, 2007 to 14 percent. The rate will be reduced further to 13 percent effective July 1, 2008 to continue the steady downward trend initiated by the government but it continues to lag behind most other jurisdictions in our study.

Some of Manitoba's major industries have long term low profit margins. Despite its growing diversification, Manitoba's economy was built on the production and export of resource products, in particular agriculture and minerals. Of course Manitoba's manufacturing and service sector industries play a dominant role, but agriculture is still an important export. The market for agricultural and other resource products is cyclical, and when market demand is strong (as in 2006) profitability rises. National survey data shows, however, that the profit margin for resources is generally low compared to other sectors.

The industry shares of GDP are fairly constant, and have proven to be very slow to change. The GDP share of agriculture, forestry, fishing and hunting in Manitoba was 4 percent in 2006, with manufacturing comprising 13 percent, mining and other primary goods 2 percent, and utilities 3 percent.⁷ New industries with higher value-added and profit margins are evolving, but the traditional mainstays will continue to be an important element of the economy.

Manitoba has not had enough productivity gains to reduce costs. In last year's *Check Up*, our analysis showed that Manitoba's productivity level rose steadily between 2000 and 2005, however it is still relatively low and has not changed in comparison to the national average during this time. Manitoba's greatest productivity gains have occurred in sectors where the labour force became more efficient, either through capital deepening or greater labour force utilization. In the absence of up to date provincial industry information, we can only surmise that productivity gains are being realized in some parts of the provincial economy, and so far not enough to significantly affect aggregate pre-tax profits.

So continued specialization in industries with low average profit margins, high corporate taxes and comparatively slow productivity gains all explain to some extent the ongoing low level of profits in Manitoba's GDP. The current spate of machinery and infrastructure investment underway in our province should improve productivity and accelerate the dissemination of value-

⁷ Source: BC Statistics (2007). *BC GDP by Industry*. Millions of chained 1997 dollars.

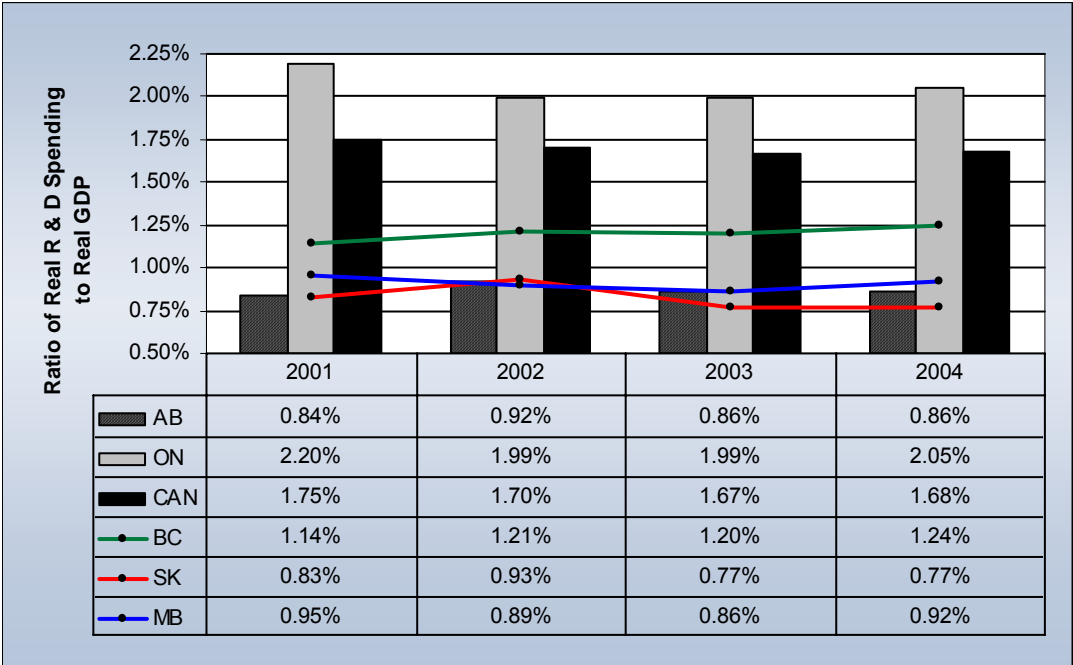
added manufacturing in our province in the years to come, with a corresponding gain in the profit share of our provincial GDP.

R & D Spending to GDP

The R&D share of GDP⁸ in Canada was 1.7 percent in 2004, almost the same level as the previous year.⁹ The Prairie provinces exhibited the lowest degree of R&D intensity in Canada (all less than one percent), with a slight downward trend between 2001 and 2004.

Manitoba’s R&D/GDP ratio was .92 percent in 2004, only negligibly higher than the previous year, and below its 2001 level of .95 percent.

FIGURE 3-2: RATIO OF R&D SPENDING¹⁰ TO GDP, PROVINCES AND CANADA, 2001 TO 2004



Source: Statistics Canada and author’s calculations.¹¹

⁸ This is the ratio of R&D expenditures by industry and higher education institutes in the area of natural sciences as a percentage of GDP.

⁹ Statistics Canada uses two sources to obtain R&D spending data. It sends an annual survey to all companies in Canada known to be performing or funding \$1 million or more in R&D. This data is augmented by administrative data on R&D spending from Canada Customs and Revenue Agency. The tax data is the main R&D spending data source for firms spending less than \$1 million on R&D. [Data only available to 2004.](#)

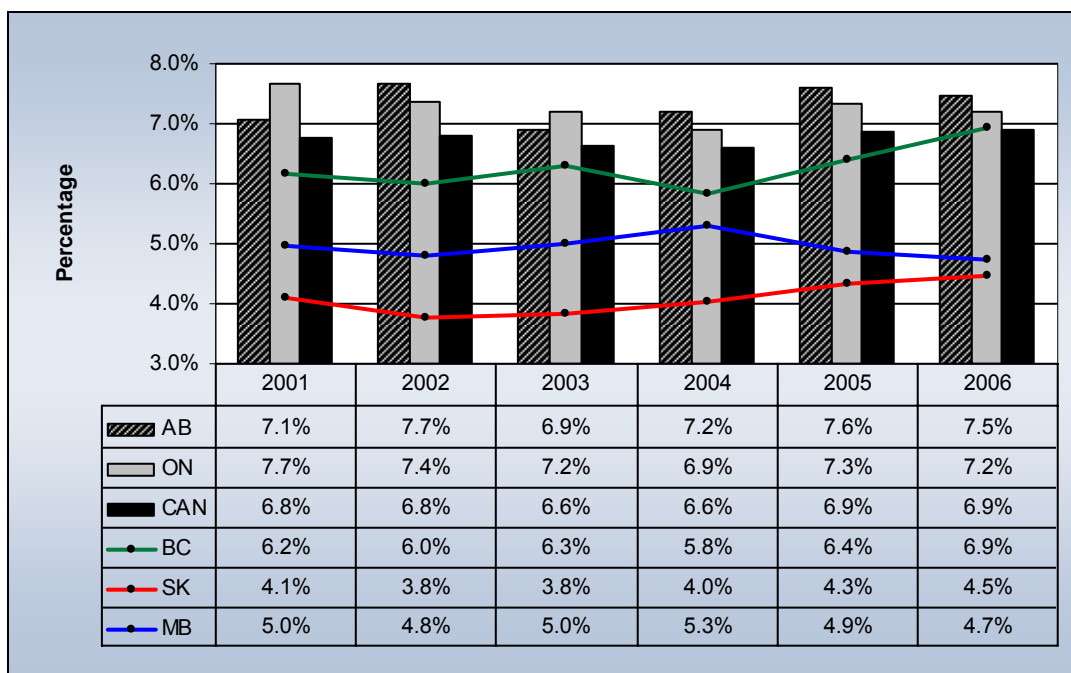
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¹¹ Calculated as the ratio of Gross Domestic Expenditure on R&D by business enterprise and higher education sectors to GDP expenditure based at current prices.

Employment in the Sciences

The proportion of workers in the natural and applied sciences measures the extent of technological dissemination in the labour force.¹² Manitoba has had the second lowest share of sciences-related employment of all jurisdictions since 2001, averaging around 5 percent, compared with the national average of 6.6 to 6.8 percent during this same period. This is an outcome of Manitoba's historical economic reliance on agriculture and resource production, which (in the past) saw less technological innovation than industries elsewhere in Canada (e.g., value-added manufacturing in Ontario, or oil and gas extraction in Alberta).

FIGURE 3-3: NATURAL/APPLIED SCIENCES SHARE OF TOTAL EMPLOYMENT, PROVINCES AND CANADA, 2001 TO 2006



Source:

Statistics Canada - Labour Force Survey.

While total employment in Manitoba increased by 6,700 in 2005-2006, employment in the sciences declined by 500 jobs. Hence the share of employment in natural and applied sciences declined in both 2005 and 2006, to reach a value of 4.7 percent in the latter year. Approximately 65 percent of jobs in science and technology are held in Winnipeg.

Real Non-Residential Construction Cost Index

Business expenditures on non-residential building construction include all money spent by the private sector on labour and materials in non-residential building and engineering construction.¹³ The implicit

¹² Natural and applied sciences include professional occupations in physical and life sciences, engineering, architecture, planning and a range of related technical occupations.

¹³ Includes new construction, conversions resulting in a structural change, major renovations, permanently built-in equipment and site preparation on industrial, commercial and institutional buildings such as plants, warehouses, shopping centres, office buildings, schools

price index of business gross fixed capital formation in non-residential structures captures the rate of construction cost increases in this sector. Comparing this with the GDP implicit price index reveals which is rising faster – construction costs or the general price level. Hence an increase in the ratio of the construction cost to GDP price indices means that construction costs are outstripping the latter, which acts as a deterrent to new investors.

Between 2001 and 2006, Manitoba’s non-residential construction cost index rose at a faster rate (6.7 percent) than the provincial implicit GDP deflator. Manitoba’s construction cost index rose by .9 percent in 2005 to 2006, one of the lowest increases of all jurisdictions in that year, but nevertheless an indication that wage and materials costs continued to rise faster than the overall price level. But this should not be surprising, given that Manitoba’s business investment in non-residential structures spiked in 2006, particularly with urban building projects and additions to the electric power infrastructure.¹⁴

FIGURE 3-4: NON-RESIDENTIAL CONSTRUCTION COST INDEX, PROVINCES AND CANADA, 2001 TO 2006



Source:

Statistics Canada.

The results show that construction costs in Manitoba were still rising at a faster rate than the general price level in 2006, as economic growth accelerated, and investment spiked. While the markets for Manitoba’s exports are buoyant (energy and agricultural products), investors will continue to be

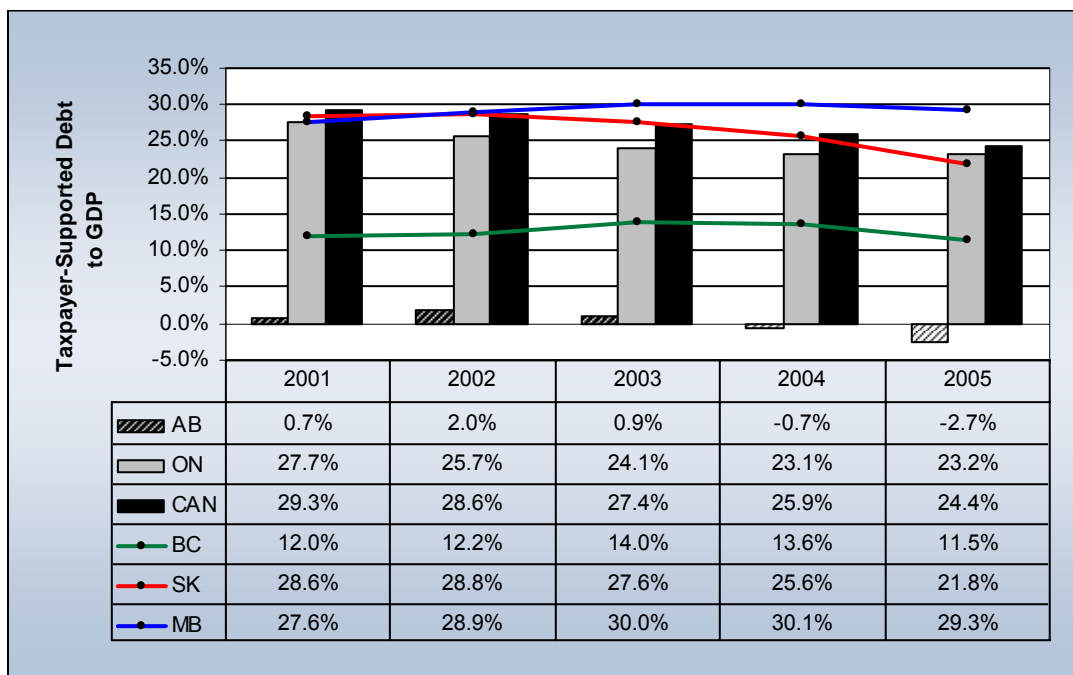
and hospitals, plus construction of highways, bridges, railway tracks, canals, waterworks, sewage systems, dams, hydro or thermal generating plants, telephone lines, oil and gas facilities, etc.
¹⁴ Source: Statistics Canada

drawn to Manitoba, but in the long term this trend in comparative prices, if unchecked, may hobble some investment decisions.

Net Government Financial Liability as a Percentage of GDP

Net government liability is important to investors not only because it reflects past fiscal policy but also future tax burden. In past years we have used taxpayer-supported debt as our indicator,¹⁵ but this year we have chosen to adopt a modified indicator derived from Statistics Canada’s Financial Management System (FMS) data. The FMS provincial government data is compiled to provide consistent and provincially comparable results.¹⁶ Our indicator is *net government financial liability as a percentage of GDP*. The numerator, net government financial liability, is defined as total provincial financial assets (including sinking funds) minus financial liabilities plus guaranteed debt.¹⁷

FIGURE 3-5: NET PROVINCIAL DEBT AS A PERCENTAGE OF GDP, PROVINCES AND CANADA, 2001 TO 2005¹⁸



Source:

Statistics Canada

Between 2001 and 2005, net financial liabilities as a percentage of GDP declined in all provinces but Manitoba, where the ratio rose at 1.7 percentage points over this time to reach 29.3 percent. Alberta is of course the leader in this regard, having completely eliminated its direct debt by 2001, while BC ranked second with a liability/GDP ratio 11.5 percent in 2005.

¹⁵ This was a custom made series produced annually by the TD Bank, but it is no longer available.

¹⁶ For more information on FMS system of accounting, see Statistics Canada Cat. No. 68F0023.

¹⁷ Guaranteed debt is a guarantee issued by the provincial government on behalf of its Crown Corporations that could become a claim on the government in the event that the Corporation does not meet its obligations.

¹⁸ Represents fiscal year ending March 31st of the following year.

Things improved for Manitoba between 2004 and 2005, when our province's net liabilities/GDP ratio declined by .8 percentage points to reach 29.3 percent. Not only has Manitoba sustained a comparatively high level of financial liability in the past five years vis a vis the other jurisdictions, but this ratio has declined only marginally in the past few years.

Looking at the nominal debt numbers, Manitoba government's total net financial debt rose annually between 2001 and 2005, to reach \$11.4 billion in 2005. At the same time, guaranteed debt also increased annually, although it constitutes a small share of total liabilities. Together, the sum of net financial liabilities grew at a rate close to that of nominal GDP, resulting in a static ratio in 2003 and 2004, and a small decrease in 2005.

The Manitoba government had an estimated budget surplus of \$166 million in fiscal year 2006-07 and others are projected in the years to come.¹⁹ Government revenues increased in 2006 as economic growth accelerated, but were offset to some degree by expenditure increases in health care, education, agriculture and disaster relief. The government is committed to paying down its debt burden, but nevertheless capital needs may push up the debt slightly in fiscal 2007-08.²⁰ Despite limitations on its fiscal latitude, the Manitoba government continues to meet its spending requirements, reduce tax rates (although not as significantly as in other provinces) and reduce its financial liabilities/GDP.

Conclusions

Manitoba enjoyed another year of strong economic growth in 2006, with real GDP gains of 3.3 percent and a surge in non-residential investment. Manitobans can thank good growing conditions and buoyant domestic and international demand for our energy, wheat and manufactured goods. The investment climate indicators show mixed results, however.

In absolute terms, Manitoba does not stand out in comparison with the other jurisdictions. Manitoba's R&D/GDP and after-tax profits/GDP ratios are both average when compared with the other provinces and Canada, while the science share of employment is low and Manitoba's debt share of GDP the highest of all.

The one-year change for some indicators is more positive. Between 2003 and 2004, Manitoba's R&D indicator improved, and the profit/GDP also rose significantly between 2005 and 2006. Government policy can take some credit for these improvements, based on their support of R&D initiatives and its move towards lower corporate tax rates. Manitoba's R&D share of GDP now rests at a significantly higher level than it did ten years ago (.58 percent in 1997) but it still has a long way to go to make its taxes (both corporate and personal) competitive with those of other provinces.

Manitoba's net financial liability/GDP ratio declined slowly in 2006, a promising trend nevertheless for a province that is constrained by its revenues, spending programs and debt reduction objectives. The

¹⁹ TD Bank Economics (April 4, 2007). *The 2007 Manitoba Budget*.

²⁰ Ibid.

one worrying trend is Manitoba's declining share of science employment, which was fairly low to start with. Manitoba will continue to enlarge its share of R&D activity as it builds the necessary infrastructure and critical mass, but the real challenge lies in attracting and retaining the right skills to grow Manitoba's high tech sector. In so doing, Manitoba will be able to continue diversifying into new, more value-added products.