



Manitoba.

Government Infrastructure Investment Spending in Fiscal 2014–15

At a Glance

- The Conference Board of Canada's analysis of the Manitoba government's \$1.04-billion core infrastructure investment in fiscal 2014–15 suggests that it has had the following economic impact on the economy:
 - GDP increased by \$1.31 billion;
 - 9,755 jobs or person-years of employment were generated;
 - personal disposable income increased by a total of \$523 million;
 - provincial exports were boosted by \$699 million.
- Construction, manufacturing, and transportation and warehousing registered the strongest output increases.

Executive Summary

In fiscal 2014–15, the Government of Manitoba invested \$1.04 billion in core infrastructure. An important stimulus to the provincial economy, government investment in core infrastructure created jobs, generated additional household and business income, and stimulated production and export activities in the province.

The \$1.04-billion investment lifted gross domestic product (GDP) by \$1.31 billion, and employment rose by 9,755 person-years across the economy, with increases of over 4,000 in the construction industry and nearly 3,000 in the commercial services sector. The core infrastructure spending also helped boost provincial exports by \$699 million and household consumption by \$539 million. The industrial sectors construction, manufacturing, and transportation and warehousing registered the largest output gains.

Introduction

In Budget 2014, the Government of Manitoba committed to spend a total of \$5.5 billion over five years on core infrastructure projects, starting in the 2014–15 fiscal year. According to the plan's investment profile, the province will spend \$3.7 billion over those five years on highways, bridges, and critical transportation infrastructure, and over \$300 million on flood protection and water quality projects. Municipal infrastructure investment will average over \$300 million a year for five years, for a total of \$1.5 billion.

An earlier study by the Conference Board of Canada¹ assessed the potential benefit of the program to the provincial economy over the five years. In this follow-up briefing, we examine the impact of public core infrastructure investment in the 2014–15 fiscal year—the first

1 Owusu, *Manitoba's Infrastructure Investment*.

The aim of this briefing is to inform policy-makers of the economic impact that the \$1.04 billion invested in core infrastructure had on Manitoba's economy.

year of the plan. For the purposes of this study, “core infrastructure” includes the transportation network (highways, bridges, and related construction), flood protection and water management (dikes, drainage, and diversion channels), and municipal infrastructure (including roads and water systems).

The aim of this briefing is to inform policy-makers of the economic impact that the \$1.04 billion invested in core infrastructure in 2014–15 had on Manitoba's economy by quantifying the investment's effect on GDP, employment, income, and other key economic indicators.

Key Assumptions and Methodology

The Conference Board's macroeconometric model of Manitoba's economy was used to quantify the impact of real infrastructure investment in 2014–15. The analysis evaluates the combined direct, indirect, and induced economic impacts, defined as follows:

- Direct impact measures the value added to the economy from the increased infrastructure spending flowing to those firms that either build structures or manufacture equipment. Because equipment generally has high import content, the direct effect on Manitoba's economy from capital equipment investment is limited.
- Indirect impact measures the value added from supply-chain effects due to heightened demand for intermediate inputs or other services that support construction of the infrastructure. For example, increased demand for construction and machinery will bolster activity in the transportation, financial, insurance, and other services sectors.
- Induced impacts are derived when employees of the directly and indirectly affected industries spend or save their earnings and owners spend or invest their profits. These purchases lead to more employment, wages, income, and tax revenues and can be felt across a wide range of industries.

Increased production in specific industries will not only have a direct impact on the economy but will also have a series of multiplier effects. Primary suppliers are the first industries to feel indirect effects, in the form of increased demand. Induced impacts have widespread (albeit usually smaller) effects on all sectors of the economy, largely through a general increase in consumer spending. The overall economic multiplier is equal to the sum of all value-added impacts (direct, indirect, and induced), divided by the initial constant-dollar spending generated by the core infrastructure program.

The initial constant-dollar value of the capital investment in infrastructure does not necessarily result in a one-to-one increase in real GDP. This is because a portion of the investment goes toward the purchase of imported capital equipment. Moreover, even as demand for capital equipment produced in Manitoba rises, intermediate input from suppliers beyond provincial boundaries may be needed to meet this demand. This supply-chain effect on imported components dampens the overall provincial multiplier. Nonetheless, Manitoba stands to reap significant economic benefits from increased productivity that will result from this investment over the long run.

For the purpose of the analysis, we used the Conference Board's provincial forecasting model, which captures the sum of the direct, indirect, and induced impacts on Manitoba's economy, based on its estimated historical relationships. The model incorporates detailed modelling of prices, households, and businesses, and provides economic impact results for a wide range of economic indicators. In addition, the model accounts for government revenues (including direct, indirect, and corporate taxes).

As verified by an independent specified-procedures audit carried out by Deloitte, the Manitoba government spent \$1.04 billion on core infrastructure in fiscal 2014–15. Of that total, \$696 million was spent on roads, highways, and bridges, while \$277 million went to municipal infrastructure, and \$64 million went to flood protection. (See Table 1.)

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Table 1

Government of Manitoba Infrastructure Spending, 2014–15

(actual core infrastructure investment, \$ millions)

Roads, highways, and bridges	696
Flood protection	64
Municipal infrastructure	277
Total core infrastructure	1,037

Sources: Deloitte; Government of Manitoba.

For the purposes of this study, we broke down the spending into investment in structures and investment in capital equipment (such as new trucks and earth-moving machinery), based on average historical shares.¹ In order to calculate the economic impact of government infrastructure spending on various industries, the total investment amount was converted to constant (i.e., inflation-adjusted) 2007 dollars to align with other economic indicators used in the Conference Board’s provincial forecasting model.

Findings

Table 2 summarizes the impact of the infrastructure spending on a number of key economic indicators. The province of Manitoba invested \$1.04 billion in infrastructure in 2014–15. The majority of the investment was spent on construction materials, roads, bridges, dikes, and water treatment facilities, as well as on wages and salaries for employees. Only about a quarter of the investment was spent on capital equipment, much of which is usually imported.

Based on the Conference Board’s provincial model, the \$1.04-billion public infrastructure investment resulted in a \$1.3-billion increase in total GDP.

1 Based on data from Statistics Canada, the historical averages in Manitoba for the share of investment in structures and in capital equipment are 74 per cent for structures and 26 per cent for capital equipment.

Table 2

Key Economic Indicators, Manitoba, 2014–15

(level-difference shock minus control, except where otherwise indicated)

Total core infrastructure investment (\$ millions)	1,037
GDP at market prices (\$ millions)	1,309
Consumer price index (percentage change)	0.1
Average weekly wages, industrial composite (percentage difference)	0.2
Personal disposable income (\$ millions)	523
Labour force (000s)	4.6
Employment (000s)	9.8
Unemployment rate (level difference in rate)	-0.8
Retail sales (\$ millions)	225
Housing starts (000s)	0.4
Net operating surplus: corporations (\$ millions)	333

Sources: The Conference Board of Canada; Statistics Canada.

Looking at the impact on the labour market, the increase in infrastructure spending resulted in a higher demand for labour. The impact on the unemployment rate, however, was limited by factors such as re-entry into the labour force and interprovincial migration, as the higher demand for labour encouraged people from outside the province to seek work in Manitoba. In addition, younger cohorts tend to choose employment over post-secondary education when enticing job prospects become available. As a result, the provincial model simulation indicated that the increased infrastructure investment boosted provincial employment by 9,755 in 2014–15. Of that total, employment increased by 4,315 in the construction industry and by 1,557 in manufacturing, while the transportation and warehousing sector gained 680 additional jobs. At the same time, the number of unemployed persons decreased. And despite 4,600 job seekers entering the labour force, the unemployment rate fell 0.8 percentage points. In addition, stronger labour demand put pressure on employee compensation, causing average weekly wages to rise

Well-maintained roads and an expanded highway system mean businesses will have dependable transportation infrastructure.

by 0.2 per cent. Personal disposable income increased by \$523 million. This benefited the province's retailers, to the tune of \$225 million in additional sales in 2014–15.

The total impact on consumption and overall expenditure-based GDP is summarized in Table 3. Gross fixed capital formation captured the direct impact of the additional infrastructure spending (the amount invested in structures and machinery and equipment). However, the table also indicates the indirect effect generated by the government's investment spending. Stronger production gave rise to an increase in provincial exports by \$699 million in 2014. Increased employment, combined with additional pressure on employee compensation, pushed consumer spending up by \$539 million. Stronger consumer demand and demand for machinery and equipment resulted in a \$1.2-billion increase in imports, as most consumer products and the majority of capital equipment came from outside Manitoba.

Additional Benefits

In addition to boosting demand in the short term and stimulating the provincial economy, public infrastructure investment has additional benefits that are more difficult to quantify, yet are very important. If spent in optimal areas where it is most needed, public infrastructure investment expands potential output and boosts growth over the long term.² For example, well-maintained roads and an expanded highway system mean businesses will have dependable transportation infrastructure, across the province and at the municipal level. Similarly, the flood protection would reduce risks to business property and equipment and may reduce insurance costs and protect against an economic slump that inevitably accompanies major flooding.

2 Abiad and others, "Is It Time for an Infrastructure Push?"

Table 3

GDP in Manitoba, Expenditure Based, 2014–15

(level-difference shock minus control, except where otherwise indicated; \$ millions at market prices)

Final consumption expenditures	569
Household consumption expenditures	539
Government consumption expenditures	29
Non-profit institutions' consumption expenditures	2
Gross fixed capital formation	1,211
Residential investment	71
Non-residential investment in structures	24
Business and government investment in machinery & equipment	282
Investment in intellectual properties	2
Government investment in structures	833
Non-profit institutions' fixed capital formation	0
Exports	699
Imports	1,170
Net exports	-471
Gross domestic product at market prices	1,309

Sources: The Conference Board of Canada; Statistics Canada.

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Conclusion

The Government of Manitoba invested \$1.04 billion in core public infrastructure over the course of the 2014–15 fiscal year. The Conference Board’s provincial model simulations indicate that increased infrastructure spending resulted in a combined boost of \$1.31 billion in total GDP in 2014–15. The additional economic activity generated by the infrastructure spending stimulated labour markets and boosted total employment by 9,755 person-years. Increased employment then brought about spillover effects, with personal disposable income rising \$523 million, resulting in higher household consumption and stronger overall domestic demand.

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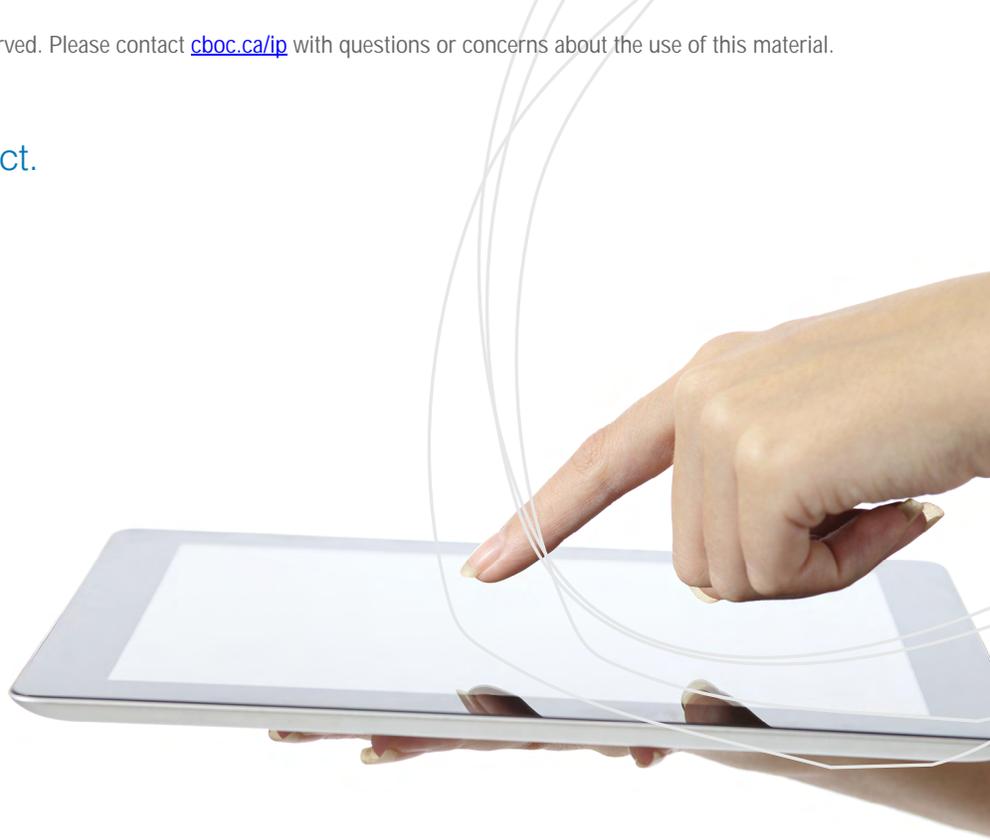
APPENDIX A

Bibliography

Abiad, Abdul, Aseel Almansour, Davide Furceri, Carlos Mulas Granados, and Petia Topalova. “Is It Time for an Infrastructure Push? The Macroeconomic Effects of Public Investment.” *World Economic Outlook—October 2014*, 75–114. Washington, D.C.: International Monetary Fund, 2014. www.imf.org/external/pubs/ft/weo/2014/02/pdf/c3.pdf.

Owusu, Prince. *Manitoba’s Infrastructure Investment*. Ottawa: The Conference Board of Canada, 2014.

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