

Manitoba 

Budget Paper A

**THE
ECONOMY**

THE ECONOMY

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CANADIAN ECONOMY

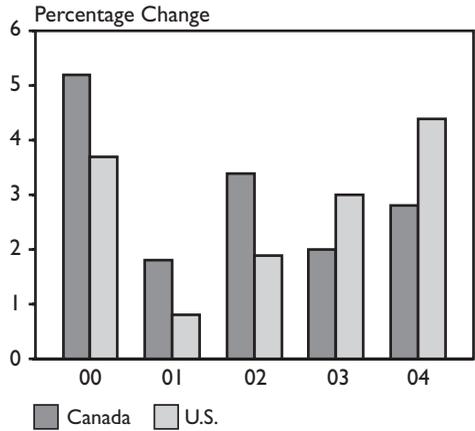
The Canadian economy grew 2.8% in 2004, up from the 2.0% increase posted in 2003 (see Chart 1). Nominal GDP increased by 6.1% to \$1.3 trillion.

Economic growth in 2004 was constrained by the continuing appreciation of the Canadian currency relative to the United States dollar. While the Canadian dollar slipped in value against its U.S. counterpart through the first five months of 2004, it appreciated significantly through the latter half of the year. In November, the Canadian dollar traded as high as U.S.\$0.85 before settling back into the U.S.\$0.81-0.82 range in December. The appreciation of the Canadian dollar last year follows a 20% increase in the value of the dollar in 2003. Overall, the Canadian dollar appreciated by about 30% between the beginning of 2003 and the end of 2004 (see Chart 2).

The higher-valued Canadian dollar increased competitive pressure on Canadian firms. This is because U.S. goods and services entering Canada became cheaper relative to domestically produced goods and services; likewise, Canadian goods and services entering the U.S. market became less competitive against U.S. products. The effect was felt most significantly in the manufacturing sector, where the good performance in the first half of the year weakened in the latter half of the year. Overall, the real value of Canadian exports to the U.S. declined in the last two quarters of 2004.

The U.S. remains Canada's largest trading partner, responsible for 85% of the market for Canadian merchandise exports and accounting for approximately 60% of the imports into Canada. U.S. exports are a significant factor in Canada's overall economy, equal to about 25% of Canada's GDP.

Chart 1
Real Gross Domestic Product
At Market Prices



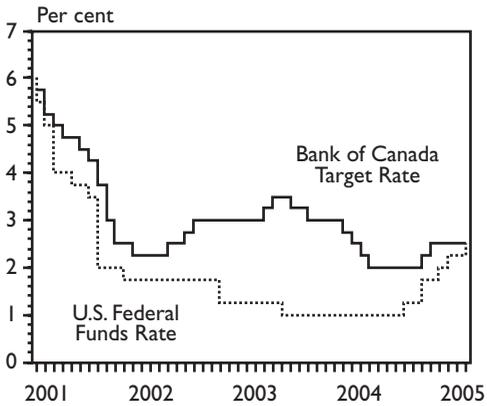
Sources: Statistics Canada and
U.S. Department of Commerce

Chart 2
Canada and U.S. Exchange Rate,
January 2002 to February 2005



Source: Bank of Canada

Chart 3
Canada and U.S. Interest Rates



Source: Bank of Canada

Manitoba Finance's survey of private economic forecasts shows CPI is expected to remain well within the Bank of Canada's 1-3% inflation target range for the next two years.

While the stronger dollar acted as a drag on Canadian economic growth last year, Canadian producers of many primary products enjoyed strong market conditions. Helped by strong demand from China, prices for copper, lead and zinc increased by more than a third as base metal prices increased to a 15-year high in late 2004. Oil prices jumped by 34%, aluminum prices advanced 23% and lumber prices rose 14%.

The Bank of Canada changed the course of monetary policy last year, first increasing, and then reducing, monetary stimulus. In the face of apparent economic weakness, the Bank cut the overnight target rate from 2.75% at the beginning of 2004 to 2.0% by early April (see Chart 3). The Bank then held the rate at this very low level for five consecutive months from April through to the beginning of September. Starting in early September, the Bank implemented two consecutive rate hikes for a total increase of 50 basis points. The Bank's move to tighten rates was in response to a strengthening economy through the first half of the year. However, as it became evident that considerable slack remained in the Canadian economy later in 2004, the Bank adopted a more neutral stance. Nevertheless, policy target interest rates in March 2005 are 50 basis points higher than they were 11 months ago.

The Bank's monetary policy report update from January 2005 indicated that the more neutral stance will likely continue through the first part of 2005. The Bank reported that inflationary pressure in Canada was under control and that any further easing of monetary stimulus was not likely in the near future.

Despite significant price increases for many major commodities last year, consumer price inflation remained relatively benign. The overall Consumer Price Index (CPI) increased 1.9%, down from 2.8% in 2003, and the lowest average annual

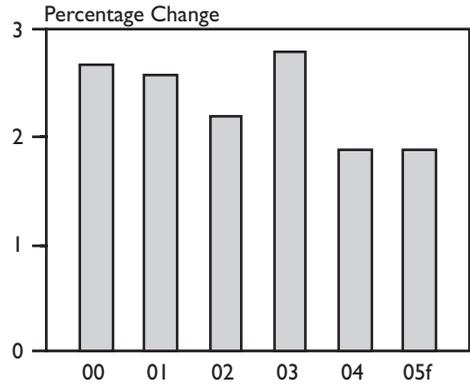
increase since 1999 (see Chart 4). While the energy component of the national CPI increased 6.7%, core CPI (consumer prices excluding food and energy) increased only 1.2%. This was the lowest annual increase in core CPI since 1994. Prices for many import-intensive goods actually declined last year; these declines, in part associated with the stronger Canadian currency, are credited with keeping prices for many consumer goods in check.

Manitoba Finance's survey of private economic forecasts shows CPI is expected to remain well within the Bank of Canada's 1-3% inflation target range for the next two years. For 2005, CPI growth is forecast at 1.9%. For 2006, CPI growth is projected to increase 1.8%. Similarly, the Bank of Canada currently predicts that CPI inflation will average 1.5% in the first half of 2005, rising gradually to about 2% by the end of 2006.

Employment growth slowed to 1.8% last year, below the annual increases in 2002 and 2003. The unemployment rate declined from 7.6% to 7.2%, the same level as 2001. With the stronger labour market, both the employment rate and the labour force participation rate increased last year. The survey of private economic forecasts shows that Canada's employment is expected to grow 1.5% in 2005 and 1.6% in 2006. The national unemployment rate is projected to decline to 7.1% this year and to fall to 7.0% in 2006.

After growing by 2.8% in 2004, Manitoba Finance's survey of private forecasts shows that Canada's real GDP is projected to increase by 3.0% in 2005 and 2006. Nominal GDP is expected to grow in 2005 and 2006 by 4.2% and 5.1%, respectively. Considerable risks remain for the Canadian economy in 2005, including adverse economic consequences of a further appreciation of the Canadian currency, the evolution of oil prices and possible changes to the pace of expansion in the economies of the U.S. and China.

Chart 4
Canada Consumer Price Index



f - Forecast

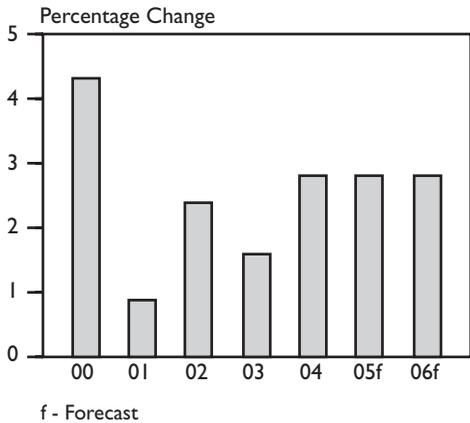
Sources: 2000-2004: Statistics Canada
2005: average of economic forecasters

Canada Forecast Summary, 2005 and 2006

	Percentage Change	
	2005	2006
Gross Domestic Product	4.2	5.1
Real Gross Domestic Product	3.0	3.0
Consumer Price Index	1.9	1.8
Employment	1.5	1.6
Unemployment Rate (%)	7.1	7.0

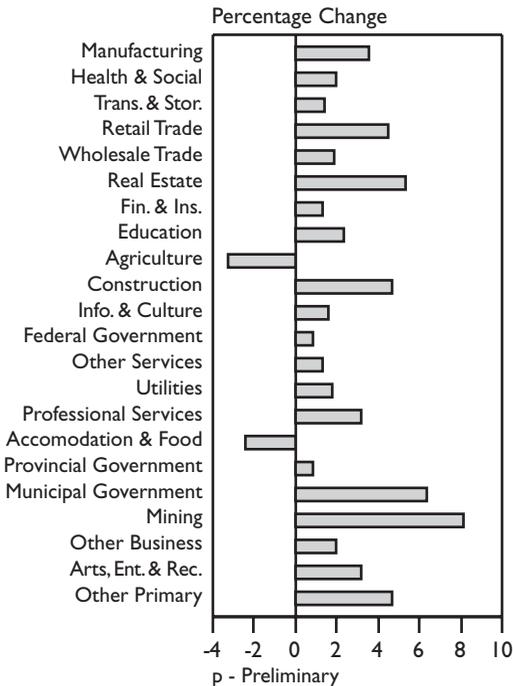
Source: average of economic forecasters

Chart 5
Manitoba Real
Gross Domestic Product



Sources: 2000-2004: Statistics Canada
 2005-2006: average of economic forecasters

Chart 6
Manitoba Real Gross Domestic
Product, at Basic Prices by
Industry, 2004p



Note: ranked by size in descending order

Source: Manitoba Bureau of Statistics

MANITOBA ECONOMY

Manitoba's real GDP growth in 2004 was 2.8%, up from the 1.6% increase of 2003 and the strongest real GDP increase since the 4.3% gain posted in 2000 (see Chart 5). Nominal GDP grew 5.5% to \$40.2 billion.

The largest category of real provincial expenditure, personal spending, increased by 2.6% based on solid consumer spending growth. Government expenditure increased by 2.8%. Total business investment rose 5.8% as machinery and equipment spending increased by 4.0%, and strong housing markets propelled residential construction investment to a 14.5% gain. The value of real exports to foreign markets grew 4.3%, the strongest increase since 1998.

Total personal income in Manitoba grew 4.1%, up from a 2.5% gain in 2003. Personal disposable income increased 4.4%, also up from a 2.5% increase posted in 2003.

By industry, GDP growth in the goods-producing sector was led by mining, which grew by 8.1% in real terms, and construction, which posted a 4.7% increase. Real estate and retail trade led real growth in services with increases of 5.3% and 4.5%, respectively (see Chart 6). Only two industries declined: real GDP in agriculture fell 3.2% due to a weaker harvest in 2004 and lower cattle and calves production associated with the U.S. ban on ruminant imports; and accommodation and food services, which declined 2.4%, was adversely affected by a number of factors, including weaker tourism spending related to the stronger Canadian dollar.

Manitoba employment grew 0.9% last year as full-time employment growth offset part-time employment declines. Manitoba's unemployment rate increased 0.3 percentage points to 5.3%, but remained well below the national average and was second-lowest among provinces. Both the labour force participation rate and employment rate increased in 2004.

Manitoba Real Gross Domestic Product at Basic Prices by Industry, 2003 and 2004p

(Millions of Chained 1997 Dollars)

	2003	2004p	Percentage Change
Goods	8,402	8,619	2.6
Agriculture	1,589	1,538	-3.2
Mining	508	549	8.1
Other Primary	77	81	4.7
Manufacturing	3,906	4,046	3.6
Construction	1,449	1,517	4.7
Utilities	871	887	1.8
Services	23,598	24,158	2.4
Transportation & Storage	2,144	2,174	1.4
Information & Culture	1,187	1,206	1.6
Wholesale Trade	2,091	2,131	1.9
Retail Trade	2,057	2,149	4.5
Finance & Insurance	1,703	1,725	1.3
Real Estate	1,869	1,969	5.3
Imputed Rent	2,892	2,970	2.7
Professional Services	807	833	3.2
Other Business Services	488	498	2.0
Federal Government	986	995	0.9
Provincial Government	683	689	0.9
Municipal Government	558	594	6.4
Education	1,615	1,654	2.4
Health & Social Services	2,477	2,528	2.0
Arts, Entertainment & Recreational Services	321	331	3.2
Accommodation & Food	793	774	-2.4
Other Services	926	938	1.3
Real GDP at Basic Prices	31,871	32,778	2.8

p – Preliminary

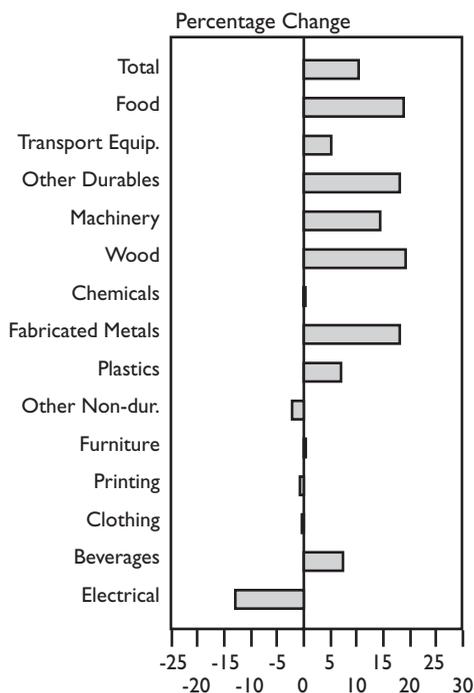
Source: Manitoba Bureau of Statistics

Manitoba's population at October 1, 2004, was estimated at 1,173,200. Between this date and October 1, 2003, Manitoba's total population grew by 10,161, or 0.87%. This was Manitoba's strongest population growth since 1985. Last year was the third consecutive year of net population growth through migration. The total net migration to Manitoba of 6,485 was the highest level recorded

“Manitoba continues to benefit from a diverse economy. Diversity has helped Manitoba avoid the volatility associated with specific local industries.”

Moody's Investors Service
November 2004

Chart 7
Manitoba Manufacturing Shipments by Industry, 2004



Note: ranked by size in descending order

Source: Statistics Canada

in modern times.

Manitoba's consumer price inflation remained moderate in 2004. Total CPI increased 2.0%, just above the national increase of 1.9%. Like at the national level, the stronger Canadian dollar relative to the U.S. currency helped contain Manitoba's consumer prices, offsetting some of the increases in energy prices through lower prices for import-intensive goods and services. Manitoba's CPI energy subcomponent rose 7.3% in 2004. This was the largest annual increase in the energy subcomponent since 2000 and is attributable to large increases in gasoline prices. Related to higher costs for fuels, transportation costs rose 3.6%. Recreation, education and reading declined 0.3%, while prices for clothing and footwear fell 1.2%, the third price decline in four years. Household operations and furnishing costs remained under control with a 1.2% increase. Food prices increased 2.5%.

■ Manufacturing

Manitoba manufacturing shipments rose 10.4% in 2004 to \$12.6 billion, ahead of the national increase of 8.4%. This was a significant improvement from 2003, when a number of factors, including weak market conditions in the U.S. and strong increases in the value of the Canadian currency relative to the U.S. dollar, combined to limit Manitoba's shipments growth to just 1.3%.

While the magnitude of the manufacturing shipments increase in Manitoba was large, the breadth of the gains across individual manufacturing industry categories was also significant. Shipments in 10 of 14 industry categories were up in 2004. Of the four manufacturing industries that declined last year, two declined by less than 1% (see Chart 7).

Manitoba's manufacturing industries growth was led by the largest sector, food processing. Food shipments increased by 18.8%, or \$461 million. Shipments of wood products increased by 19%, fabricated metals by 18% and machinery by

14.3%. Declines were led by a 12.7% fall in electrical equipment shipments (the fourth annual decline in this manufacturing category) and a 2.1% reduction in other non-durables.

In line with the strong performance in manufacturing shipments, Manitoba manufacturers posted significant gains in foreign exports. Manufacturing exports reached a record high level in 2004 of \$6.4 billion. Total manufacturing exports rose by 6.7%, led by increases in machinery (17.1%), wood products (15.4%), fabricated metals (12.6%) and primary metals (10.7%).

Manufacturing employment rose 0.3% last year, just behind the national increase of 0.6%. Manufacturing employment averaged 69,100 in 2004. As in Canada, manufacturing employment in Manitoba has been relatively stable over the past four years.

Manufacturing is Manitoba's largest industry, accounting for 12.3% of Manitoba's real GDP. The majority of Manitoba's manufactured goods are exported. These exports include a diverse mix of industrial and consumer goods, including buses, furniture, food products, newsprint, pharmaceuticals, aerospace products, printing, agricultural machinery and industrial chemicals. Manufactured goods account for about two-thirds of total foreign merchandise exports.

■ Agriculture

Despite a number of setbacks in agriculture in 2004, total farm cash receipts in Manitoba rose 8.8%, the second-strongest growth among provinces. The level of receipts matches the all-time high established in 2002 (see Chart 8).

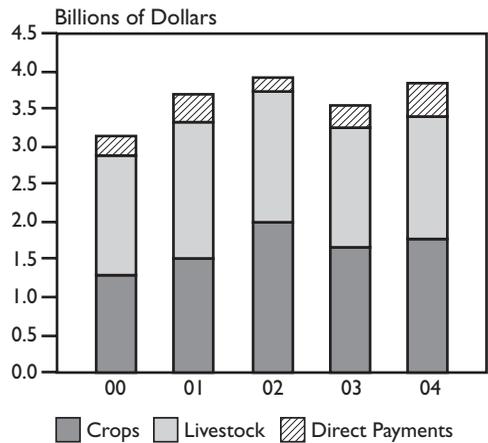
The most significant factor in raising farm cash receipts in 2004 was direct payments, or non-market support payments to producers, which increased by 48.9%. Over the past two years, these payments – related to support arising from weak

Manufacturing Exports, Major Growth Categories, 1996-2004

	Percentage Change
Printing & Publishing.....	295.3
Chemicals.....	292.9
Wood.....	220.3
Primary Metals.....	168.5
Plastics	136.9
Fabricated Metals.....	126.3
Food	108.3

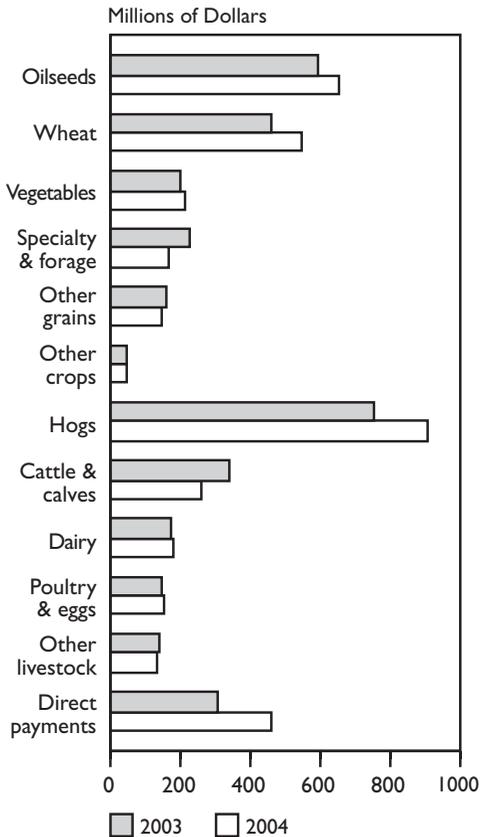
Source: Statistics Canada

**Chart 8
Manitoba Farm
Cash Receipts**



Source: Statistics Canada

Chart 9
Manitoba Farm Cash Receipts
by Product, 2003 and 2004



Source: Statistics Canada

harvest conditions and U.S. restrictions on cattle imports – increased by 109% to \$458.7 million. Increased payments occurred under the crop insurance program, Net Income Stabilization Accounts (NISA) program and payments made in support of bovine spongiform encephalopathy (BSE) recovery programs.

Livestock receipts, which account for approximately 48% of Manitoba's market cash receipts, increased by 4.6% (see Chart 9). Hog receipts increased by 19.9% to \$904 million. Hog receipts reflect the significant growth in this industry in Manitoba, and have doubled in the last five years.

Receipts from cattle and calves continued to slide in the face of continued U.S. restrictions on cattle imports from Canada.

On May 20, 2003, the Canadian Food Inspection Agency (CFIA) announced that tests had confirmed that a case of BSE had been found in a single beef cow in the province of Alberta. The inspection system prevented the meat from entering the food chain. More than 2,700 animals were destroyed and tested as part of the CFIA's investigation; all test results for BSE were negative and the investigation did not identify any additional cases. However, the United States Department of Agriculture (USDA) placed Canada under BSE restriction guidelines and announced that it would not accept any live ruminants (cattle, sheep and certain other hoofed animals) or ruminant products from Canada pending further investigation. Several other countries also imposed import restrictions. On August 8, 2003, the USDA announced that it would begin to accept applications for import permits for certain boneless ruminant products, including boneless bovine meat from cattle under 30 months of age. Several other countries followed the U.S. and are allowing the import of certain Canadian beef products. However, the Canada-U.S. border remains closed to live ruminants and other ruminant products.

On December 29, 2004, the USDA announced that young live cattle from Canada younger than 30 months of age, beef from animals over 30 months of age and certain other animals and products, would be allowed across the border into the United States beginning March 7, 2005. However, on March 2, 2005 a U.S. court injunction was granted delaying the implementation of the USDA decision.

Overall, cattle receipts (excluding direct payments) declined 24.8% in 2004 after a 38.7% decrease in 2003 (see Chart 10). Cattle and calves receipts stood at less than half the level received in 2001, and were at their lowest levels since 1983.

Eggs, poultry and dairy products comprise 20% of total livestock receipts. In 2004, receipts from these products reached \$328 million, an all-time high level.

While actual production of crops in Manitoba suffered due to cool and wet weather conditions, crop producers drew down inventory in 2004 as overall receipts from crops advanced 5.4%. Wheat receipts advanced 18.8% while receipts from oilseeds rose by 10.3%. Receipts for vegetables and horticulture products increased by 6.4%. The effects of the weaker prairie harvest will continue to be reflected in income statistics into 2005.

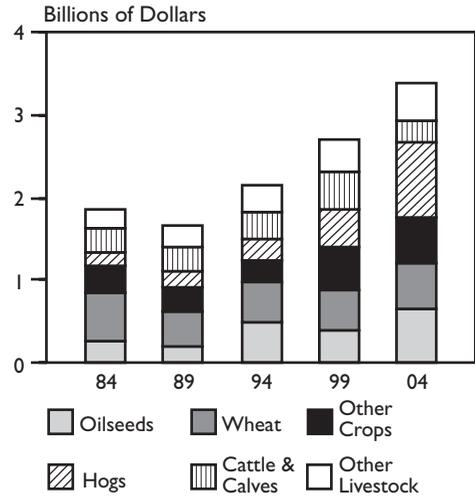
Manitoba agriculture exports account for 23.2% of total foreign merchandise exports. In 2004, agriculture exports increased 10.3% with strong gains in hogs and crops exports.

■ Minerals

Manitoba's mining industry enjoyed strong market conditions in 2004. Demand of minerals kept prices high throughout the year as robust industrial production in China and several other foreign markets buoyed markets for many metals.

Nickel accounts for about half of mineral production in the province, and Manitoba produces

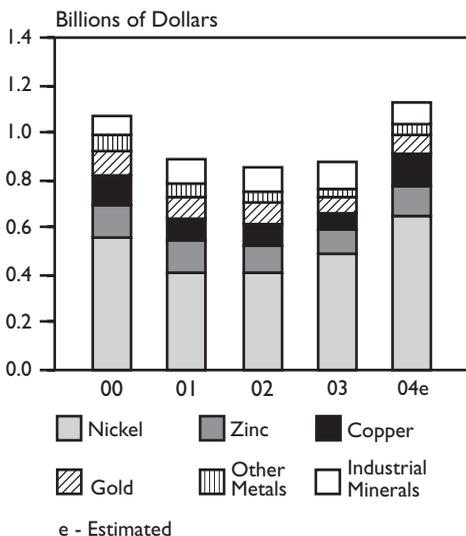
Chart 10
Manitoba Market Receipts
by Type



Source: Statistics Canada

Hog receipts reflect the significant growth in this industry in Manitoba, and have doubled in the last five years.

Chart 11
Manitoba Mineral Production



Source: Natural Resources Canada

Helped by strong demand from China, prices for copper, lead and zinc increased by more than a third as base metal prices increased to a 15-year high in late 2004.

about one-quarter of the nickel mined in Canada. In 2004, the value of nickel production reached \$590 million through November, a 35% increase relative to the same period in 2003 (see Chart 11). Nickel prices were strong through 2004, with all of the increased value of nickel production last year due to higher prices. Used mainly for stainless steel production, nickel markets benefited from a 22% increased in demand for nickel in China last year. World nickel prices averaged U.S.\$6.28 per pound in 2004, the highest average annual price in history.

The growth in the value of most mineral products produced in Manitoba last year reflected both stronger volumes and prices. The value of copper produced rose 112% relative to the same period in 2003, as the 2004 price for copper averaged 50% higher than 2003, and the volume of production increased by about 40%. Copper prices recently reached their highest level since 1989, as strong demand from China combined with low world copper inventories to drive up price levels.

The value of zinc production through November 2004 increased 36% from the same period in 2003. This large increase reflected a 13% increase in the average price and a 21% increase in production volumes. As with most other metals, strong growth demand from China – an increase of 20-25% last year – propelled prices higher.

The value of gold production through November 2004 increased 18%. Gold prices were up almost 4% last year, while increased production volumes accounted for the bulk of the increased value of gold output in the province.

There was one mine closure in Manitoba last year. Early in 2005, the owners of the New Britannia gold mine in Snow Lake announced that the mining operation would be placed in care and maintenance mode and that regular mining operation at the facility would cease.

Manitoba's petroleum industry posted a good performance in 2004. The value of production last year is estimated at \$195 million. In 2004, 119 wells were drilled, the highest number since 1986. This industry directly employs about 350 Manitobans. Production is concentrated in the southwest corner of the province with 1,490 producing wells and 14 designated producing fields.

Mineral exploration expenditures last year increased by 20% to \$32.6 million. Strong growth in exploration spending on precious metals and diamonds was responsible for the robust increase.

■ Hydro-Electricity

Manitoba Hydro is Manitoba's largest utility and accounts for virtually all electricity generation, transmission and distribution in the province. Almost all of Manitoba Hydro's electricity is produced by water, a renewable source of energy. Currently, Manitoba Hydro has a generating capability of more than 5,000 megawatts, with a further potentially economical hydro generating capacity of about 5,000 megawatts.

After two years of significant declines in sales associated with the effects of low water-flows on generating capability, Manitoba Hydro's electricity sales increased 11.9% in calendar year 2004 to \$1.4 billion (see Chart 13). 2004 was the second-strongest calendar year of energy sales recorded. The increase was due to the recovery of sales in both Manitoba and out-of-province markets, and reflected higher precipitation in the Hudson Bay drainage basin and, consequently, more normal water flow for hydraulic generation.

The value of Manitoba electricity sales, which accounted for 66.0% of the total, increased 4.9% in 2004. Total gross exports, which accounted for the remainder of sales, increased by 28.3% after declining for two years. The value of export sales had more than doubled between 1997 and 2001, driven

Chart 12
Manitoba Mining Investment

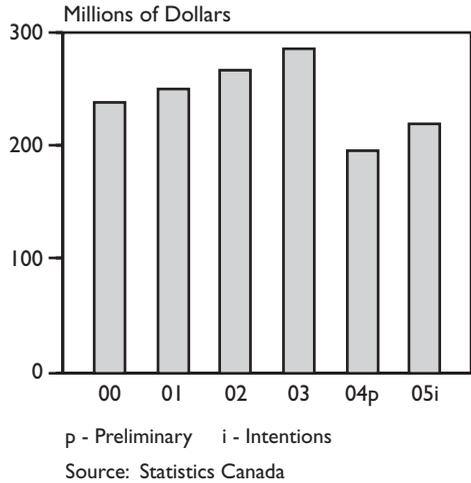
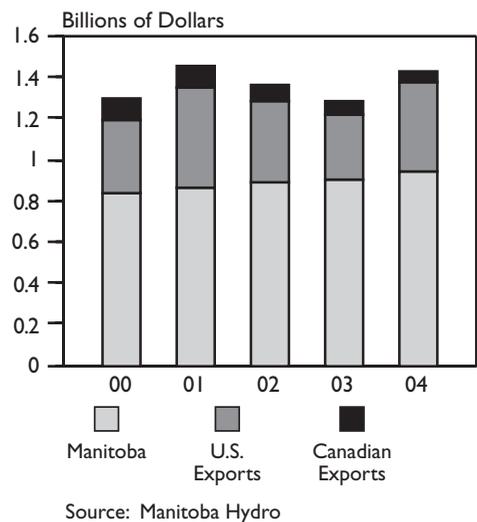


Chart 13
Manitoba Hydro-Electricity Sales



Almost all of Manitoba Hydro's electricity is produced by water, a renewable source of energy.

Manitoba Hydro Generating Stations

Station	River	MW
Limestone	Nelson	1,340
Kettle	Nelson	1,220
Long Spruce	Nelson	1,010
Grand Rapids	Saskatchewan	479
Kelsey	Nelson	223
Seven Sisters	Winnipeg	165
Jenpeg	Nelson	132
Great Falls	Winnipeg	131
Pine Falls	Winnipeg	88
Pointe du Bois	Winnipeg	78
Slave Falls	Winnipeg	67
McArthur Falls	Winnipeg	55
Laurie River I & II	Laurie	10
Hydraulic Capacity		4,998
Thermal Stations		473
Total System		5,471

Source: Manitoba Hydro

by strong increases in exports to the United States and good water flows. The U.S. is the major market for Manitoba's electricity exports. The U.S. accounts for about 87% of total out-of-province sales.

Manitoba Hydro is currently working closely with Northern Aboriginal communities in respect of potential new generating facilities. Two such facilities are under active consideration. The proposed Wuskwatim generating station would be built on the Burntwood River in Northern Manitoba and would generate 200 megawatts of power, with the earliest in-service date being 2010. The Gull (Keeyask) generating facility is another potential generating site. The Gull station would produce about 620 megawatts of power. Construction of the Gull facility, which would be located on the Nelson River near Gillam, also requires the construction of a transmission line to deliver power to Southern Manitoba. The combined cost of these two generating projects, as well as the required transmission facilities, is approximately \$4 billion.

Another option under active consideration is the development of the Conawapa site. This 1,250-megawatt generating facility project would be similar in magnitude to Manitoba's Limestone facility, currently the largest single generating station in the province. This project would assist in meeting the needs of out-of-province customers who would contract for the delivery of power from Manitoba Hydro.

In December 2004, construction began on a new 99-megawatt wind energy project near St. Leon. The \$187 million project will take advantage of Manitoba's world-class wind energy capabilities and was facilitated by a 20-year power purchase agreement with Manitoba Hydro. By the end of 2005, 63 new wind turbine generators will be installed at what will become one of Canada's largest wind farms.

Manitoba Hydro continues to strengthen its position as a leader among Canadian utilities in

voluntarily reducing greenhouse gas emissions. In the future, Manitoba Hydro is prepared to play an increasingly important role in meeting more of North America's electrical energy needs through environmentally desirable hydro-electric resources. In so doing, it will contribute to the reduction of global greenhouse gas emissions.

■ Housing

The housing industry continued a robust performance in 2004. Strong population growth, rapid household formation and low mortgage rates combined to push up the demand for housing. The total number of housing starts increased 5.6% last year, bringing the increase in starts since 2000 to 73% (see Chart 14).

Single-family housing starts increased 10.1% to 3,484 units. This was the fifth consecutive annual increase in single-family starts and brought the number of starts to its highest level since 1988. Winnipeg single-family starts increased 14.7%, the sixth consecutive annual increase.

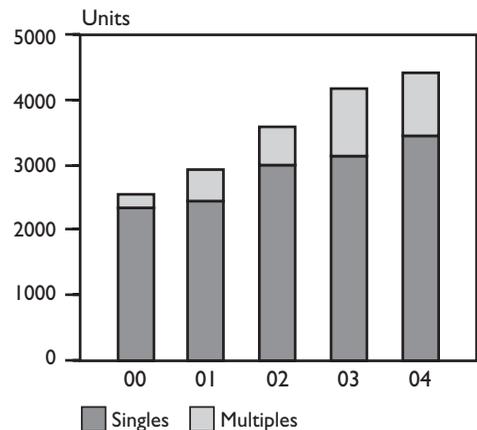
Multiple dwelling starts (apartments, duplexes etc.) declined 8.2%. The 956 units recorded in 2004 was still the second-highest number of multiple starts in the past 15 years.

In its February 2005 forecast, Canada Mortgage and Housing Corporation (CMHC) forecast that Manitoba's housing starts will dip slightly in 2005, from 4,440 units to 4,400 units. For 2006, as population continues to grow with stronger immigration, CMHC forecasts Manitoba's housing starts will grow by a further 9.1% to 4,800.

CMHC reports that total residential resales in Manitoba grew by 5% in 2004, though supply constraints continued to restrict resale activity. CMHC projects that MLS home sales will grow by 7.5% in 2005 and 6.2% in 2006.

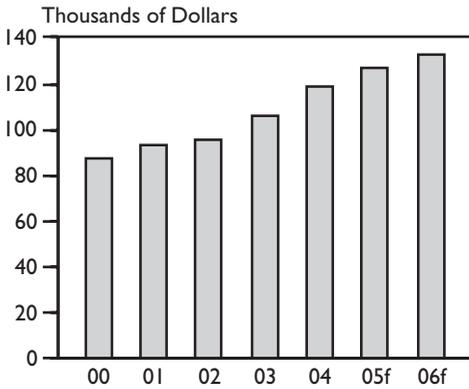
Winnipeg single-family starts increased 14.7%, the sixth consecutive annual increase.

Chart 14
Manitoba Housing Starts



Source: Canada Mortgage and Housing Corporation

Chart 15
Manitoba Average Residential Resale Price



f - Forecast

Source: Canada Mortgage and Housing Corporation

Manitoba's house prices posted strong increases over the past several years (see Chart 15). The average residential resale price in Manitoba in 2004 was \$119,245, significantly below the national average of \$227,261. With an 11.7% increase last year, Manitoba house prices posted the second-highest increase behind Quebec. Overall, Manitoba's residential resale prices have increased 36% since 2000. CMHC forecasts that the average house price will increase by a further 7.3% in 2005 – the highest gain among provinces this year – and by 4.7% in 2006.

■ Retail Sales

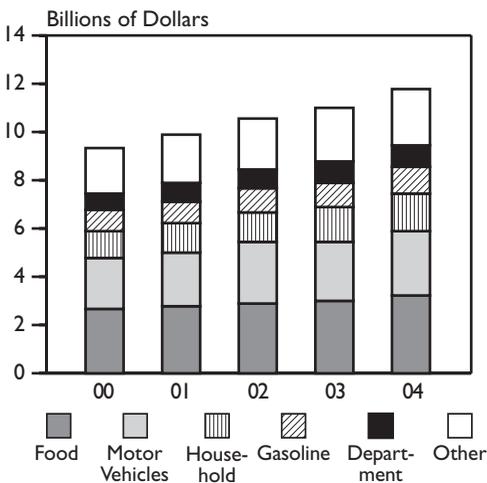
Manitoba's retail sales rose 7.6% in 2004, higher than the national increase of 5.0% and second-highest among the provinces (see Chart 16). Manitoba's increase was the highest since 1997. Solid growth in full-time jobs and rising incomes buoyed consumer confidence and computer spending last year.

Low interest rates and strong housing investment were also significant factors in the strong retail sales increase. Sales at home furnishings stores and furniture stores grew by 25.5% and 17.8%, respectively. Home centres and hardware stores posted increases of 30%. While the value of sales by new car dealers rose by only 3.7% – consistent with the national trend to lower new car sales – sales of recreational vehicles, used motor vehicles and parts increased by 33.4%.

The largest category of decline was specialized building materials and garden stores, where cool and wet weather conditions through much of the spring and summer reduced landscaping and gardening purchases.

Manitoba's sales of new motor vehicles (number of units, not value) were down 1.5% in 2004, somewhat better than the national decline of 3.1%. The number of motor vehicles sold in Manitoba

Chart 16
Manitoba Retail Trade by Type



Source: Statistics Canada

slipped to 45,356 as passenger car sales declined by 4.3%, while truck sales increased by 0.8%.

■ Tourism

Tourism receipts in Manitoba have been relatively stable over the past three years at approximately \$1.4 billion per year.

Although final estimates for 2004 tourism visits and receipts are not yet available, the tourism indicators tracked by Travel Manitoba show positive developments despite the unseasonably cool temperatures and rain experienced during the summer.

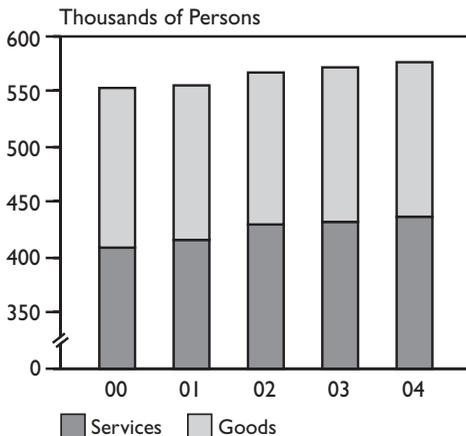
Domestic travel, which makes up approximately 89% of visits to Manitoba, is up by 3.8% to the end of the third quarter. Winnipeg hotel occupancies are also up 2.8%, while Brandon occupancies are up 5.1% and rural occupancies finished the year down by 2.2%.

Overnight direct entries from the U.S. to Manitoba were down slightly by 1.2% compared to 2003. Same day entries were also down by 12.5%. At the national level, overnight direct entries from the U.S. were up by 5.8% and same day entries are down by 8.0%. The strength of overnight entries at the national level is primarily a result of recovery from the impact of SARS in Ontario.

For 2005, the Conference Board of Canada forecasts that domestic overnight person trips to Manitoba will grow by 4.0% with overseas visits up 6.5% and U.S. visits up 1.5%. The modest growth in visits from the U.S. reflects the continued high value of the Canadian dollar relative to the U.S. currency.

Domestic travel, which makes up approximately 89% of visits to Manitoba, is up by 3.8% to the end of the third quarter.

Chart 17
Manitoba Employment



Source: Statistics Canada

■ Labour Market

Employment in Manitoba increased 0.9% in 2004, up from the 0.6% increase posted in 2003 (see Chart 17). Full-time job growth of 1.5% was partly offset by fewer part-time jobs, as part-time employment declined by 1.3%. Average annual employment reached an all-time high of 576,000, up 5,400 from 2003.

Manitoba's unemployment rate last year increased to 5.3% from 5.0% in 2003 (see Chart 18). This rate was the second-lowest in Canada and remained well below the national unemployment rate of 7.2%.

Manitoba's youth unemployment rate rose to 11.1% from 9.6% in 2003. The Manitoba rate was the third-lowest among provinces and well below the national rate of 13.4%.

Among industries, the goods-producing sector, which accounts for 24% of Manitoba jobs, posted a 0.7% increase in employment. Goods industries were led by a 1.8% increase in construction employment. Service industries posted a 1.1% increase in employment, led by

Labour Market Definitions

Employment: Non-institutionalized, civilian working-age adults (15 years of age and older) that work at paid jobs plus those who are self-employed, including unpaid workers who contribute to the family's farm or other business.

Unemployment: People without work who are available for work and are actively looking for jobs, or have looked for work in the previous four weeks.

Labour Force: The sum of employment and unemployment. Excludes those who are not employed and who are not looking for work.

Participation Rate: Labour Force as a percentage of working-age adults.

Employment Rate: Employment as a percentage of working-age adults.

public administration and information and culture industries, which posted 6.0% and 4.5% increases, respectively.

Manitoba's labour force grew 1.3% last year, just behind the national increase of 1.4%. Overall, Manitoba's labour force growth has strengthened considerably recently, growing at an average annual rate of 1.2% over the past five years, well above the average annual increase of 0.4% through the 1990s. Nevertheless, tight labour market conditions persisted through the year.

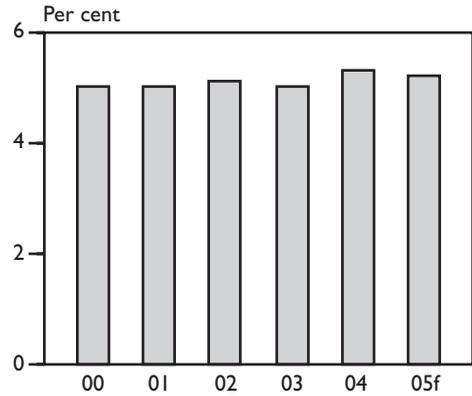
Manitoba's labour force participation rate increased 0.3 percentage points to 69.0% in 2004. The participation rate remained second-highest in Canada last year, and above the national rate which edged up to 67.6%. The 2004 Manitoba rate matched the record-high labour force participation rate established in 2002. Manitoba's employment rate – the ratio of employed to the total of the working age population – increased by 0.1 percentage points to 65.5% (see Chart 19). Like the participation rate, Manitoba's employment rate is the second-highest among provinces in Canada.

Manitoba Finance's survey of economic forecasters shows that Manitoba's annual employment growth rate is projected at 1.1% in 2005 and 2006. Manitoba's unemployment rate is forecast to decline to 5.2% in 2005, and drop further to 4.9% in 2006.

■ Investment

Total new capital investment in Manitoba is estimated to have increased 9.9% in 2004, according to the Statistics Canada Survey of Private and Public Investment. This was the fourth-best increase among provinces and above the national increase of 8.5%. Total investment is forecast to increase to \$7.25 billion in 2005, an increase of \$479 million, or 7.1%. Growth is projected to be stronger than

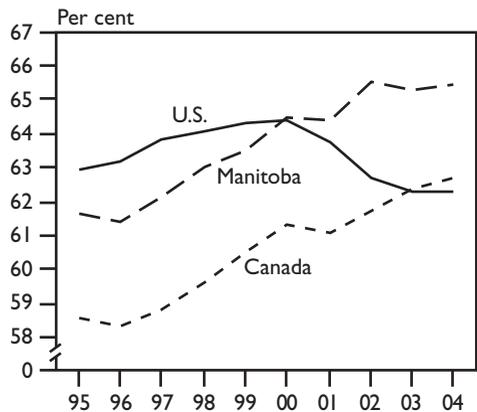
Chart 18
Manitoba Unemployment Rate



f - Forecast

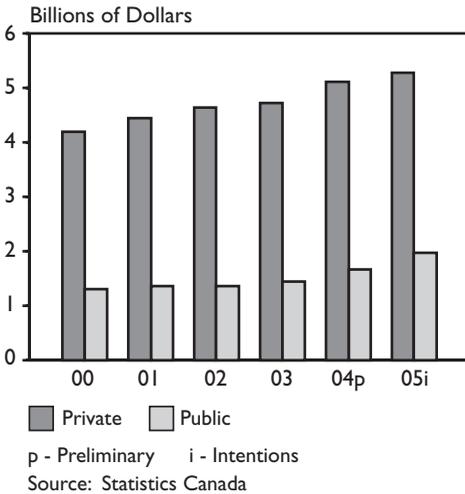
Sources: 2000-2004: Statistics Canada
2005: average of economic forecasters

Chart 19
Manitoba, Canada and U.S. Employment Rate



Sources: Statistics Canada and
U.S. Department of Labour

Chart 20
Manitoba Capital Investment



The Conference Board of Canada, in its February 2005 forecast, projects that capital investment in Manitoba will grow by 6.2% in 2005 and 6.0% in 2006.

the national average increase of 6.0%.

Following slow growth in 2003, private capital investment grew 8.1% in 2004. Over the 1999-2005 period, the level of private investment in Manitoba increased 31% (see Chart 20). Statistics Canada estimates that private investment will increase 3.6% in 2005, slightly below the projected growth for Canada of 5.1%. Private investment accounts for approximately 75% of capital investment in Manitoba. Over the last five years, the level of private investment in Manitoba has increased by more than one billion dollars.

Public capital investment in Manitoba by the federal, provincial and local governments rose by 16.0% last year, almost double the national increase and second-strongest in Canada. For 2005, public investment is projected to increase 17.7%, well above the 10.3% national rate of public investment growth.

According to the Manitoba Bureau of Statistics, real (inflation-adjusted) business investment in Manitoba grew 5.8% in 2004, with a 14.5% increase in residential structures and a 4.0% increase in machinery and equipment spending. By the provincial accounts measures of real investment, total business investment has increased approximately 20%, or \$988 million, since 1999.

Investment growth driven by increased investment in residential structures coincides with a 7.9% or \$1.15 billion increase in the value of building permits issued in Manitoba last year, the highest level ever recorded. Winnipeg permits, which account for about two-thirds of permits issued, increased by 8.4%. Residential building permits increased 28.3% while non-residential permits declined 12% following two years of strong growth.

The Conference Board of Canada, in its February 2005 forecast, projects that capital investment in Manitoba will grow by 6.2% in 2005 and 6.0% in 2006. Manitoba's investment will outpace the national growth in investment and will be third

and second-highest among provinces in the two years, respectively.

Several major capital projects have just been completed, are under way or are now planned. Examples include the following projects.

- Work has just been completed by **Winpak Ltd.** on an expansion of the company's biaxially oriented nylon film plant, the second phase of a project that also involved a 140,000-square-foot expansion of the company's main plant in Winnipeg. The project is part of a \$50 million investment in Manitoba announced by the company.
- A new \$15 million office complex in downtown Winnipeg is now under construction. With completion late in 2005, the 90,000-square-foot building will be home to the **Credit Union Central of Manitoba, Celero Solutions** and other tenants.
- **Manitoba Hydro** will be constructing a new 600,000-square-foot head office in downtown Winnipeg starting in 2005. Approximately 1,800 Manitoba Hydro staff will be located at the new headquarters. Completion of the project is expected in 2007.
- The \$19 million **Millennium Library** project in downtown Winnipeg, scheduled for completion in September 2005, will increase Manitobans' access to technology, boost collections, enhance services and expand facilities at Winnipeg's largest library.
- Plans are under way for the **Red River Floodway Expansion**, with construction to begin in 2005 and completion expected in 2009. This \$660 million project will increase protection from flooding and create thousands of local jobs.
- **Cangene Corporation**, a leader in the development, manufacture and commercialization of specialty hyper-immune plasma and biotechnology products, is investing \$30 million in the expansion of its plasma fractionation facility.

Manitoba Capital Investment by Industry, 2005 Intenions

	Millions of Dollars
Housing	1,545.2
Utilities	944.6
Public Administration	842.7
Transportation	559.6
Finance & Insurance.....	468.3
Manufacturing.....	445.5
Agriculture.....	412.7
Information & Culture	332.8
Real Estate	265.2
Retail Trade.....	233.4
Other Services.....	228.3
Minerals.....	219.4
Construction.....	175.4
Health & Social	174.8
Wholesale Trade.....	171.8
Education	124.5
Professional & Scientific.....	109.2
Total	7,253.4

Source: Statistics Canada

Leading Growth Industries in Manitoba Capital Investment, 1999-2005

	Percentage Change
Utilities	119.4
Housing	81.0
Minerals	68.6
Construction.....	59.3
Professional & Scientific.....	55.6
Public Administration	48.1
Information & Culture	45.6
Retail Trade.....	44.9
Finance & Insurance.....	30.8
Agriculture.....	29.1

Source: Statistics Canada

- **Biovail Corporation** announced that it will invest \$28 million in the expansion of its Steinbach pharmaceutical manufacturing facility, already one of the largest pharmaceutical manufacturing plants in Canada. Coming after an earlier expansion that Biovail undertook in Steinbach two years ago, the new 75,000-square-foot expansion will boost employment at the facility to about 600.
- Construction of the **Richardson Centre for Functional Foods and Nutraceuticals** is under way at the University of Manitoba’s SMART park. Completion is expected by the summer of 2005. This \$25 million facility will bring together researchers from the agriculture, foods sciences, human nutrition, medicine and pharmacology disciplines, along with their industry partners, to study and develop functional foods and nutraceuticals.
- The new \$11 million, 55,000-square-foot **Centre for Commercialization of Biomedical Technology** is under construction adjacent to the National Research Centre’s (NRC) **Institute for Biodiagnostics** (IBD). The new four-storey facility, which will be ready for occupancy in 2005, will help new entrepreneurs and small Canadian firms grow and successfully commercialize biomedical technology in Manitoba and Canada and reach markets around the world. NRC already houses elements of the Centre within its existing facilities at the IBD.
- The 99-megawatt **St. Leon Wind Energy Project** is being developed with completion of the first phase slated for May 2005. A total of 63 wind turbines will be installed at the site, with project costs estimated at \$187 million. The project will be big enough to supply the energy needs of 35,000 homes when completed, and will be one of the largest wind farms in Canada.
- A \$52 million state-of-the-art **engineering and information technology complex** is under construction at the **University of Manitoba**, with completion slated for 2005.

- Brandon's new \$15 million Keystone Centre project includes improvements to existing facilities plus the addition of the **Agricultural Centre of Excellence**, a new multi-functional facility that includes a 100,000-square-foot building with show seating, stabling facilities and show ring.
- Completion of the new \$13 million pilot plant expansion of the Manitoba **Food Development Centre** in Portage La Prairie is expected in April. The 19,000-square-foot expansion will support continued development of Manitoba agricultural goods into commercial products for national and international markets.
- **Rancher's Choice Beef Co-op Ltd.** plans to build a new \$16 million mature cattle slaughter plant near Dauphin. Construction is planned to begin in 2005 with 60 new jobs to be added on a permanent basis.
- **Winnipeg Airports Authority** is starting a \$350 million capital program to upgrade the international airport facilities and establish a new 60,000-square-foot main terminal building. Construction on the multi-level terminal parkade will begin in 2005, along with roadwork and construction site preparation. The new terminal is scheduled for construction in 2006, with completion in 2009.

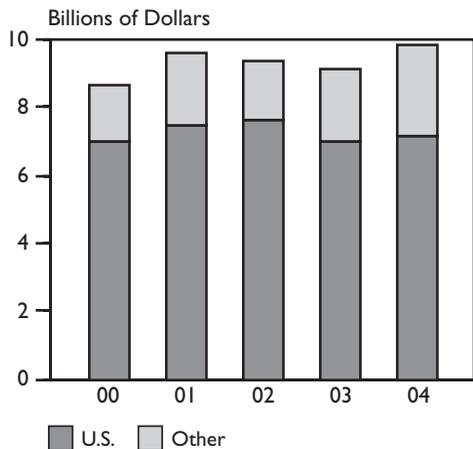
■ Foreign Markets

After two consecutive annual declines, the value of Manitoba's foreign merchandise exports increased 7.5% in 2004, to \$9.8 billion (see Chart 21).

Manitoba's exports to the U.S., which accounted for about 73% of Manitoba's foreign merchandise exports last year, grew 2.9% after falling 8.1% in 2003. A number of factors combined to weaken U.S. export performance over the last two years, including a significant and rapid increase in the value of the Canadian currency relative to the U.S. dollar, trade actions against Manitoba products

Over the last five years, the level of private investment in Manitoba has increased by more than one billion dollars.

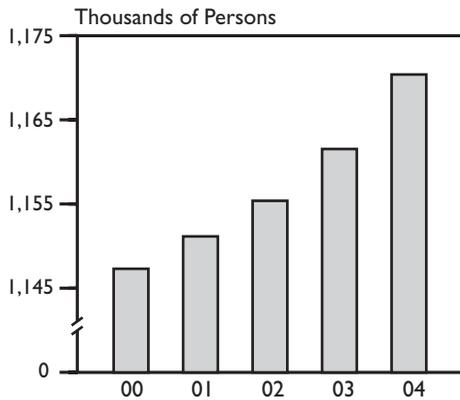
Chart 21
Manitoba Foreign Exports



Source: Statistics Canada

The total net migration to Manitoba of 6,485 was the highest level recorded in modern times.

Chart 22
Manitoba Population



Source: Statistics Canada

such as cattle and weak water-flows which reduced Manitoba's hydro-electricity exports.

While Manitoba's exports to the U.S. grew moderately last year, exports to non-U.S. markets posted significant gains. Non-U.S. merchandise exports increased 22.2% to \$2.7 billion. Total non-U.S. merchandise exports have increased by 48% over the last two years, and by 72% since 1999. Major increases last year occurred in exports to China, Hong Kong and Mexico.

Manitoba's exports of manufactured goods, which accounted for 65% of foreign exports in 2004, rose by 6.7%. Major growth was posted in exports of machinery (17.1%), wood products (15.4%), fabricated metals (12.6%), primary metals (10.7%), food processing (7.4%) and transportation equipment (6.0%).

Foreign exports of agricultural products accounted for about 23% of total Manitoba exports last year. Agriculture exports jumped 10.3%, led by significant increases in wheat.

Electricity exports, which account for 3.8% of Manitoba's foreign exports, rebounded from two consecutive annual declines with a 42.5% increase last year. Better water flows in 2004 strengthened hydro-electricity generation.

Manitoba Foreign Exports

BY INDUSTRY	2000	2001	2002	2003	2004p	2004p Share
	(Millions of Dollars)					(%)
Manufacturing						
Food	830.1	996.0	1,058.6	1,056.3	1,134.3	11.5
Primary Metals	745.8	803.5	847.1	870.2	963.0	9.8
Transportation Equip.	1,053.0	1,139.7	944.9	878.4	931.0	9.5
Machinery	584.8	535.9	679.8	620.8	727.2	7.4
Wood	540.6	531.4	573.3	553.0	638.3	6.5
Chemical Products	359.2	418.1	398.1	459.7	456.9	4.6
Paper	268.6	254.9	267.1	298.6	300.7	3.1
Plastics	178.5	210.5	221.4	229.1	233.8	2.4
Electrical & Electronic	274.7	273.8	188.2	187.9	192.2	2.0
Printing	124.8	165.6	195.2	182.7	183.8	1.9
Petroleum and Coal	205.8	118.7	135.4	186.1	166.4	1.7
Fabricated Metals	95.1	126.1	119.2	116.2	130.8	1.3
Furniture and Fixtures	158.2	171.5	166.8	125.2	111.1	1.1
Clothing and Textiles	193.2	156.6	145.2	122.4	97.8	1.0
Other Manufacturing	134.4	127.1	164.5	142.7	166.5	1.7
Total Manufacturing	5,746.8	6,029.3	6,104.8	6,029.2	6,434.0	65.3
Agriculture	1,594.1	2,030.0	1,839.0	2,072.2	2,285.3	23.2
Electricity	442.7	534.7	390.5	263.7	375.9	3.8
Other Primary	639.8	714.5	792.3	520.1	431.1	4.4
Other Exports	255.4	267.8	279.5	279.7	322.9	3.3
Total Exports	8,678.8	9,576.2	9,406.2	9,164.8	9,849.3	100.0
BY DESTINATION						
United States	6,973.5	7,517.8	7,604.7	6,986.3	7,186.3	73.0
Japan	370.3	454.7	475.0	499.3	510.9	5.2
China	108.5	167.9	79.5	150.9	451.0	4.6
Mexico	124.8	177.3	148.1	204.6	282.1	2.9
Hong Kong	128.6	140.2	112.1	128.8	171.7	1.7
Belgium	127.5	147.5	117.9	115.0	83.2	0.8
United Kingdom	61.3	56.1	72.7	70.8	66.8	0.7
Spain	24.9	34.3	8.4	53.7	65.4	0.7
Australia	27.4	39.5	47.8	52.0	61.4	0.6
Taiwan	55.2	52.1	57.6	54.9	61.2	0.6
Other Countries	676.9	788.8	682.3	848.5	909.3	9.2
Total Exports	8,678.8	9,576.2	9,406.2	9,164.8	9,849.3	100.0

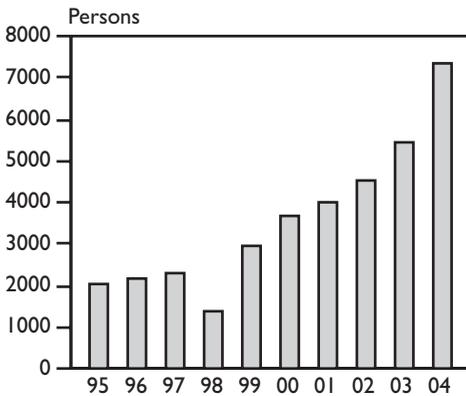
p - Preliminary

Note: adjustments to coin exports to the United States of \$899 million in 2000

Totals may not add due to rounding.

Source: Manitoba Bureau of Statistics

Chart 23
Manitoba Immigration
1995 to 2004



Note: data is for year ending October 1
 Source: Statistics Canada

Manitoba's Projected Population, July 1st

2004	1,170,300
2005	1,179,700
2006	1,189,400
2007	1,199,700
2017	1,303,900
2028	1,401,000

Source: Manitoba Bureau of Statistics

Population

Manitoba's total population was estimated at 1,170,268 as of July 1, 2004. This is Manitoba's "official" population for the year. The population growth from 2003 was 8,716 persons, or 0.75% (see Chart 22). This was the province's largest annual growth since 1986 and fourth-best among provinces behind Alberta, Ontario and British Columbia.

The latest quarterly population data available is October 1, 2004. Manitoba's population was estimated at 1,173,200. Between October 1, 2004 and the same date in 2003, Manitoba's total population grew by 10,161, or 0.87%. This was comprised of total net immigration of 6,485 combined with natural population growth (births minus deaths) of 3,676. This was Manitoba's strongest population growth since 1985.

Last year was the third consecutive year of net population growth through migration. The total net migration to Manitoba of 6,485 was the highest level recorded in modern times.

Total international net migration over the period, including movement of non-permanent residents and Canadian citizens traveling abroad, was 7,367, up 36% from the preceding 12 months (see Chart 23). A large rise in the number of international immigrants coming to Manitoba was principally responsible for the increase.

In large part, the increase in international migration reflected the success of the Manitoba Provincial Nominee Program, a program that targets immigration of skilled workers and business persons to Manitoba. Nominees accounted for about half of all international immigrants to Manitoba last year.

Total net interprovincial outmigration was -882 in the twelve months ending October 1. This is the lowest net interprovincial outmigration level since 1983.

MANITOBA ECONOMIC OUTLOOK

Overall, Manitoba's economy is expected to grow at rates near the national average in 2005 and 2006. Most forecasters anticipate that the U.S. economy will continue to strengthen, supporting demand for Canadian exports, although the continuing high Canadian dollar exchange rate will mute growth somewhat next year.

Manitoba Finance's survey of economic forecasters shows that real GDP in Manitoba is projected to increase by 2.8% in both 2005 and 2006. This is in line with the survey's projected national increases of 3.0% in 2005 and 2006.

Manitoba's nominal GDP is projected to increase by 3.9% in 2005 and by 4.2% in 2006. This compares with projected national growth of 4.2% in 2005 and 5.1% in 2006.

Manitoba's employment is expected to grow by 1.1% in both 2005 and 2006. Manitoba's unemployment rate is projected to decline to 5.2% in 2005, declining further to 4.9% in 2006.

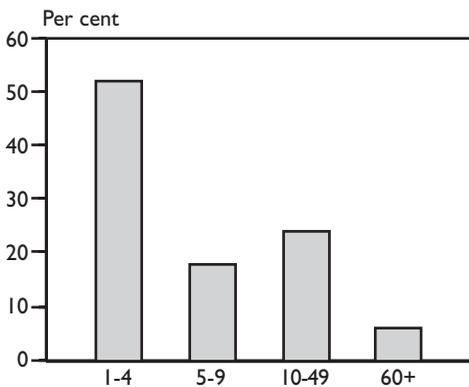
Manitoba Outlook at a Glance

	2003	2004	2005f	2006f
	(Percentage Change Except as Noted)			
Gross Domestic Product				
Real	1.6	2.8	2.8	2.8
Nominal	3.3	5.5	3.9	4.2
Employment	0.6	0.9	1.1	1.1
Unemployment Rate (%)	5.0	5.3	5.2	4.9
CPI	1.8	2.0	1.9	1.7

f - Forecast

Sources: 2003 and 2004: Statistics Canada and Manitoba Bureau of Statistics
2005 and 2006: average of economic forecasters

Chart 24
Manitoba Business by Number of Employees



Source: Statistics Canada

The perception that small businesses are limited to local markets is a myth.

In fact, 79% of Manitoba small businesses export goods interprovincially, while almost 60% are also exporting to U.S. markets.

FOCUS ON SMALL BUSINESS

Small businesses play a significant role in the province's economy. Usually defined to include firms employing less than 50 persons (including self-employed individuals, family businesses and small corporations), small businesses are key contributors to provincial commerce. These firms are found across Manitoba's economic landscape participating in all sectors of the economy and are an important source of job creation, investment and innovation.

According to Statistics Canada (June 2004), firms with less than 50 employees accounted for 94% of the businesses in the province. About 52% of Manitoba businesses (who indicate they had employees) had less than 5 employees; while another 18% had 5-9 employees (see Chart 24).

With such significant participation of small businesses in the economy, it is not surprising that smaller firms are an important source of employment in Manitoba. Statistics Canada reports that, throughout the 1990s, nearly one-third of Manitobans were employed by small businesses. Similarly, in Canada overall, firms with less than 50 employees accounted for 40% of total private sector employment. A significant share of small business in Manitoba is accounted for by self-employed individuals. About 15% of the employed labour force, or about 86,000 Manitobans, are self-employed.

In addition to maintaining a solid share of the overall labour force, small businesses are also a positive source of job creation. Throughout the 1990s, Statistics Canada reported approximately one-third of all new jobs in the Manitoba economy were created by small business.

Manitoba small businesses are an important source of economic growth. It is estimated that small businesses accounted for almost one-quarter of provincial GDP in 2003. This is comparable to the national average share over the same period.

Manufacturing is Manitoba's largest sector, accounting for 12.3% of provincial GDP; 87% of manufacturing firms have identified themselves as small businesses, employing less than 50 persons. Other sectors, like financial services and real estate, do not have such high rates of small business participation. However, in a few industries, such as rubber and leather products, virtually all firms are smaller enterprises.

The perception that small businesses are limited to local markets is a myth. A recent survey of small businesses found that smaller firms in Manitoba are important sources of provincial exports. In fact, 79% of Manitoba small businesses export goods interprovincially, while almost 60% are also exporting to U.S. markets. Beyond direct exports, Manitoba firms had the highest ratio of indirect foreign exporters among small businesses in Western Canada; 59% of Manitoba firms identified themselves as producers whose goods are incorporated into other products that are in turn sold outside of Canada.

It is clear that Manitoba's small businesses are vital to the health of the provincial economy. Their contributions to employment and to local, interprovincial and international commerce are key components of provincial economic growth. Continued development of Manitoba small businesses will be closely linked with Manitoba's future prosperity.

“The diversified nature of the Manitoba economy adds to stability and helps to lessen the volatility associated with economic cycles. A very substantial service sector that includes wholesale and retail trade, finance and insurance, real estate and public administration is one factor adding to diversity.”

Moody's Investors Service
July 2004

Chart 25
Manitoba's Personal Income Per Capita and Personal Disposable Income Per Capita, 1999 to 2004

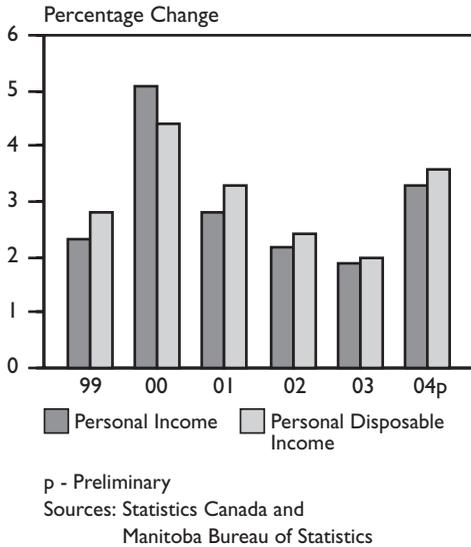
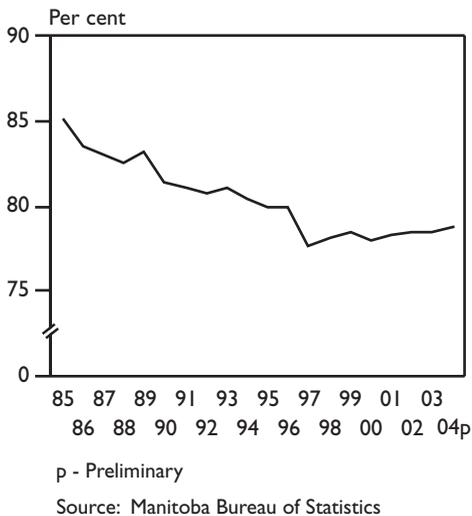


Chart 26
Manitoba Personal Disposable Income as a Percent of Personal Income



HIGHER INCOMES

One of the principal benefits of a growing economy is growing incomes. Higher incomes promote savings and investment, along with higher personal consumption and increased living standards.

Personal income and personal disposable income are two principal measures of overall economic well-being. Personal income includes wages and salaries, investment income and transfers from government (for example, employment insurance benefits and CPP income). Personal disposable income is personal income less personal income taxes and social security program contributions. Broadly, personal disposable income is the income left to individuals after their personal taxes have been paid.

Manitoba has posted a strong record of per capita income growth in recent years. In most years during 1999-2003, Manitoba's personal disposable income level ranked fourth-highest among the provinces, behind Alberta, Ontario and British Columbia.

In 2004, Manitoba's per capita personal disposable income grew by 4.4%, ahead of the national average increase of 3.9%, and above the inflation rate of 2.0% (see Chart 25). In per capita terms, Manitoba's personal income grew by 3.3% in 2004, slightly lower than the national average growth of 3.5%. Manitoba's per capita personal income grew by 16.3% during 1999-2004, close to the national average increase of 17.4%.

After accounting for inflation, "real" per capita personal disposable income has increased by 5.2% over the past five years. This contrasts with the 1990s, when Manitoba's real per capita personal disposable income actually declined between 1990 and 1999.

THE MANITOBA ECONOMY: STRENGTH IN DIVERSITY

Manitoba's economy continues to be recognized as one of the most diversified in Canada. Reports by Moody's Investors Service, Standard and Poor's, Dominion Bond Rating Service and CIBC all cite economic diversity as one of the province's major economic strengths.

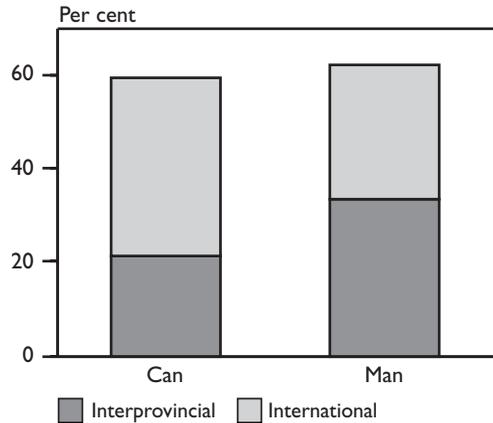
Diversity provides long-term stability, as periodic weaknesses in some industries are balanced by strengths in others. No one industry dominates the province's economy. Statistics Canada data show that Manitoba's economy posted the most stable growth performance among provinces over the past five years.

Even within the current industrial structure there is growing diversity, providing Manitoba businesses with a more stable environment to flourish. Developments in traditional industries are providing opportunities for Manitoba businesses to diversify into new markets, and bringing new products to existing markets. This continual broadening and renewal of Manitoba's economic base offers the prospect of even greater stability and certainty for Manitobans in the future.

Manitoba is one of Canada's most export-oriented provinces. As Chart 27 indicates, total exports as a per cent of GDP were 62.4% in 2003, slightly ahead of the 59.3% national average. Manitoba's exports are split almost equally between interprovincial and international exports, the most evenly balanced of any province (see Chart 28). In the rest of Canada, the ratio of foreign to domestic exports is 2:1.

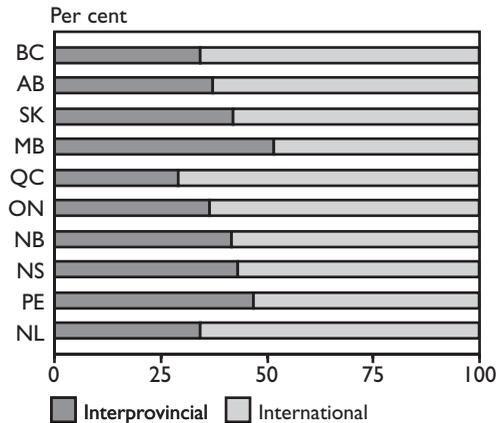
Manitoba companies have taken advantage of the province's central geographic location to maximize opportunities for interprovincial trade. This high volume of interprovincial commerce has been

Chart 27
Ratio of Exports to Gross Domestic Product, Canada and Manitoba, 2003



Source: Statistics Canada

Chart 28
Ratio of Interprovincial to International Exports, By Province, 2003



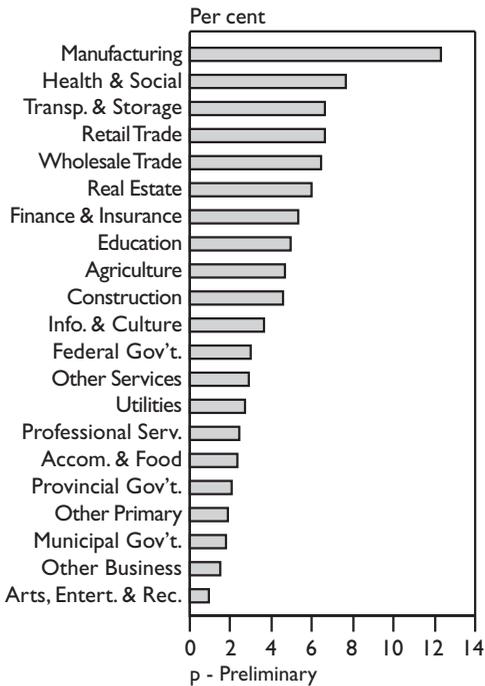
Source: Statistics Canada

Composition of Manitoba Foreign Commodity Exports, 1996 & 2004

	1996	2004
	(Per cent of Total)	
Manufacturing.....	57	65
Agriculture.....	28	23
Other Primary.....	9	4
Electricity.....	5	4
All Other.....	1	3

Source: Manitoba Bureau of Statistics

Chart 29
Shares of Manitoba Gross Domestic Product, 2004p



Source: Manitoba Bureau of Statistics

recognized as an important contributing factor in maintaining stable economic growth. Less dependence on foreign trade and increasing diversity in export destinations has helped Manitoba's export industries remain competitive in the face of the rising Canadian dollar, and has helped the province avoid the overall declines in exports recorded in other provinces over the last few years.

Manitoba's foreign commodity exports have increased dramatically over the past several years and the diversification of the economy into increased value-added production can be best illustrated by the change in the shares of exports among major industries. In particular, manufacturing, which in 1996 accounted for about 57% of Manitoba's foreign merchandise exports, has grown steadily to account for over 65% of foreign exports in 2004. New product lines in areas such as furniture, prepared meats, potato products, industrial chemicals, plastic products, pharmaceuticals, and printing and publishing goods increased dramatically.

As noted above, Manitoba's industry portfolio is broadly based, which helps manage the risk associated with a downturn in any particular industry (see Chart 29). Manufacturing is Manitoba's largest sector, accounting for about 12% of total GDP. Manitoba is home to Canada's largest furniture plant and to Motor Coach Industries and New Flyer Industries, making it the largest producer of intercity and urban buses in North America. Manitoba is also a major location for the manufacture of aerospace equipment, machinery, clothing and processed food.

Primary industries have historically played an important role in Manitoba's economic growth and development. Agriculture, mining and other primary industries directly contribute about 7% to provincial GDP. Manitoba's agriculture sector has diversified significantly over the past several years, and now produces a broader range of crop and livestock varieties.

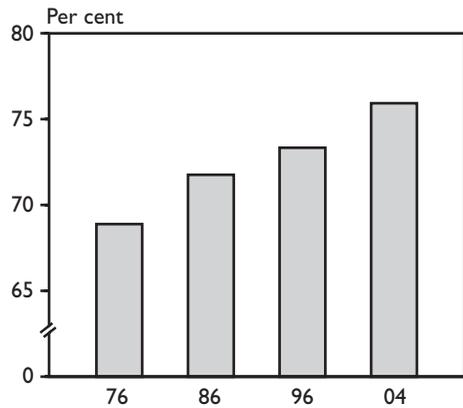
Manitoba's service sector encompasses a wide range of private and public activity. Service industries accounted for approximately 74% of Manitoba's economy in 2004, higher than the 69% for Canada as a whole. The service sector also accounts for about 76% of jobs in the province (see Chart 30).

Relative to most provinces, Manitoba's service sector is large – a factor which provides added stability to the Manitoba economy. Service industries tend to be less susceptible to fluctuation through the business cycle than most goods-producing industries. The province is home to many major service sector operations, including the head offices of two of Canada's major financial corporations – Great-West Life and Investors Group – as well as, the International Institute for Sustainable Development, the Canadian Wheat Board and CanWest Global Communications. Winnipeg is also a major centre for several other service industries, including transportation and storage industries, business call centres, health care, education and wholesale and retail trade.

Manitoba anchors the northern end of the mid-continent trade corridor that connects Canada to the Central U.S. and Mexico. The main lines of the two national railways and three railway lines to the U.S. meet in Winnipeg. This, coupled with major air and road transport links, has spawned a large cargo and freight transportation sector. Three of the ten largest employers in the country's for-hire trucking industry have headquarters in Winnipeg. The international border crossing at Emerson is the second-busiest in Western Canada.

Research and innovation has been pivotal in promoting the diversification and diffusion of new technologies and processes that have strengthened industry in the province. A number of major research establishments are located here. A large part of the research activities under way in the province are centered in our higher education institutions.

Chart 30
Manitoba Service Industries
Share of Total Employment



Source: Statistics Canada

Reports by Moody's Investors Service, Standard and Poor's, Dominion Bond Rating Service and CIBC all cite economic diversity as one of the province's major economic strengths.

Manitoba Economic Statistics, 2000 to 2004

	2000	2001	2002	2003	2004
	(Millions of Dollars)				
SECTORS					
Farm Cash Receipts	3,151	3,701	3,853	3,539	3,851
Crops	1,313	1,519	1,918	1,678	1,768
Livestock	1,551	1,800	1,716	1,553	1,624
Direct Payments	287	382	219	308	459
Manufacturing Shipments	11,439	11,372	11,263	11,413	12,605
Mining	1,233	1,020	1,001	1,029	1,330
Electric Power Sales	1,295	1,458	1,361	1,282	1,434
Export Sales	454	596	472	380	488
Housing Starts (no. of units)	2,560	2,963	3,617	4,206	4,440
Retail Trade	9,310	9,850	10,541	10,925	11,755
FOREIGN EXPORTS					
Total Exports	8,679	9,576	9,406	9,165	9,849
U.S.	6,974	7,518	7,605	6,986	7,186
GROSS DOMESTIC PRODUCT					
Nominal	34,042	35,419	36,859	38,074	40,181
Real	32,801	33,108	33,904	34,447	35,422
BASE RATE WAGE SETTLEMENTS (%)					
Public	2.5	2.5	4.6	3.0	3.1
Private	2.1	2.5	1.3	0.6	1.4
Total	2.5	2.5	4.0	2.8	2.6
INVESTMENT					
Total	5,520	5,803	6,013	6,163	6,774
Private	4,211	4,442	4,649	4,721	5,101
Public	1,310	1,361	1,363	1,442	1,673
Non-residential	4,609	4,784	4,876	4,906	5,243
Housing	912	1,019	1,137	1,257	1,531
POPULATION					
July 1 (000's)	1,147	1,151	1,156	1,162	1,170
LABOUR MARKET					
Labour Force (000's)	580.5	583.7	597.7	600.4	608.2
Employment (000's)	551.7	554.3	567.4	570.6	576.0
Participation Rate (%)	67.8	67.8	69.0	68.7	69.0
Unemployment Rate (%)	5.0	5.0	5.1	5.0	5.3
CONSUMER PRICE INDEX					
(Index, 1992=100)	118.1	121.2	123.1	125.3	127.8
BANKRUPTCIES					
Business	253	300	249	243	178
Farm	18	19	41	28	27
Personal	2,475	2,493	2,437	2,609	2,339

Sources: Statistics Canada, Industry Canada and Manitoba Bureau of Statistics

2000	2001	2002	2003	2004
(Annual Percentage Change)				
8.3	17.5	4.1	-8.1	8.8
-6.3	15.8	26.2	-12.5	5.4
20.1	16.0	-4.6	-9.5	4.6
32.9	33.1	-42.7	40.7	48.9
4.8	-0.6	-1.0	1.3	10.4
36.1	-17.3	-1.9	2.8	29.3
9.8	12.6	-6.6	-5.8	11.9
24.9	31.4	-20.8	-19.4	28.3
-18.3	15.7	22.1	16.3	5.6
4.5	5.8	7.0	3.6	7.6
8.0	10.3	-1.8	-2.6	7.5
7.4	7.8	1.2	-8.1	2.9
6.6	3.3	4.9	3.3	5.5
4.3	0.9	2.4	1.6	2.8
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
1.9	5.1	3.6	2.5	9.9
4.7	5.5	4.7	1.5	8.1
-6.1	3.9	0.2	5.8	16.0
1.0	3.8	1.9	0.6	6.9
6.8	11.8	11.6	10.5	21.8
0.4	0.3	0.4	0.5	0.7
1.4	0.6	2.4	0.5	1.3
2.2	0.5	2.4	0.6	0.9
-	-	-	-	-
-	-	-	-	-
2.5	2.6	1.6	1.8	2.0
17.1	18.6	-17.0	-2.4	-26.7
-37.9	5.6	115.8	-31.7	-3.6
0.4	0.7	-2.2	7.1	-10.3

SECTORS

Farm Cash Receipts
Crops
Livestock
Direct Payments
Manufacturing Shipments
Mining
Electric Power Sales
Export Sales
Housing Starts (no. of units)
Retail Trade

FOREIGN EXPORTS

Total Exports
U.S.

GROSS DOMESTIC PRODUCT

Nominal
Real

BASE RATE WAGE SETTLEMENTS (%)

Public
Private
Total

INVESTMENT

Total
Private
Public
Non-residential
Housing

POPULATION

July 1 (000's)

LABOUR MARKET

Labour Force (000's)
Employment (000's)
Participation Rate (%)
Unemployment Rate (%)

CONSUMER PRICE INDEX

(Index, 1992=100)

BANKRUPTCIES

Business
Farm
Personal

Appendix: RESEARCH AND INNOVATION

Research and innovation are key elements of economic growth and prosperity. It is through research that we acquire knowledge, and it is through the transformation of knowledge that innovation occurs. Innovation touches our lives and helps us achieve economic success.

Research and development (R&D) creates the knowledge and expertise that ultimately can lead to innovation. Knowledge gained through R&D can produce new or substantially improved materials, devices, products, processes or systems, or commercial applications. The discovery and application of research knowledge is necessary if the economy is to compete and prosper. While research and innovation does not guarantee that economies will grow, research and innovation are important inputs that are critical to growth. Without them, economies will lose competitive advantage and will not realize the full social benefits that innovation can bring: higher productivity, rising incomes, a cleaner environment and sustainable development, improvements to personal health and wellness and so forth.

R&D cannot occur without a supportive environment aimed at promoting research investment. In Manitoba, fostering R&D and innovation occurs through a partnership of industry, higher education, the non-profit sector and governments. With this partnership, investments in research, innovation and in developing a skilled workforce for knowledge-based industries will continue to grow.

■ Manitoba's Research Environment

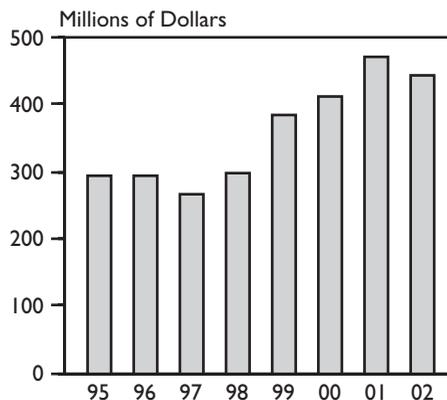
One of the principal measures of R&D effort is the ratio of R&D expenditure relative to GDP. In Manitoba, the current level of gross expenditure on research and development was estimated to be equal to about 1.2% of GDP in 2002. On a per capita basis, gross domestic spending on R&D in Manitoba was \$384 per person, fourth-highest among the provinces.

Statistics Canada estimates that total gross expenditure on R&D in Manitoba in 2002 was \$444 million, down slightly from 2001 but still the second-highest level recorded (see Chart 31). About 3,700 personnel are engaged in R&D in Manitoba, three-quarters of them in higher education and private businesses.

Industry is an important component of the Manitoba R&D environment. Over 200 Manitoba businesses were involved in R&D programs across a variety of economic sectors. These firms invested \$138 million in Manitoba R&D activities in 2002, about 30% of the total spending on R&D in the province.

Research and innovation in Manitoba spans a broad

Chart 31
Gross Expenditure on R&D in Manitoba



Source: Statistics Canada

range of industries, including engineering, medicine, pharmaceuticals, agriculture and agri-food, aerospace products and other transportation equipment. The list of firms undertaking research in the province include Apotex, Bayer, Cangene Corporation, Novadaq Technologies Inc., Buhler Versatile Industries, Advanta Seeds, BASF, Wyeth Canada, Ceridian Canada, Vansco Electronics, New Flyer Industries, Boeing Canada and Bristol Aerospace.

One of Manitoba's widely recognized research strengths is in the fast-growing biotechnology sector. The province is home to 41 biotechnology companies and 30 R&D establishments undertaking work in various biotechnology fields like health and agriculture. One in ten of Canada's biotechnology companies currently undertakes research in Manitoba, and more than 2,300 persons are employed by the biotechnology industry in the province. Ernst & Young's Global Biotechnology Report 2004 concluded that Manitoba's biotechnology industry is the fastest growing in Canada. Since 2002, the number of biotechnology companies in the province is up 11%, the number of employees in the industry is up 35%, and revenues have grown by 76%. Annual revenues in this field are now estimated at \$440 million.

Manitoba is also home to a number of major public R&D facilities. These include the University of Manitoba, the St. Boniface General Hospital Research Centre, the Canadian Science Centre for Human and Animal Health, the National Research Council's Institute for Biodiagnostics, the Manitoba Industrial Technology Centre, TRILabs, the Food Development Centre, the National Centre for Agri-Food Research in Medicine, Agriculture and Agri-Food Canada's Cereal Research Centre, the Canadian International Grains Institute and the Prairie Agricultural Machinery Institute.

While the province is widely recognized for its existing research facilities and programs, a number of significant new projects will further add to the province's R&D networks:

- The \$25 million Richardson Centre for Functional Foods and Nutraceuticals will focus on products derived from crops important to the prairie region, including oats, wheat, buckwheat, canola, flax and hemp. Major funding partners to date include Western Economic Diversification, the province of Manitoba, CIBC, Agricore United, the Manitoba Rural Adaptation Council, the Richardson family and other private sector investors. The new building will be a unique facility where researchers from different disciplines as well as industry partners will work together to develop functional foods and nutraceuticals based on scientific evidence for their efficacy and safety. Construction of the facility began in autumn 2004 and the 55,000-square-foot facility is expected to be completed in 2005.
- The new \$11 million, 55,000-square-foot Centre for Commercialization of Biomedical Technology is under construction adjacent to the National Research Centre's Institute for Biodiagnostics (IBD). The new facility, which will be ready for occupancy in 2005, will provide services to 30-40 start-up companies from the high-tech medical technology sector and spinoffs from the NRC, assisting them to become self-sustaining.
- A \$13 million renovation and pilot plant expansion project at the Food Development Centre in Portage la Prairie will be completed in April 2005. The Centre provides a timely and cost-effective way for the agri-food industry and entrepreneurs to produce safe, high-quality food products. Supporting greater value-added processing of agricultural commodities, the facility

provides applied research and development in processing and packaging of all types of food produced in Manitoba.

The federal government continues to have a major presence in science and technology funding in Canada. In Manitoba, federal funding for R&D was estimated at \$132 million for 2002/03.

The federal government supports science activities performed by federal departments and agencies, universities, businesses or other organizations. Federal departments and agencies conducting research in Manitoba include Agriculture Canada, Environment Canada, Fisheries and Oceans, Health Canada and the National Research Council. About 52% of the federal expenditures on R&D in Manitoba are for work carried out by these departments and agencies, while another 42% of the federally funded R&D is conducted by universities. The remainder of the work is performed by private firms and by non-profit organizations.

■ Provincial Support for Research and Innovation

The province supports research and innovation both through direct spending programs, and through the Manitoba Research and Development Tax Credit.

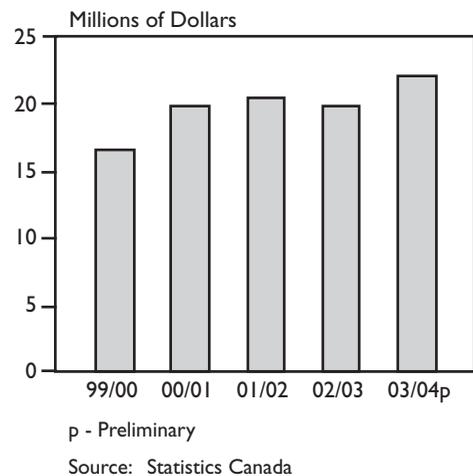
Manitoba's direct expenditures on R&D include internal departmental spending, support to business enterprises, R&D support to universities and health care organizations and support through the activities of the Industrial Technology Centre.

In 2003/04, direct expenditure on R&D by the provincial government is estimated at \$22.2 million, up 13% from 2002/03 (see Chart 32). Most of the provincial government's direct expenditure commitment to R&D is provided to universities and to hospitals and other health organizations, including the Manitoba Health Research Council. The balance of provincial R&D expenditure supports the work of government departments, private businesses and other parties.

Manitoba's Research and Development Tax Credit encourages private sector R&D activity in Manitoba. The tax credit program was established in 1992 and provides firms undertaking R&D in the province with substantial support for R&D investment through a non-refundable credit for qualifying R&D expenditures. Budget 2005 boosted the credit rate to 20% of eligible expenditures from 15% (see "Manitoba Research and Development Tax Credit", page 39).

Manitoba partners with the federal government through the Manitoba Research and Innovation Fund (MRIF). The MRIF was established to assist in increasing the capabilities of Manitoba

Chart 32
Provincial Government
Expenditure on R&D
1999/2000 - 2003/2004



universities, colleges, hospitals and not-for-profit sector to conduct scientific research and product development. The fund also enhances the ability of Manitoba research institutions to attract and retain world-class researchers and technicians, and increases Manitoba's capacity to innovate through such means as supporting science awareness and technology commercialization.

This program, in part, leverages funds from outside sources, such as the Canada Foundation for Innovation (CFI) and the Canadian Institutes of Health Research Regional Partnerships Program. Funding in 2003/04 leveraged almost \$15 million from other public and private sources.

In 2004/05, dozens of projects were funded through the MRIF, including several funded in partnership with the CFI, which provides support for research infrastructure. The MRIF supported various research projects in several areas including infectious diseases, microelectronics and genomics at a number of Manitoba institutions including the University of Winnipeg and Brandon University. The table "Manitoba Research and Innovations Fund Support 2004/05" on page 38 provides a list of some of the projects funded last year.

As well as providing health research support through the various MRIF sub-component programs, Manitoba has implemented the Health Research Initiative. The objectives of the initiative are to assist Manitoba's health research centres to increase R&D activities in Manitoba and facilitate sustained economic growth and the creation of high-quality jobs. The program is an incentive-based initiative with the distribution of funds tied to the amount of research revenue each Manitoba health research centre attracts from private industry and from non-governmental granting agencies outside the province. In 2004/05, the Health Research Initiative provided \$2 million to support operating costs for five health research centres in Manitoba.

The province will provide support grants of \$1.95 million in 2005/06 to the Manitoba Health Research Council (MHRC) and another \$1.8 million to the Manitoba Centre for Health Policy. The Council promotes and assists health sciences in Manitoba and advises the Ministers of Health and Energy, Science and Technology on health matters referred to the MHRC. The Council operates a number of funding programs including awards to post-doctoral and graduate students, PhD dissertation awards and operating and establishment grants.

The Manitoba Centre for Health Policy (MCHP) is a research unit in the University of Manitoba's Faculty of Medicine. About 50 staff work at the centre. The MCHP provides population-based health services research and policy analysis to support health care decision makers and providers in offering the most effective and efficient services to maintain and improve the health of Manitobans. An endowed Chair in Child Health provides a focus on understanding the links between child development and human development.

The Government of Manitoba is also a partner with the federal government in the Networks of Centres of Excellence program. This program was established several years ago to support research at universities and hospitals in partnership with the private sector. Manitoba's objectives in developing the Manitoba Centres of Excellence Fund (MCEF) are to attract and maintain world-class R&D activity to Manitoba and to generate related spin-off benefits for local companies and non-profit institutions.

Manitoba Research and Innovation Fund Support, 2004/05

	Funding (Thousands of Dollars)
CIHR Strategic Training Program	100
Centre for Agroecological Livestock Production Systems	670
Richardson Centre for Functional Foods and Nutraceuticals.....	2,375
Centre for Health Policy Endowed Child Health Chair	400
Archaeological lipid residue analysis, Brandon Univesity.....	82
Resource Management and the Environment, Brandon University	67
Chromatin Dynamics and nuclear organization	119
Obesity & diabetes: infrastructure for studies in mouse models	127
Manufacturing Process Research Facility	100
Cereal brans constituents	57
Laboratory for the Study of Bioprocesses	105
Psychological Studies in Memory	83
Dissection of Plant Light Response.....	84
University of Winnipeg Planetary Spectrophotometer Facility.....	370
Regional Materials and Surface Characterization Facility	1,476
Program in Systems Biology	1,810
Canadian Molecular Cytogenetics Platform.....	72
Laboratory of study determinants of healthy aging	125
Health Research Initiative	2,000
TRLabs	480
MindSet	250
Incubat.....	200
Westlink.....	40
ICID	250
Regional Partnerships Program	428
All other	328
Total	\$12,200

Source: Department of Energy, Science and Technology

■ MANITOBA RESEARCH AND DEVELOPMENT TAX CREDIT

In Budget 2005, Manitoba has boosted the credit rate for the province's non-refundable CIT credit for scientific research and experimental development undertaken in Manitoba by a third, from 15% to 20%.

The incentive, introduced in 1992, is tied to the criteria used to determine eligibility for the federal investment tax credit on qualifying R&D expenses and supplements the federal credit.

The federal and provincial R&D credits are broadly targeted insofar as both incentives are activity based, and apply to all sectors and industries. Both current expenditures – which includes remuneration of persons engaged in research and the cost of materials and prescribed capital expenditures, which includes the cost of machinery and equipment – are eligible expenses for purposes of Manitoba R&D tax credit amounts.

From the inception of the Manitoba R&D tax credit through to the 2003 taxation year (latest year for which data is available), firms conducting R&D in Manitoba claimed \$90.1 million in provincial tax credits.

Further details in respect of the Research and Development Tax Credit programs are available at <http://www.cca-adrc.gc.ca/taxcredit/sred/menu-e.html>.

Over the years, studies by various agencies have repeatedly confirmed that Canada's income tax treatment of research is among the most generous in the world, especially when coupled with provincial incentives. The following table shows the after-tax cost associated with R&D current expenses for a large corporation and a small privately owned corporation, based on 2005 income tax rates.

After-Tax Cost of \$100 R&D Expenditure, 2005

	<u>Large Corporation</u>	<u>Small Private Corporation</u>
Eligible R&D expenditure	\$100.00	\$100.00
(less) Manitoba tax credit	20.00	20.00
(less) Federal tax credit	<u>16.00</u>	<u>28.00</u>
Deductible Amount	64.00	52.00
Tax Savings:		
Manitoba	9.60	2.60
Federal	<u>14.16</u>	<u>6.82</u>
Net after-tax cost	40.24	42.58

In 2004/05, 13 Manitoba Networks of Centres of Excellence (see p. 43) research programs received support totaling \$556,000 through the MCEF. Grants of between \$5,000 and \$280,000 were provided to research programs such as the Canadian Genetic Diseases Network, Food and Biomaterials Net, Intelligent Sensing for Innovative Structures, the Canadian Stroke Network and Sustainable Forest Management.

Manitoba continues to support a number of major research initiatives in the province related to agriculture. The Agri-food Research and Development Initiative (ARDI) will provide \$1 million in funding for research and development aimed at enhancing diversification, value-added opportunities and export capabilities in the province's large agri-food sector.

The province supports a special operating agency, the Food Development Centre, to undertake R&D and related services to bring new Manitoba food products to market. As noted above, the Centre is nearing completion of a \$13 million pilot plant expansion, which should further support the diversification of the agri-food sector in Manitoba. The opening of the expansion will take place in April 2005.

Portage la Prairie is also home to the Prairie Agricultural Machinery Institute (PAMI) Manitoba testing and development station. Established over 25 years ago, PAMI is jointly sponsored by the governments of Manitoba and Saskatchewan. PAMI undertakes approximately 100 projects annually for a wide range of clients, including equipment manufacturers, farm producers, commodity groups and governments. Most of the work focuses on machinery development and applied research. Although the provincial governments provide some financial support to the Institute, PAMI has been a largely self-supporting research organization through fee-for-service arrangements.

Another special operating agency of the Manitoba government is the Industrial Technology Centre (ITC). ITC facilitates technological improvements and innovation by providing advanced technical research and testing for a variety of manufacturers, inventors and other clients. Facilities and services include a calibration laboratory, noise and vibration analysis, mechanical testing, advanced document examination and administrative support for product development and related activities. ITC operates a Virtual Reality Centre, which allows businesses to realistically simulate new products before they are built. Industrial clients can use the virtual technology to design any product with computer images that show how two-dimensional models will actually look and feel in a three-dimensional world. The Centre is the only one of its kind in Canada. In 2005, the ITC will be relocating to the University of Manitoba's technology and research park, SMARTpark.

Manitoba is home to one of five TRILabs applied research laboratories. Sponsored by a private-public sectors partnership and funded in part by the Department of Energy, Science and Technology, is Canada's largest not-for-profit information and communications technology research consortium. TRILabs Winnipeg was established in 1994 and employs 75 people in the area of data networking – research aimed at improving the speed, reliability and efficiency of the communications network. Located at the University of Manitoba's SMARTpark, TRILabs creates innovative technologies and trains students to enhance ICT expertise and improve Canada's global competitiveness.

As well as direct sponsorship of research and innovation programs in the province, the Manitoba government has supported several investment capital supply programs. The provincial government's involvement with six private venture capital corporations has helped leverage a total capital pool of \$155 million. Some have provided venture capital support to new and innovative companies, including the Manitoba Science and Technology Fund and Renaissance Capital Fund. In 2002, the \$45 million Western Life Sciences Venture Fund was established to bring life sciences research and new knowledge to commercial development. In November 2004, Centrestone Ventures Inc., based in Winnipeg, established a new \$25 million fund for investment in the early stages of life sciences projects in Manitoba and other mid-west jurisdictions.

Manitoba Hydro commits approximately \$5 million per year to a research and development program to assist in providing higher system reliability, lower electricity rates, increased safety of the system infrastructure and improved customer quality of service. Some of this research is undertaken in-house, while the company sponsors other research at universities and other external research facilities. Last year, Manitoba Hydro helped support more than 100 individual research projects.

In January 2005, Manitoba Hydro announced that it is providing financial support for two new Natural Sciences and Engineering Research Council (NSERC) of Canada Industrial Research Chairs in the Faculty of Engineering at the University of Manitoba. The corporation will contribute approximately \$730,000 over five years to the Power System Simulation Research Chair and \$500,000 over five years to the Alternative Energy Research Chair. The new industrial research chairs will also be funded by industry and the federal government, through the NSERC program.

Manitoba Hydro also operates the HVDC Research Centre. The Centre, established in 1981, performs innovative research and development in high voltage DC and power electronic technologies, instrumentation and simulation. The Centre has become a world leader in the technology of electric power system simulation, applied power systems analysis and related technologies.

■ University of Manitoba

Universities and other post-secondary institutions play a critical role in Canadian R&D activities. These institutions provide the knowledge and the skilled labour force necessary for innovation, and serve as incubators for new ideas in basic and applied research.

In Canada, higher education institutions account for about 30% of the R&D work performed. In Manitoba, the role of higher education is even more important as higher education (including related institutes, clinics and research stations) accounts for more than half of the R&D activity.

Statistics Canada estimates that R&D expenditure by Manitoba's higher education sector in 2002/03 was \$224.6 million, up from \$205.9 million in 2001/02 (see Chart 33). Natural sciences and engineering (including health sciences) accounted for approximately three-quarters of this total, while social sciences accounted for the remainder.

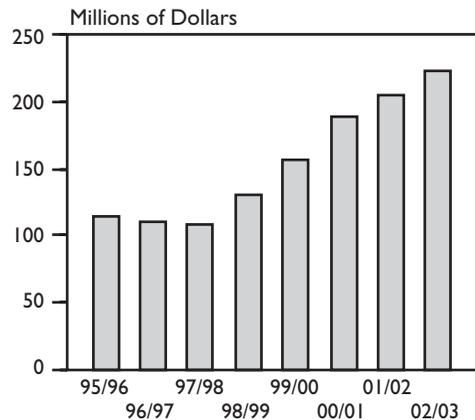
The University of Manitoba is one of Canada's major research universities. The University has enrollment of 27,600 students with more than 3,600 academic and support staff. The University's reputation for outstanding research has earned it national and international recognition, and helps it to earn over \$100 million annually in grants and contracts. Many of the research projects conducted at the University involve collaboration and partnership with other higher education institutions, private firms, community organizations and governments. The University is home to more than 20 research centres and institutes ranging in scope from defence and security studies to cardiovascular sciences.

The University is an active participant in the National Networks of Centres of Excellence program. Currently, the University's researchers participate in 16 of the 21 networks created under this program, and the University is the network leader of Intelligent Sensing for Innovative

Structures Canada, the national network focusing on "smart" civil infrastructure.

The University of Manitoba has established 32 Canada Research Chairs, with 15 additional chairs under active recruitment. The research programs of these chairs focus on such important fields as infection and immunity, aerospace materials, protein chemistry, natural resource management and Canadian social history. The University's life sciences research activities are further strengthened through active partnerships with several major provincial medical research organizations, including the Health Sciences Centre, St. Boniface General Hospital, CancerCare Manitoba, the Manitoba Institute of Child Health, the Canadian Science Centre for Human and Animal Health and the Institute for Biodiagnostics.

Chart 33
R&D Expenditure in Manitoba
Higher Education
1995/96-2002/03

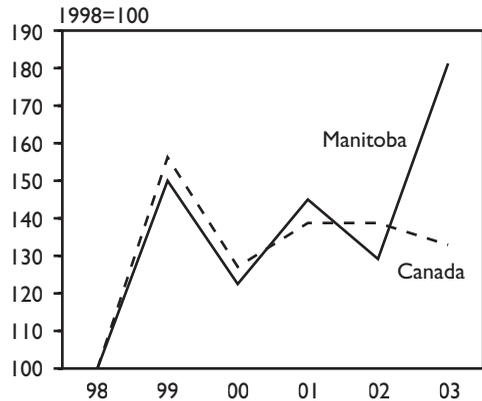


Source: Statistics Canada

Construction is continuing on the University's new Engineering and Information Technology Complex, which will provide leading-edge research and teaching facilities for engineering and computer science. New laboratories and equipment will help build on all current areas of research expertise – including advanced manufacturing, advanced materials, biomedical engineering, civil infrastructure, electrical power systems and information technology/communications – and create new research opportunities. In addition to building innovative links between the engineering and computer science disciplines, the complex will strengthen research collaboration with industry.

SMARTpark, the research and innovation park located at the University of Manitoba, continues to grow. SMARTpark brings together industry and the University to promote R&D and the development of knowledge-based industry. One of the key features of the park is its proximity and access to the extensive resources of the University.

Chart 34
Indexed Patents per
One Million Population



Source: Institute of Chartered Accountants

University Of Manitoba National Centres of Excellence

- Intelligent Sensing for Innovative Structures, Canada (Leader)
- genetic diseases
- arthritis research
- stroke research
- robotics and intelligent systems
- bacterial diseases
- protein engineering
- water research
- sustainable forest management
- photonic innovations
- microelectronic devices and systems
- automobile design and engineering
- vaccines and immunotherapeutics
- mathematics of information technology
- advanced food and materials
- arctic research