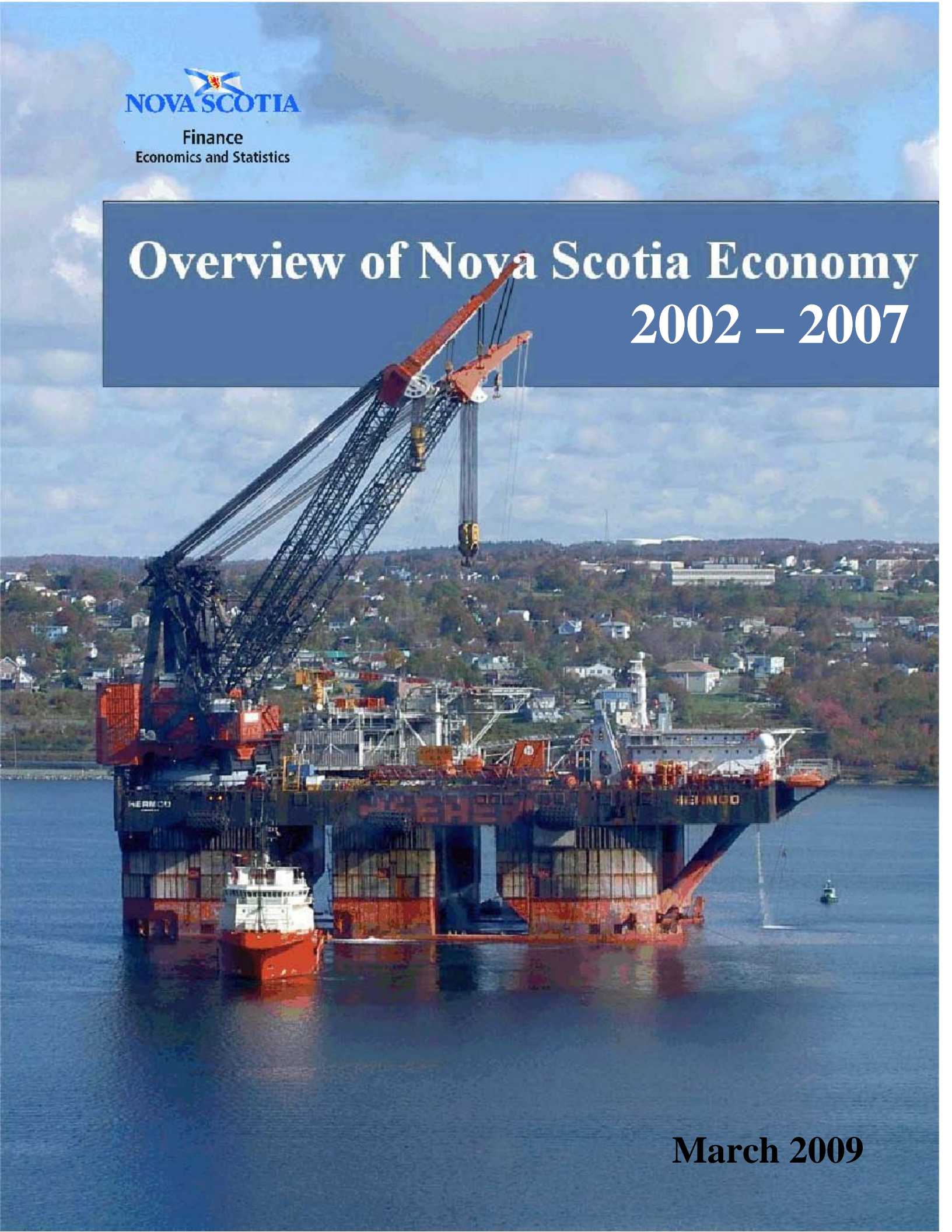


Overview of Nova Scotia Economy 2002 – 2007



March 2009

Overview of Nova Scotia Economy

5th Edition
March 2009

Nova Scotia Department of Finance
Economics and Statistics Division
1723 Hollis Street, PO Box 187
Halifax, Nova Scotia, B3J 2N3

Telephone: (902) 424-1848
Facsimile: (902) 424-0714
E-mail: RuszelBA@gov.ns.ca
Web Site: <<http://www.gov.ns.ca/finance/statstics/agency/index.asp>>

ISSN-1718-7761

Cover photo – Douglas J. McCann

Hermond - a heavy lift vessel owned by Heerema Marine Contractors of the Netherlands. The vessel is capable of a tandem lift of 8,100 tonnes. Overall length = 154 metres (505 ft) and breadth = 86 metres (282 ft). Total deck load capacity = 8,000 tons. Transit speed with a 8,000 ton deck load = 6 knots at 11.5 meters (38 ft) draft. The living quarters are equipped to accommodate 336 men. All quarters have heating and air conditioning facilities.

On the deck of the *Hermond* are the components of a 2,400-tonne platform, built at the Halifax Shipyards, destined for the ExxonMobil South Venture offshore natural gas site.

Inquiries or suggestions with regards to this report or data contained within are welcome and should be directed to:

Barbara Ruszel
Economics and Statistics Division
Department of Finance
PO Box 187
Halifax, NS
B3J 2N3

Tel: (902) 424-1848
Fax: (902) 424-0714
E-mail: INTERNET:RuszelBA@gov.ns.ca
URL: <http://www.gov.ns.ca/finance/statistics/agency>



1	Introduction.....	1
2	Economic Structure.....	3
3	Employment.....	7
4	Labour Income.....	12
5	Average Weekly Wages and Salaries.....	16
6	Capital Expenditures.....	21
7	Labour Productivity.....	24
8	Appendix.....	29
9	Sectors' Performance Ranking based on a Composite Index.....	30

Introduction

This paper provides a brief overview of the Nova Scotia economy, including the relative contribution of each sector to the provincial Gross Domestic Product (GDP) and structural changes in employment over the mid-term period.¹ There is also some discussion on labour productivity in Nova Scotia during the five-year period 2002-2007, and key labour productivity indicators including labour income, wages and salaries, average weekly wages, and capital expenditures.

During the five-year period 2002-2007, the province's economy experienced a moderate growth due to the expansion mainly in the services sector, with above five percent growth in administrative, support and waste management services, due to advent of call centers and recycling activities.

Significant growth was also observed in professional, scientific and technical services, and finance, insurance and real estate and leasing industries. Construction, retail trade, health care and social assistance, educational services and manufacturing, all experienced above average GDP growth during the same time period.

Public administration, information and cultural industries, wholesale trade and arts, entertainment and recreation all

experienced less than average provincial real GDP growth during the five-year period 2002-2007.

In the goods producing sector, all primary industries: agriculture, forestry, fishing and hunting, mining and oil and gas extraction, and utilities experienced a negative real GDP growth between 2002 and 2007.

In order to evaluate the overall economic performance of each sector of Nova Scotia's economy, a composite index was created based on the six indicators of economic performance. The indicators used in development of this composite index included the compound annual growth rates in real GDP, employment, labour income, average weekly wages and salaries, and capital investment for 2002-2007, as well as the labour productivity index for the same time period. Each sector was ranked from the highest to lowest for each of GDP, employment, labour income, average weekly wages, capital investment and productivity. Next, the ranking scores for each of the six indicators were added up for each sector to create an overall ranking by sector (Appendix 1). The lowest total ranking score was ranked as 1 and the highest total ranking score was ranked as 18.

The best economic performance during the 5-year period 2002-2007, based on

¹ Five-year period is considered to be a mid-term period. Since the latest annual statistics is available for 2007 the 5-year period chosen for analysis is 2002-2007.

the composite index was observed in administrative, support and waste management sector followed by the construction and finance, insurance, real estate and leasing sector. The health care and social assistance and retail trade sectors' ranking were the fourth and fifth highest among all Nova Scotia's sectors between 2002-2007. The rapid growth in health care costs may be linked to its strong economic growth despite a declining capital spending in this sector during the time period 2002-2007.

The public administration performance was ranked the sixth best in Nova Scotia for 2002-2007, while the manufacturing sector was ranked the tenth. The lowest performance was observed in the agriculture, forestry, fishing and hunting sector, followed by mining and oil and gas extraction, and transportation and warehousing.

Economic Structure

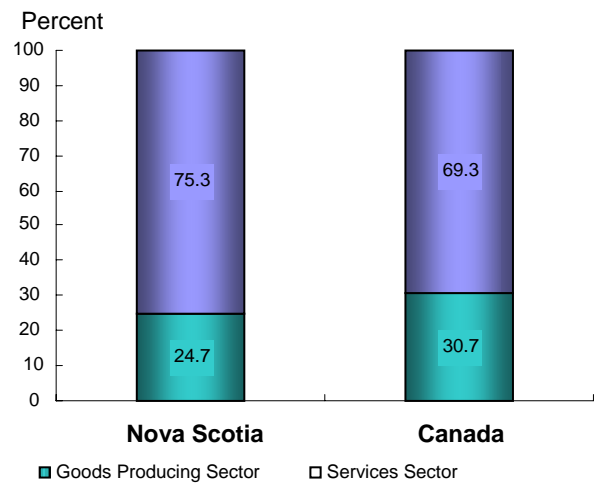
Nova Scotia has a diversified economy. The geographic location of Nova Scotia has significantly contributed to the economy. The importance of the sea to the economy is witnessed in many industries such as fishing and aquaculture, oil and gas extraction, naval defense, transportation and tourism.

While many of the goods and services producing industries are directly or indirectly related to the processing of Nova Scotia's natural resources such as pulp and paper products, natural gas and seafood products, the provincial economy is also diversified into information age technologies and other goods producing as diverse as aerospace parts, motor vehicle tires and ship building and repairing.

The economy of Nova Scotia is influenced by the economic situation of its principal trading partners in Canada and abroad. Approximately 50% of all goods produced in Nova Scotia are exported, and of that figure, about 75% are exported to the United States.

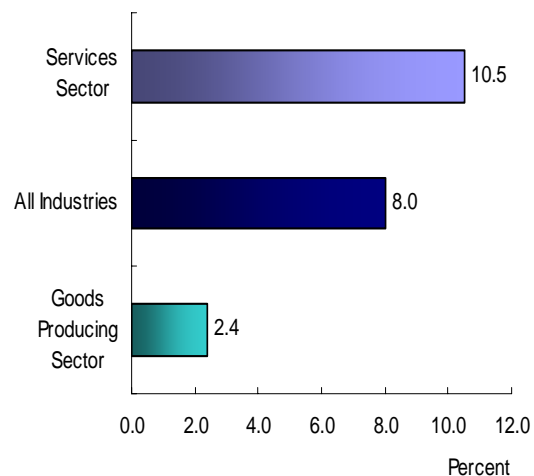
The Nova Scotia economy is predominantly service-based. The Province's services sector is proportionally larger than that of Canada. In 2007, service industries accounted for more than three fourths (75.3%) of the Nova Scotia's Gross Domestic Product (GDP), compared to 69.3% for Canada (Figure 1). The goods producing sector accounted for 24.7% of Nova Scotia's economy in 2007, compared to 30.7% for Canada in 2007. This represents Nova Scotia's long established position as the

Figure 1: Contribution of the Goods Producing and Services Sectors to GDP [%], Nova Scotia and Canada, 2007.



Source: CANSIM Tables 379-0025 and 379-0017.

Figure 2: GDP Growth by Sector [%], Nova Scotia, 2002-2007.



Source: Statistics Canada, GDP by Industry in Chained 2002\$, Catalogue No 15-203-XIB, November 6, 2008.

private sector service hub of the four Atlantic Provinces, and the centre for regional public administration and defense. The share of services in GDP is increasing due to the convergence of such forces as demographics and the expansion of technical knowledge. The general shift to services reflects rapid growth in a variety of individual service industries, and the genesis and expansion of entirely new industries.

The services sector includes a wide range of business and financial services, wholesale and retail trade, transportation and warehousing, personal services, health and educational services, public administration, defense and other federal departments. The goods producing sector includes manufacturing, construction, utilities and primary resource industries.

From 2002 to 2007 the provincial economy expanded by 8.0% (Figure 2). The services sector significantly outperformed the goods producing sector during this time period. While GDP² in the services sector grew by 10.5%, the GDP in the goods producing sector grew only by 2.4% between 2002 and 2007, mainly as a result of the contraction in the shares of real GDP in mining and oil and gas extraction, agriculture, forestry, fishing and hunting, and utilities sector by 0.8 percentage points, 0.5 percentage points and 0.2 percentage points, respectively, from 3.8% to 3.0%, from 3.1% to 2.6%, and from 2.5% to 2.3% of the provincial economy, respectively (Table 1).

Over the five-year period 2002-2007, Nova Scotia's real GDP grew at a

Table 1. Compound Annual Growth in GDP (CAGR) and Shares of Total Provincial GDP by Industry, Nova Scotia, 2002-2007.

Industry	CAGR 2002- 2007 [%]	Share of Total Provincial GDP	
		2002 [%]	2007 [%]
Total	1.5	100.0	100.0
Goods Producing Sector	0.5	26.1	24.7
Primary Industries	(2.3)	9.5	7.9
Agriculture, Forestry, Fishing & Hunting	(2.4)	3.1	2.6
Mining & Oil & Gas Extraction	(3.2)	3.8	3.0
Utilities	(0.8)	2.5	2.3
Secondary Industries	1.9	16.6	16.8
Manufacturing	1.7	10.9	10.9
Construction	2.4	5.7	5.9
Services Sector	2.0	73.9	75.3
Private Sector	2.1	49.1	50.3
Retail Trade	2.3	6.6	6.8
Wholesale Trade	0.7	4.5	4.3
Transportation & Warehousing	(0.2)	4.3	3.9
Finance, Insurance, Real Estate & Leasing	3.0	19.4	20.7
Professional, Scientific & Technical Services	3.3	3.0	3.3
Information & Cultural Industries	1.3	3.6	3.6
Arts, Entertainment & Recreation	0.3	0.7	0.7
Accommodation & Food Services	(0.6)	2.6	2.3
Administrative, Support & Waste Management	5.8	1.9	2.3
Other Services	1.0	2.5	2.4
Public Sector	1.8	24.8	25.0
Educational Services	2.0	5.8	6.0
Health Care & Social Assistance	2.1	8.4	8.5
Public Administration	1.4	10.6	10.4

Source: Statistics Canada, GDP by Industry in Chained 2002\$, Catalogue No 15-203-XIB, 2005 data released November 6, 2008.

² In chained 2002 dollars.

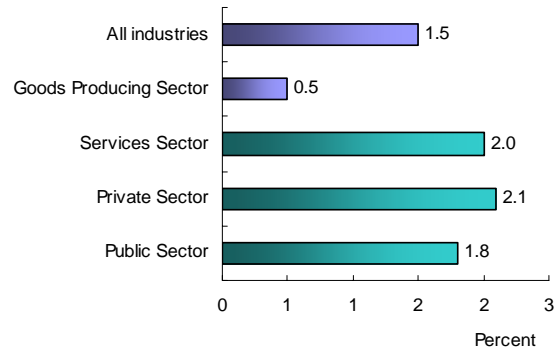
compound annual growth rate of 1.5%. The growth in the services sector was above the annual growth rate of the entire Nova Scotia economy and faster than in the goods producing sector, at 2.0% and 0.5%, respectively, for 2002-2007.

However, within the services sector the private sector compound annual growth rate was faster than the public sector's growth rate, at 2.1% and 1.8%, respectively, between 2002 and 2007. As a result, the services sector's share of the provincial economy, expressed by the share of provincial GDP, increased from 73.9% in 2002 to 75.3% in 2007, while the goods producing sector's share declined from 26.1% in 2002 to 24.7% in 2007.

Within the goods producing sector, the negative growth in primary industries, at -2.3%, was offset by a moderate growth in the secondary industries, at 1.9%, for 2002-2007 (Figure 3).

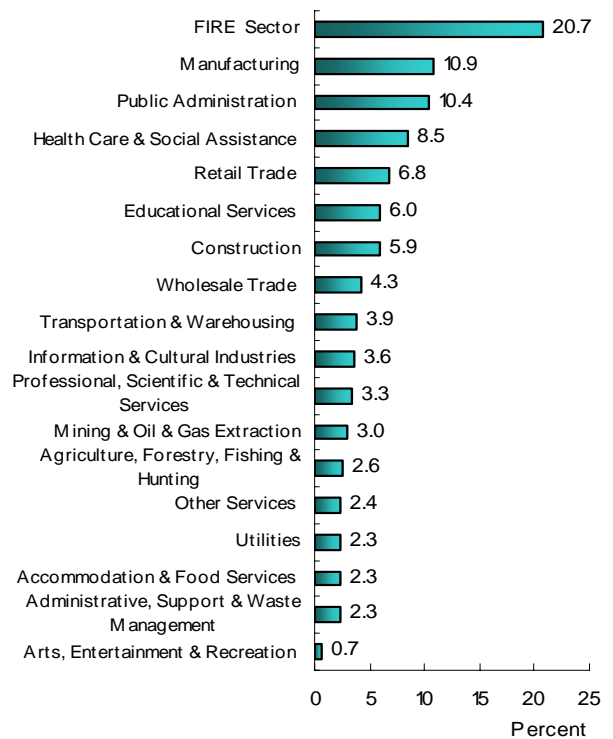
Almost all service industries experienced stronger than the average provincial GDP growth over the five-year period 2002-2007. The fastest growing sectors in the province were administrative, support and waste management services, professional, scientific and technical services, and finance, insurance, real estate and leasing, which grew at the compound annual rates of GDP growth of 5.8%, 3.3%, and 3.0%, respectively, between 2002 and 2007 (Table 1). The provincial shares of GDP for administrative, support and waste management services increased by 0.4 percentage points from 1.9% in 2002 to 2.3% in 2007, for professional, scientific and technical increased by 0.3 percentage points from 3.0% in 2002 to 3.3% in 2007, and for the FIRE and leasing sector increased by 1.3

Figure 3: Compound Annual GDP Growth Rates by Sector, Nova Scotia, 2002-2007.



Source: Statistics Canada, *GDP by Industry in Chained 2002\$, Catalogue No 15-203-XIB, November 6, 2008.*

Figure 4: Shares of Total Provincial GDP by Industry, Nova Scotia, 2007.



Source: Statistics Canada, *GDP by Industry in Chained 2002\$, Catalogue No 15-203-XIB, November 6, 2008.*

percentage points from 19.4% in 2002 to 20.7% in 2007.

The growth in construction, retail trade, health care and social services, and educational services also exceeded the compound annual growth rate for the overall Nova Scotia economy for 2002-2007, by growing at the compound annual growth rates of 2.4%, 2.3%, 2.1% and 2.0%, respectively, between 2002 and 2007. The provincial shares of GDP for the construction sector increased from 5.7% in 2002 to 5.9% in 2007, for the retail trade sector increased from 6.6% in 2002 to 6.8% in 2007, for the health care and social services sector increased from 8.4% in 2002 to 8.5% in 2007, and for the educational services sector from 5.8% in 2002 to 6.0% in 2007.

Above average annual sectoral growth was also observed in manufacturing, which grew at the compound annual rate of 1.7% for 2002-2007. The provincial share of GDP for manufacturing sector remained unchanged between 2002 and 2007 at 10.9%.

By contrast, public administration, information and cultural industries, other services, wholesale trade, and arts, entertainment and recreation industries experienced growth below the annual growth rate of the Nova Scotia's economy, as shown by the compound annual GDP growth rates of 1.4%, 1.3%, 1.0%, 0.7%, and 0.3%, respectively, for 2002-2007. The provincial share of GDP for public administration sector declined from 10.6% in 2002 to 10.4% in 2007, for other services sector declined from 2.5% in 2002 to 2.4% in 2007, for wholesale trade declined from 4.5% in 2002 to 4.3% in 2007, while for information and cultural services, and arts, entertainment

and recreation remained unchanged at 3.6% and 0.7%, respectively, for 2002-2007.

Between 2002 and 2007 negative compound annual GDP growth was observed in mining and oil and gas extraction sector, agriculture, forestry, fishing and hunting sector, utilities, accommodation and food services, and transportation and warehousing, as shown by the negative compound annual GDP growth rates of -3.2%, -2.4%, -0.8%, -0.6%, and -0.2%, respectively, for 2002-2007.

The most significant decline in the provincial share of GDP was registered in the mining and oil and gas extraction sector, which declined by 0.8 percentage points from 3.8% of the total provincial GDP in 2002 to 3.0% in 2007.

The provincial share of GDP for agriculture, forestry, fishing and hunting, utilities, transportation and warehousing, accommodation and food services, public administration, the wholesale trade sector, and other services declined by 0.6 percentage points, 0.3 percentage points, 0.3 percentage points, 0.3 percentage points, 0.2 percentage points, 0.2 percentage points, and 0.1 percentage points, respectively, in the same time period.

Employment

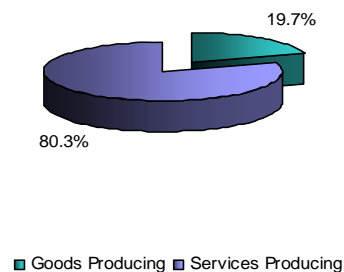
Between 2002 and 2007, Nova Scotia's total employment gain, for the population 15 and over, was 5.8% or 24,700 new jobs in the province. The employment growth in the province was driven primarily by increases in a few, mainly service related, industries and an increase in the labour participation rate from 62.6% in 2002 to 63.7% in 2007. The participation rate in Nova Scotia appears to have reached its peak in 2004 at 64.1%. This was the highest the rate has ever been in the province and may mark the high point in the province's participation rate for the medium term. Demographics, a tightening labour market and on-going recession might cause this rate to increase in the future.

The economic diversification of the province is reflected in where Nova Scotians are employed among the economy's industrial sectors. Distribution of employment between the goods and services producing sectors slightly changed with 80.3% jobs in the services producing sector in 2007, up by 1.6 percentage points from 2002, and 19.7% of the jobs in the goods producing sector, down by 1.6 percentage points from 2002 (Table 2 and Figure 5).

There were approximately 359,400 service sector jobs and 88,200 goods producing sector jobs in Nova Scotia in 2007. In general, service producing industries are more labour intensive than their goods producing counterparts.

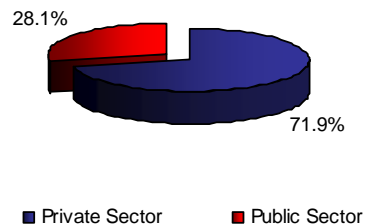
From 2002 to 2007, the compound annual growth rate in total employment in

Figure 5: Distribution of Employment between the Goods Producing and Services Sectors, Nova Scotia, 2007.



Source: Statistics Canada, Labour Force Historical Review 2009, CD-ROM No. 71F0004-XCB.

Figure 6: Distribution of Employment between the Private and Public Sectors, Nova Scotia, 2007.



Source: Statistics Canada, Labour Force Historical Review 2009, CD-ROM No. 71F0004-XCB.

Nova Scotia was 1.1%, with a higher than average provincial compound annual growth rate in the services producing sector and a negative growth rate in the goods producing sector, at

1.5% and -0.4%, respectively. The major employment gains, approximately 26,500 new jobs were in the services sector, including 7,500 new jobs in private sector and 19,000 new jobs in the public sector³ (Figures 6 and 7).

Between 2002 and 2007, only 3,200 new jobs were created in the goods producing sector, and all new jobs were in the construction industry, which grew at the compound annual growth rate of 2.5% from 2002 to 2007 (Table 2). However, employment gains in the construction industry were offset by losses in manufacturing, agriculture, utilities, forestry, fishing, and hunting, and mining and oil and gas extraction sector, where approximately 2,100, 1,100, 900, and 800 jobs were lost, respectively, between 2002 and 2007.

In the services sector, the compound annual growth rate in employment in the public sector was significantly higher than in the private sector, at 3.3% and 0.7%, respectively for 2002 to 2007. As a result of such a growth rate, the share of the public sector employment increased from 25.3% of total provincial employment in 2002 to 28.1% in 2007, while the share of the private sector employment in the services sector declined from 53.5% in 2002 to 52.1% in 2007.

The fastest growth in employment was observed in the business, building and other support services, health care and social services, and real estate and leasing, which grew at the compound annual growth rates of 4.7%, 4.4%, and

Table 2. Compound Annual Growth in Employment by Industry and Shares of Total Provincial Employment by Industry, Nova Scotia, 2002-2007.

Industry	CAGR 2002- 2007 [%]	Share of Total Employment	
		2002 [%]	2007 [%]
Total	1.1	100.0	100.0
Goods Producing Sector	(0.4)	21.3	19.7
Primary Industries	(2.6)	5.3	4.4
Agriculture	(3.5)	1.6	1.3
Forestry, Fishing, Mining & Oil & Gas Extraction	(1.3)	3.1	2.7
Utilities	(7.5)	0.7	0.4
Secondary Industries	0.3	16.0	15.3
Manufacturing	(1.0)	10.3	9.2
Construction	2.5	5.7	6.1
Services Sector	1.5	78.7	80.3
Private Sector	0.7	53.5	52.1
Retail Trade	(0.4)	15.3	14.2
Wholesale Trade	0.0	3.1	3.0
Transportation & Warehousing	(1.9)	4.8	4.1
Finance & Insurance, Real Estate & Leasing	0.4	3.6	3.5
Professional, Scientific & Technical Services	4.1	1.5	1.7
Information, Culture, Recreation	0.1	4.1	3.9
Accommodation & Food Services	2.2	4.1	4.4
Business & Building Services	0.1	7.1	6.7
Other Services	4.7	5.1	6.1
	0.8	4.7	4.6
Public Sector	3.3	25.3	28.1
Educational Services	2.0	7.8	8.1
Health Care & Social Assistance	4.4	11.7	13.7
Public Administration	2.8	5.8	6.3

Source: Statistics Canada, Labour Force Historical Review 2009, CD-ROM No. 71F0004-XCB.

³ 12,000 new jobs in health care and social assistance, 3,600 new jobs in public administration and 3,400 new jobs in educational services created between 2002 and 2007.

4.1%, respectively between 2002 and 2007 (Table 2).

The largest increase in employment was observed in the health care and social services, with approximately 12,000 new jobs created in this industry between 2002 and 2007 (Table 3). This sector is the second largest industrial category in Nova Scotia labour market and employed approximately 13.7% of all employed workers in the province in 2007. The health care and social services sector experienced four times higher compound annual growth rate, at 4.4%, than all industries between 2002 and 2007. As a result, the share of total provincial employment in this sector increased by 2.0 percentage point, from 11.7% in 2002 to 13.7% in 2007.

The second largest increase in employment was registered in the business, building and other support services, where approximately 5,600 new jobs were created, mainly due to proliferation of new call centers in the province (Table 3). This sector grew at the compound annual growth rate of 4.7% between 2002 and 2007. The share of total provincial employment in this category increased by 1.0 percentage point, from 5.1% in 2002 to 6.1% in 2007.

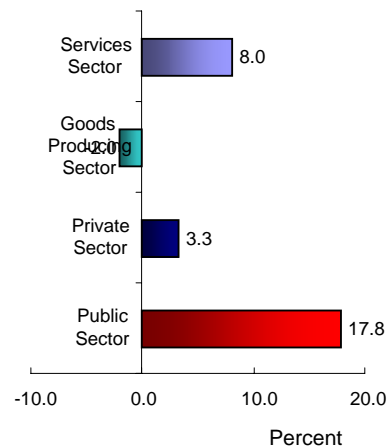
Job gains in the public administration accounted for approximately 3,600 new jobs created between 2002 and 2007. The compound annual growth in employment in this sector was 2.8%, 1.7 percentage points above the growth in employment in all industries in Nova Scotia for 2002-2007. The share of total provincial employment in this category increased by 0.5 percentage point, from 5.8% in 2002 to 6.3% in 2007.

Table 3. Largest Increase in Employment by Industry, Nova Scotia, 2002-2007.

Largest Increase in Employment 2002-2007	Employment Growth [Persons]	Employment Growth [%]
Health Care & Social Assistance	12,000	24.2
Business and Building Services	5,600	26.0
Public Administration	3,600	14.7
Educational Services	3,400	10.3
Construction	3,200	13.3
Information, Culture and Recreation	2,000	11.4
Real Estate & Leasing	1,400	22.2

Source: Statistics Canada, Labour Force Historical Review 2009, CD-ROM No. 71F0004-XCB.

Figure 7. Employment Growth by Sector, Nova Scotia, 2002-2007.



Source: Statistics Canada, Labour Force Historical Review 2009, CD-ROM No. 71F0004-XCB.

Significant growth in employment was also observed in educational services, with approximately 3,400 new jobs created between 2002 and 2007. This sector employed 8.1% of all employed

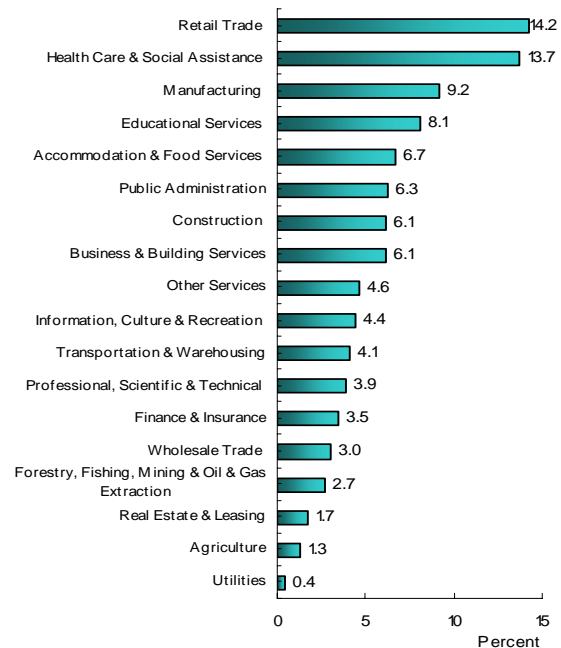
workers in the province in 2007. Despite a moderately higher compound annual growth, at 2.0%, compared to 1.1% for all industries, the share of total provincial employment in the educational services sector increased from 7.8% in 2002 to 8.1% in 2007.

Job gains in the construction sector accounted for approximately 3,200 new jobs created between 2002 and 2007. The compound annual growth in employment in this sector was 2.5%, 1.4 percentage points above the growth in employment in all industries in Nova Scotia for 2002-2007. The share of total provincial employment in this sector increased from 5.7% in 2002 to 6.1% in 2007.

Significant growth in employment was also observed in information, culture and recreation sector, with approximately 2,000 new jobs created between 2002 and 2007. The compound annual growth in employment in this sector was 2.2 % for 2002-2007. The share of total provincial employment in this sector increased from 4.1% in 2002 to 4.4% in 2007.

Real estate and leasing sector has also shown higher than the average Nova Scotia employment compound annual growth rate of 4.1% for 2002-2007. This sector created approximately 1,400 new jobs between 2002 and 2007. The share of total provincial employment in this sector increased from 1.5% in 2002 to 1.7% in 2007. Despite the fact that housing starts in Nova Scotia were down by 4.4% in 2007 from the 2002 level, capital expenditures on residential building construction reached \$1,990.3 million in 2007, a 51.5% increase from the 2002 level. The value of building

Figure 8. Shares of Total Provincial Employment by Industry, Nova Scotia, 2007.



Source: Statistics Canada, Labour Force Historical Review 2009, CD-ROM No. 71F0004-XCB.

permits in the province rose 46.9% over the 2002 level to \$1,288.9 million in 2007.

By contrast, the utilities, agriculture, transportation and warehousing, forestry, fishing, mining and oil extraction, manufacturing and retail trade experienced declines in employment, as shown by the negative compound annual growth rates in employment of -7.5%, -3.5%, -1.9%, -1.3% -1.0% and -0.4%, respectively for 2002-2007 (Table 2).

The retail trade sector, the single largest industrial category in Nova Scotia labour market, lost approximately 1,200 jobs between 2002 and 2007. The compound annual negative growth in employment in

this sector was -0.4%, compared to 1.1% for all industries for the same time period. The share of total provincial employment in this sector decreased by 1.1 percentage points from 15.3% in 2002 to 14.2% in 2007. Despite a decline in employment, retail trade sales in Nova Scotia increased by 18.2% in 2007 over 2002 level, and reached \$11.6 billion in 2007.

The most significant decrease in employment was observed in the manufacturing sector, where approximately 2,100 jobs were lost between 2002 and 2007, due to impact of slowing US economy on manufacturing exports, facing an increasing competition from China and other Asian economies, and changing consumer demands. The share of total provincial employment in this sector dropped from 10.3% in 2002 to 9.2% in 2007.

Significant decline in employment was also registered in the transportation and warehousing industry, with approximately 1,900 jobs lost between 2002 and 2007, mainly due to impact of fuel cost increases during that period of time. The compound annual negative growth in employment in this industry was -1.9% for 2002-2007. The share of total provincial employment in this sector decreased from 4.8% in 2002 to 4.1% in 2007.

The employment losses in the agriculture sector accounted for approximately 1,100 jobs lost between 2002 and 2007. The compound annual growth rate in employment in this sector was -3.5% for 2002-2007. The share of total provincial employment in this sector decreased from 1.6% in 2002 to 1.3% in 2007.

A decline in employment was also registered in the utilities sector, with approximately 900 jobs lost between 2002 and 2007. The compound annual growth rate in employment in this industry was -7.5% for 2002-2007. The share of total provincial employment in this sector dropped from 0.7% in 2002 to 0.4% in 2007.

The decline in employment, which occurred in the forestry, fishing, mining and oil and gas extraction sector accounted for approximately 800 jobs lost between 2002 and 2007. The share of total provincial employment in this capital intensive sector dropped from 3.1% in 2002 to 2.7% in 2007. The decline in employment in the mining and oil and gas extraction sector was mainly attributed to the decrease in direct employment in this industry. After the oil and gas exploration reached a peak in 2002, as a result of the Sable Offshore project, direct employment in the industry has declined even though exploration activities have continued.

Labour Income

Over the five-year period 2002-2007, labour income in Nova Scotia grew at the compound annual rate of 4.2%, with a higher growth in the supplementary labour income than in the wages and salaries, at 5.7% and 3.9%, respectively (Table 4 and Figure 9). As a result, the share of the labour income from wages and salaries decreased from 87.3% in 2002 to 86.3% in 2007, while the share of the supplementary labour income increased from 12.7% in 2002 to 13.7% in 2007.

In general, total provincial wages and salaries were growing almost twice as fast in the services sector than in the goods producing sector, at the compound annual growth rates of 4.4% and 2.4%, respectively, between 2002 and 2007 (Figure 10). As a result, the services sector's share of total provincial wages and salaries increased by 1.6 percentage points from 77.4% in 2002 to 79.0% in 2007, while the goods producing sector share declined by 1.6 percentage points from 22.6% in 2002 to 21.0% in 2007 (Table 5).

Within the goods producing sector, the secondary industries experienced significantly faster growth in wages and salaries than the primary industries, and grew at the compound annual growth rates of 2.7% and 1.0%, respectively, between 2002 and 2007 (Figure 10).

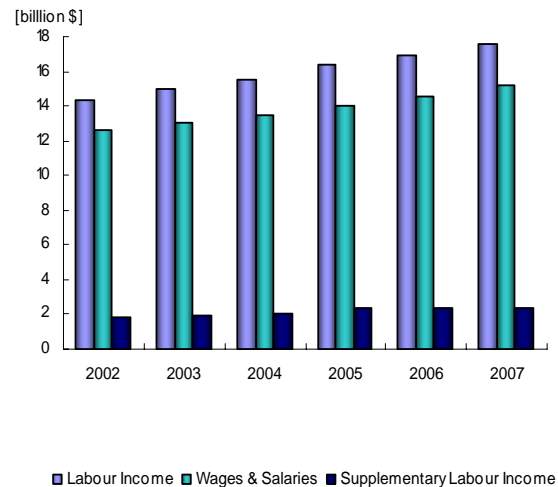
However, within the services sector, the public sector experienced slightly faster growth rates in wages and salaries than the private sector, and grew at 4.6% and 4.0%, respectively, between 2002 and 2007 (Figure 10 and Table 5). As a result

Table 4. Components of Labour Income, Nova Scotia, 2002-2007.

Components of Labour Income	CAGR 2002-2007 [%]	Share of Industrial Aggregate	
		2002 [%]	2007 [%]
Labour Income	4.2	100.0	100.0
Supplementary Labour Income	5.7	12.7	13.7
Wages & Salaries	3.9	87.3	86.3

Source: Statistics Canada, *Estimates of Labour Income*, Catalogue No 13F0016-XPB.

Figure 9. Growth in Components of Labour Income, Nova Scotia, 2002-2007.



Source: Statistics Canada, *Estimates of Labour Income*, Catalogue No 13F0016-XPB.

the share of total provincial wages and salaries in the public sector increased by 1.3 percentage points from 34.3% in

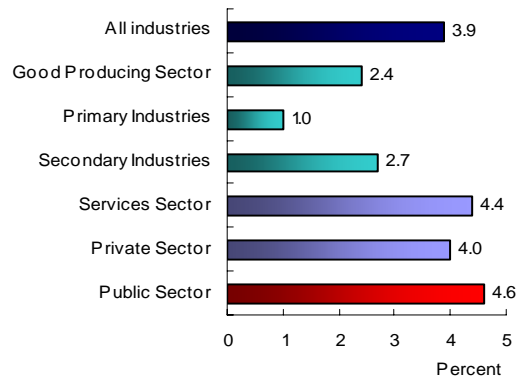
2002 to 35.6% in 2007, while the share of total provincial wages and salaries in the private sector increased only by 0.3 percentage points from 43.1% in 2002 to 43.4% in 2007.

The fastest growth in wages and salaries was observed in construction, local public administration, health care and social assistance, and professional and personal services, which grew at the compound annual growth rates of 6.2%, 5.9%, 5.8%, and 5.7%, respectively, between 2002 and 2007 (Figure 11). As a result, the share of total provincial wages and salaries in the construction sector increased from 6.8% in 2002 to 7.5% in 2007, in local public administration from 1.4% in 2002 to 1.5% in 2007, in health care and social assistance from 11.3% in 2002 to 12.4% in 2007, and in professional and personal services from 14.4% in 2002 to 15.6% in 2007 (Table 5 and Figure 11).

Over the five-year period 2002-2007, provincial and territorial public administration, federal public administration, mining and oil and gas extraction, and educational services also experienced a significant growth in total wages and salaries, which grew at the compound annual growth rates of 4.2%, 4.1%, 4.1%, and 4.0%, respectively, over that period. The provincial share of total wages and salaries in federal public administration increased by 0.1 percentage points from 9.8% in 2002 to 9.9% in 2007, while in provincial and territorial public administration, educational services and mining and oil and gas extraction, remained unchanged at 2.6%, 9.2%, and 1.1%, respectively, between 2002 and 2007.

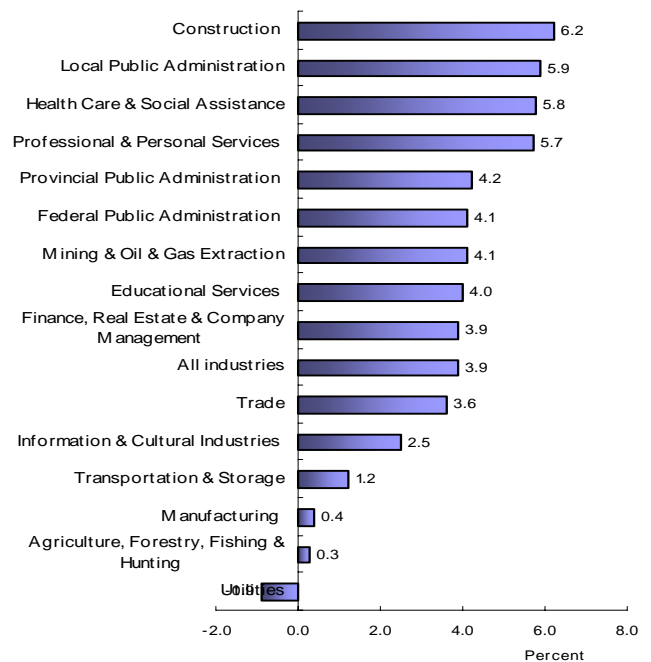
The finance, insurance and company management sector registered growth in

Figure 10. Compound Annual Rate of Growth in Wages and Salaries by Sector, Nova Scotia, 2002-2007.



Source: Statistics Canada, *Estimates of Labour Income*, Catalogue No 13F0016-XPB.

Figure 11. Compound Annual Rate of Growth in Wages and Salaries by Industry, Nova Scotia, 2002-2007.



Source: Statistics Canada, *Estimates of Labour Income*, Catalogue No 13F0016-XPB.

total wages and salaries the same as the overall industrial aggregate's compound annual growth rate, by growing at 3.9% between 2002 and 2007. The share of total provincial wages and salaries in this sector remained unchanged at 7.0% for 2002 to 2007 (Table 5).

Trade sector, information and cultural industries, transportation and storage, manufacturing, and agriculture, forestry, fishing and hunting sectors showed a slower than the overall industrial aggregate's compound annual growth rate, and grew at the compound annual growth rates of 3.6%, 2.5%, 1.2%, 0.4%, and 0.3%, respectively, between 2002 and 2007 (Table 5 and Figure 11). As a result, the share of total provincial wages and salaries in the trade sector declined by 0.2 percentage points from 13.9% in 2002 to 13.7% in 2007. The share of total provincial wages and salaries in information and cultural industries also declined by 0.2 percentage points from 2.6% in 2002 to 2.4% in 2007, while the share of total provincial wages and salaries in transportation and storage sector declined by 0.6 percentage points from 5.2% in 2002 to 4.6% in 2007.

The public sector, excluding military, showed a growth rate in total wages and salaries above the compound annual growth rate for the overall industrial aggregate, which is above 3.9% for 2002-2007. The wages and salaries in the provincial and territorial public administration, and federal public administration grew at the compound annual growth rates of 4.2% and 4.1%, respectively, between 2002 and 2007.

However, within the federal public administration, the compound annual

Table 5. Compound Annual Growth in Wages and Salaries by Industry and Shares of Total Provincial Wages and Salaries by Industry, Nova Scotia, 2002-2007.

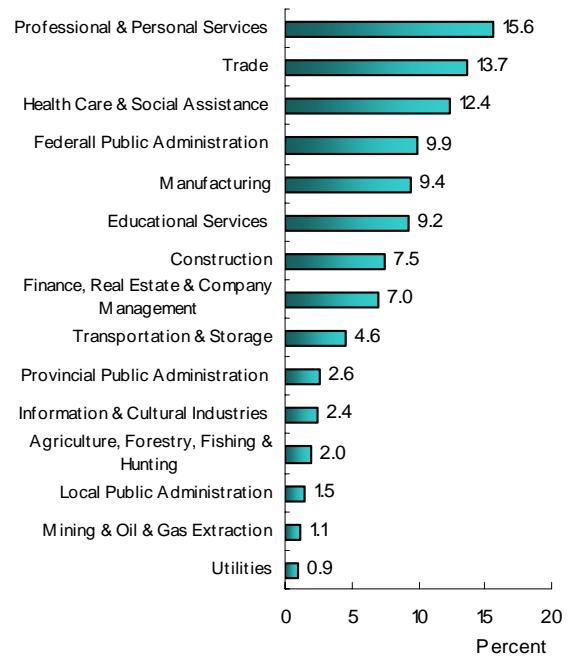
Industry	CAGR 2002- 2007 [%]	Share of Industrial Aggregate	
		2002 [%]	2007 [%]
Wages and Salaries	3.9	100.0	100.0
Goods Producing Sector	2.4	22.6	21.0
Primary Industries	1.0	4.6	4.0
Agriculture, Forestry, Fishing & Hunting	0.3	2.4	2.0
Mining & Oil and Gas Extraction	4.1	1.1	1.1
Utilities	(0.9)	1.1	0.9
Secondary Industries	2.7	18.0	17.0
Manufacturing	0.4	11.2	9.4
Construction	6.2	6.8	7.5
Services Producing Sector	4.4	77.4	79.0
Private Sector	4.0	43.1	43.4
Trade	3.6	13.9	13.7
Transportation & Storage	1.2	5.2	4.6
Finance, Real Estate & Company Management	3.9	7.0	7.0
Professional & Personal Services	5.7	14.4	15.6
Information & Cultural Industries	2.5	2.6	2.4
Public Sector	4.6	34.3	35.6
Educational Services	4.0	9.2	9.2
Health Care & Social Assistance	5.8	11.3	12.4
Federal Public Administration	4.1	9.8	9.9
Federal Public Admin. excluding Military	4.6	5.3	5.5
Military	3.6	4.5	4.4
Provincial & Territorial Public Administration	4.2	2.6	2.6
Local Public Administration	5.9	1.4	1.5

Source: Statistics Canada, Estimates of Labour Income, Catalogue No 13F0016-XPB.

growth rate in wages and salaries was lower for military staff than for federal public administration, excluding military, at 3.6% and 4.6%, respectively, for 2002-2007, reflecting slower expansion of the military personnel.

Between 2002 and 2007, the utilities sector experienced a decline in the total wages and salaries, at the compound annual negative growth rate of -0.9%. The decline in total wages in salaries in the utilities was attributed to a significantly decreasing employment due to restructuring in this industry, at the compound annual rate of -7.5%. As a result, the share of total provincial wages and salaries in utilities sector decreased by 0.2 percentage points from 1.1% in 2002 to 0.9% in 2007.

Figure 12. Shares of Total Provincial Wages and Salaries by Industry, Nova Scotia, 2007.



Source: Statistics Canada, *Estimates of Labour Income*, Catalogue No 13F0016-XPB.

Average Weekly Wages and Salaries

Over the five-year period 2002-2007, average weekly wages in Nova Scotia grew at the compound annual growth rate of 2.4%, with a slightly higher growth in the goods producing sector than in the services sector, at 2.7% and 2.4%, respectively (Table 6).

The fastest growth in average weekly wages was observed in administrative, support and waste management services, accommodation and food services, information and cultural industries, and health care and social assistance, which grew at the compound annual rates of 3.8%, 3.7%, 3.6% and 3.5%, respectively between 2002 and 2007 (Figure 13).

Growth above the overall industrial aggregate's average weekly wages growth rate was also registered in construction, other services, except public administration, whole sale trade, public administration and manufacturing sector, which grew at the compound annual growth rates of 3.1%, 3.0%, 3.0%, 2.8% and 2.5%, respectively for 2002-2007.

Retail trade sector experienced growth in average weekly wages and salaries at the compound annual growth rate of 2.4%, that is the same growth rate as for all industries in Nova Scotia between 2002 and 2007.

During the five-year period 2002-2007, professional, scientific and technical services, educational services, arts, entertainment and recreation, and transportation and warehousing

Figure 13. Compound Annual Growth in Average Weekly Wages and Salaries by Industry, Nova Scotia, 2002-2007.



Source: Statistics Canada, *Employment, Earnings & Hours*, Catalogue No 72F0023-XCB.

experienced growth in average weekly wages and salaries below the overall industrial aggregate's average weekly wages growth rate, and grew at the compound annual rates of 1.1%, 1.0%, 0.6% and 0.5%, respectively.

In 2007, average weekly earnings in Nova Scotia were 14.5% lower than in Canada, at \$673.38 in Nova Scotia and

\$770.82 in Canada. In the goods producing sector, in general, the average weekly wages and salaries were 25.4% higher than in the services sector, at \$811.81 and \$647.63, respectively for 2007. These figures represent gross earnings, before tax and other deductions, and include overtime.

The highest paying industries in 2007 included public administration, professional, scientific and technical services, information and cultural industries, and manufacturing, in which employees earned average weekly wages of \$914.51, \$842.66, \$824.81 and \$806.60, respectively (Figure 14). Within the public administration sector, wages and salaries were higher for federal public administration than provincial public administration, at \$1,109.84 and \$741.42, respectively, for 2007.

The lowest average weekly wages and salaries were observed in accommodation and food services, arts, entertainment and recreation, retail trade, and other services, in which average weekly wages were \$305.71, \$343.64, \$450.59, and \$520.71, respectively in 2007.

The highest percentage of permanent jobs among all industries in Nova Scotia was registered in finance, insurance, real estate and leasing sector in 2007. Only 7.4% of all FIRE and leasing industry workers were temporary employees, compared to the provincial average of 17.6%. In addition, the sector employed more full-time workers, on a percentage basis, than the provincial average. In 2007, only 15.1% of all FIRE and leasing sector employees worked on part-time

Table 6. Compound Annual Growth in Average Weekly Wages and Salaries by Industry, Nova Scotia, 2002-2007.

Industry	CAGR 2002- 2007 [%]	Share of Industrial Aggregate	
		2002 [%]	2007 [%]
Industrial Aggregate	2.4	100.0	100.0
Goods Producing Sector	2.7	118.6	120.6
Primary Industries	X	X	X
Agriculture, Forestry, Fishing & Hunting	X	X	X
Mining & Oil & Gas Extraction	X	X	X
Utilities	X	X	X
Secondary Industries			
Manufacturing	2.5	118.9	119.8
Construction	3.1	111.1	115.1
Services Sector	2.4	96.0	96.2
Private Sector			
Retail Trade	2.4	67.0	66.9
Wholesale Trade	3.0	114.5	118.3
Transportation & Warehousing	0.5	120.3	109.8
Finance & Insurance	X	X	X
Professional, Scientific & Technical Services	1.1	133.4	125.1
Information & Cultural Services	3.6	115.6	122.5
Accommodation & Food Services	3.7	42.6	45.4
Arts, Entertainment & Recreation	0.6	55.7	51.0
Administrative, Support & Waste Management Services	3.8	76.2	81.7
Other Services	3.0	75.2	77.3
Public Sector			
Educational Services	1.0	117.6	110.0
Health Care & Social Assistance	3.5	96.7	102.3
Public Administration	2.8	132.9	135.8

Source: Statistics Canada, *Employment, Earnings & Hours*, Catalogue No 72F0023-XCB.

Note: X – Suppressed to meet the confidentiality requirements of the Statistics Act.

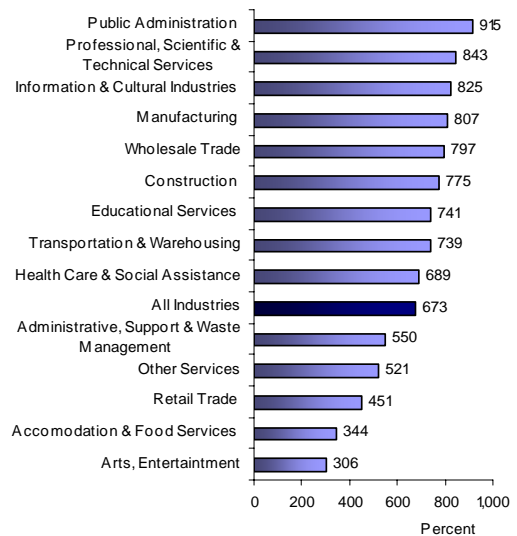
basis, compared to the provincial average of 18.5% (Figures 15 and 17). The level of workforce unionization in this sector was very low, at 6.3% for 2007, compared to the provincial average of 29.4% for 2007 (Figure 16).

The highest paying sector in Nova Scotia, public administration, employed significantly more full-time workers, on a percentage basis, than the provincial average in 2007. Only 8.9% of public administration employees worked on a part-time basis, compared to the provincial average of 18.5% in 2007. In addition, only 16.4% of all jobs in public administration were temporary or term jobs, slightly less than the provincial average of 17.6% for 2007. This sector had the second highest level of unionization of workforce. In 2007, 66.1% of the public administration employees were unionized, as compared to the provincial average of 29.4%.

In contrast, the second highest paying industry, professional, scientific and technical services, had the higher percentage of permanent jobs than public administration sector, but less full-time jobs. The professional scientific and technical services employed only 12.6% of part-time workers, compared to the provincial average of 18.5% for 2007. In addition, 87.1% of all jobs in this sector were permanent jobs, compared to 82.4% for all industries in 2007.

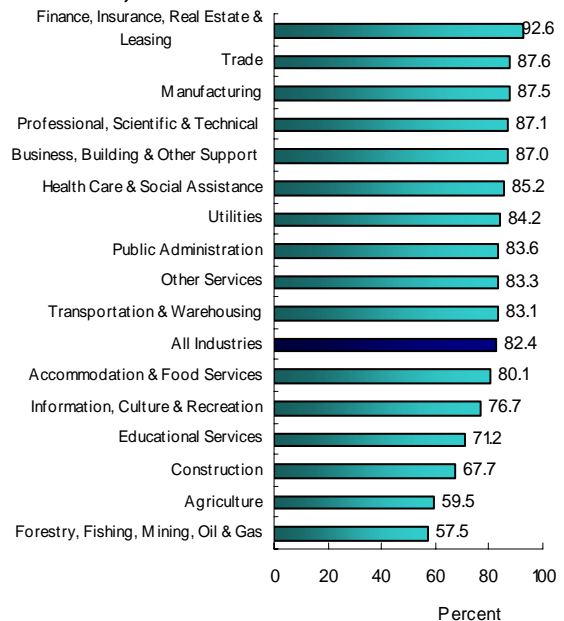
Information and cultural industries sector, which paid the third highest average weekly wages in Nova Scotia in 2007, employed significantly less full-time workers, on a percentage basis, than the provincial average. In fact, the percentage of full-time jobs in the information and cultural industries sector

Figure 14. Average Weekly Wages and Salaries by Industry, Nova Scotia, 2007.



Source: Statistics Canada, *Employment, Earnings & Hours*, Catalogue No 72F0023-XCB.

Figure 15. Permanent Jobs by Industry, Nova Scotia, 2007.



Source: Statistics Canada, *Labour Force Historical Review 2006*, CD-ROM No. 71F0004-XCB.

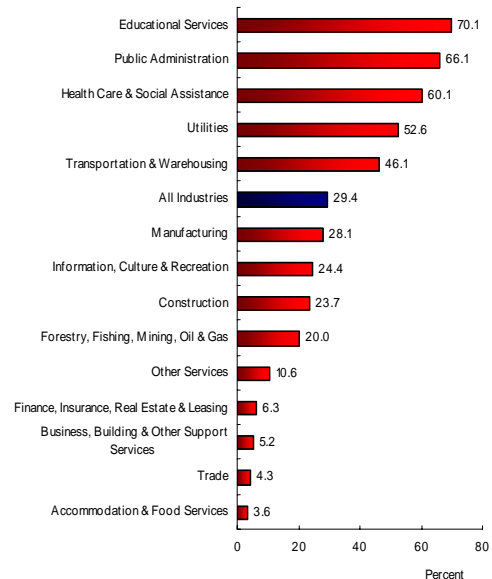
was only 74.4% in 2007. The number of permanent jobs, on the percentage basis was also very low, 76.7% compared to 82.4% for all industries in 2007. Unionization of workers in the information and cultural industries sector was only 24.4%, 5.0 percentage point below the provincial average of 29.4% for 2007.

Although, the level of unionization in educational services was the highest of all industries, at 70.1% for 2007, the high percentage of part-time and temporary jobs contributed to relatively lower average weekly wages. In 2007, the educational services sector employed 26.4% part-time workers, compared to the provincial average of 18.5%. The number of permanent jobs in this sector, on a percentage basis, was 71.2%, which is also below the provincial average of 82.4% for 2007.

In 2007, the highest percentage of full time jobs was in manufacturing sector, where 96.1% employees worked on full-time basis. In addition, the number of permanent jobs was also very high, at 87.5%, as compared to the provincial average of 82.4% for 2007. Unionization of workforce in this industry was below the provincial average. About 28.1% of all employees were union members, compared to the provincial average of 29.4% for 2007.

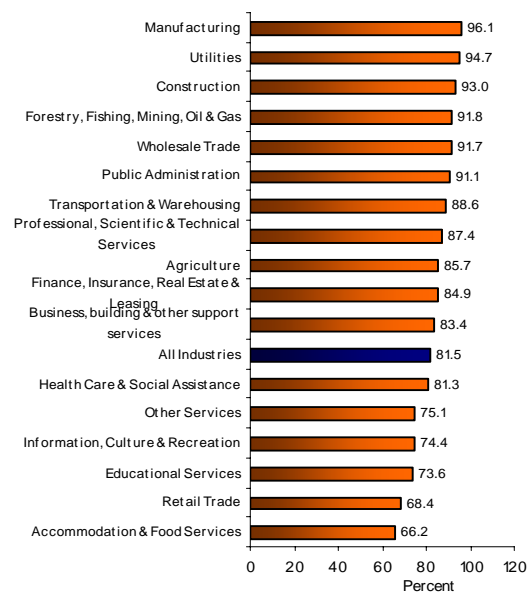
Accommodation and food services, the lowest paying industry in Nova Scotia employed significantly more part-time, temporary and seasonal workers, on a percentage basis, than the provincial average. In 2007, 33.8% of all workers in this sector, aged 15 year and over, were employed on a part-time basis, compared to the 18.5% for all industries.

Figure 16. Unionization by Industry, Nova Scotia, 2007.



Source: Statistics Canada, Labour Force Historical Review 2008, CD-ROM No. 71F0004-XCB.

Figure 17. Full-Time Jobs by Industry, Nova Scotia, 2007.



Source: Statistics Canada, Labour Force Historical Review 2008, CD-ROM No. 71F0004-XCB.

Overview of Nova Scotia Economy, 2002-2007

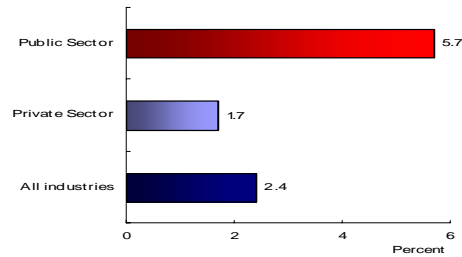
Unionization of workforce in this sector was very low. Only 3.6% of all employees were union members, compared to the provincial average of 29.4% for 2007.

Capital Expenditures

Nova Scotia registered total capital expenditures of \$6.6 billion in 2007, a 12.5% increase over the 2002 level. During the five-year period 2002-2007, total capital expenditures in Nova Scotia grew at the compound annual growth rate of 2.4%, with a faster growth in the public sector, at 5.7% (Table 7 and Figure 18), mainly due to reinvestment in public services, notably hospitals, P-3 schools and the Nova Scotia Community College. Over the same time period the compound annual growth in private sector capital investments was 1.7%, because of the effect of declining impact of the one-time, huge capital investments related mainly to the Sable Offshore Energy Project and Maritimes and Northeast Pipeline Project, as well as expansion of Michelin and STORA, which thereafter declined over time. As a result of that capital spending, the public sector share of total provincial capital expenditures increased from 16.0% in 2002 to 16.2% in 2007, while the private sector share declined from 84.0% in 2002 to 83.8% in 2007.

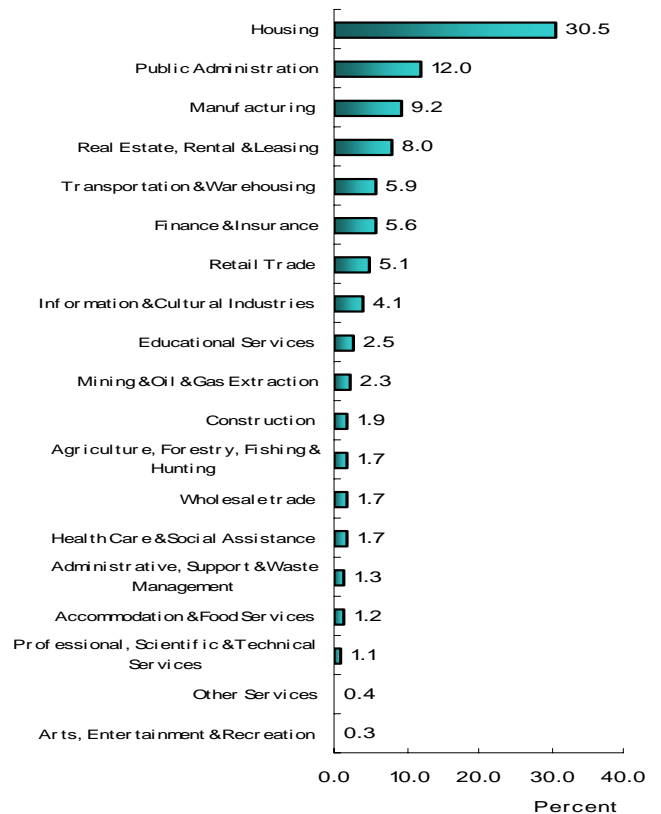
Double digit growth in capital expenditures was observed in administrative, support and waste management services, accommodation and food services, real estate, rental and leasing, and retail trade (Wal-Mart and new Big Box stores in Bayers Lake area), which grew at compound annual growth rates of 35.7%, 14.1%, 12.2% and 11.5%, respectively between 2002 and 2007 (Table 7). Since the administrative, support and waste management services sector accounts for only a small percentage of Nova

Figure 18. Compound Annual Growth in Capital Expenditures by Sector, Nova Scotia, 2002-2007.



Source: Statistics Canada, *Public & Private Investment in Canada*, Catalogue No 61-206 XPB.

Figure 19. Shares of Capital Expenditures by Industry, Nova Scotia, 2007.



Source: Statistics Canada, *Public & Private Investment in Canada*, Catalogue No 61-206 XPB.

Scotia's total capital expenditures, despite the rapid growth in capital investment in this sector, at the compound annual growth rate of 35.7% for 2002-2007, the provincial share of total capital expenditures for this sector increased only by 1.0 percentage points from 0.3% of the total provincial expenditures in 2002 to 1.3% in 2007 (Figure 19).

The most significant increase in the share of the total provincial capital expenditures was observed in the housing sector, which was up by 8.2 percentage points from 22.3% of the total provincial capital investments in 2002 to 30.5% in 2007. Lower interest rates and lower unemployment was driving up housing investment in the province during this period.

The share of total provincial capital investment in accommodation and food services increased by 0.5 percentage points from 0.7% in 2002 to 1.2% in 2007, and in real estate, rental and leasing sector (driven by imports of autos) increased by 2.9 percentage points, from 5.1% in 2002 to 8.0% in 2007.

Since the retail trade sector accounts for only small percentage of Nova Scotia's total capital expenditures, despite the double-digit growth in capital investment in this sector, at the compound annual growth rate of 11.5% for 2002-2007, the provincial share of total capital expenditures for this sector increased only by 1.8 percentage points from 3.3% of the total provincial capital spending in 2002 to 5.1% in 2007 (Figure 19).

Table 7. Total Capital Expenditures by Industry, Nova Scotia, 2007.

Industry	CAGR 2002- 2007 [%]	Share of Industrial Aggregate	
		2002 [%]	2007 [%]
Industrial Aggregate	2.4	100.0	100.0
Goods Producing Sector	X	X	X
Primary Industries	X	X	X
Agriculture, Forestry, Fishing & Hunting	(2.5)	2.2	1.7
Mining & Oil & Gas Extraction	(33.9)	20.2	2.3
Utilities	X	X	X
Secondary Industries	6.8	9.1	11.1
Manufacturing	6.3	7.7	9.2
Construction	9.4	1.4	1.9
Services Producing Sector	X	X	X
Private Sector	X	X	X
Retail Trade	11.5	3.3	5.1
Wholesale Trade	7.6	1.4	1.7
Transportation & Warehousing	9.8	4.2	5.9
Finance & Insurance	(1.3)	6.7	5.6
Real Estate, Rental & Leasing	12.2	5.1	8.0
Professional, Scientific & Technical	5.6	0.9	1.1
Management of Companies	X	X	X
Information & Cultural Services	(1.3)	4.9	4.1
Arts, Entertainment & Recreation	6.0	0.3	0.3
Accommodation & Food Services	14.1	0.7	1.2
Administrative, Support & Waste Management	35.7	0.3	1.3
Other Services	0.3	0.4	0.4
Housing	9.0	22.3	30.5
Public Sector	9.0	16.0	16.2
Educational Services	3.1	2.4	2.5
Health Care & Social Assistance	(4.8)	2.5	1.7
Public Administration	3.9	11.1	12.0

Source: Statistics Canada, Public & Private Investment in Canada, Catalogue No 61-206 XPB.

Note: X – Suppressed to meet the confidentiality requirements of the Statistics Act.

Within the goods producing sector, the primary industries experienced a decline in total capital investment, mainly due to a decrease in capital expenditures in mining and oil and gas extraction sector (Sable Offshore Energy Project and Maritimes and Northeast Pipeline Project had one-time huge capital investments in 1999 and thereafter declined over time), which showed a negative compound annual growth rate of -33.9% for 2002-2007. The share of total provincial capital expenditures in this capital intensive sector declined by 17.9 percentage points from 20.2% in 2002 to 2.3% in 2007.

Agriculture, forestry, fishing and hunting sector also registered a decline in total capital investment, at a negative compound annual growth rate of -2.5% for 2002-2007. The share of total provincial capital expenditures in this sector declined by 0.5 percentage points from 2.2% in 2002 to 1.7% in 2007.

At the same time, the share of total provincial capital investments in the secondary industries increased by 2.0 percentage points from 9.1% of total provincial capital expenditures in 2002 to 11.1% in 2007. Between 2002 and 2007, the construction sector grew at the compound annual growth rate of 9.4%. This sector experienced an increase in the provincial share of total capital spending from 1.4% in 2002 to 1.9% in 2007.

The manufacturing sector also showed an increase in the share of total provincial capital expenditures from 7.7% in 2002 to 9.2% in 2007, despite of many challenges facing this sector over the period 2002-2007. Those challenges included slowing demand for manufacturing exports as a result of

appreciation of the Canadian dollar, higher raw materials costs, and increasing competition from cheaper foreign imports, changing customers demands and increasing business costs due to increase in energy costs, that industry needed to absorb.

The share of total provincial capital investment in the finance and insurance sector, health care and social assistance, and information and cultural services declined by 1.1, 0.8 and 0.8 percentage points, respectively for 2002-2007. The share of total provincial capital expenditures in finance and insurance sector declined from 6.7% in 2002 to 5.6% in 2007. The share of total provincial capital expenditures in health care and social services sector declined from 2.5% in 2002 to 1.7% in 2007. Information and cultural services showed a decline in the share of total provincial capital expenditures from 4.9% in 2002 to 4.1% in 2007.

At the same time, transportation and warehousing, wholesale trade, and professional, scientific and technical services experienced an increase in the share of total provincial capital expenditures by 1.7, 0.3 and 0.2 percentage points, respectively. The share of total provincial capital expenditures in transportation and warehousing increased from 4.2% in 2002 to 5.9% in 2007, in wholesale trade from 1.4% in 2002 to 1.7% in 2007, while in professional, scientific and technical services increased from 0.9% in 2002 to 1.1% in 2007.

Labour Productivity

Labour productivity is defined as the ratio of real value added over hours worked. The simplest measure of labour productivity in an individual industry is output divided by hours worked. Productivity, as measured by output per hour worked, improves when GDP increases more rapidly than the number of hours worked. Improvements in productivity imply increased efficiency, that is, labour and capital resources are used in ways that add more value.

Productivity is not only the key to the performance of firms and industries, it is fundamental to raising and maintaining the living standard of a country's residents. Labour productivity, as measured by real GDP (in chained 2002 dollars) per hour worked, is a primary determinant of improvements to the standard of living in the long run. It is also the main source of economic growth. Three main drivers of productivity are human capital, physical capital and innovation.

Labour productivity in selected industry sectors was compared using as a proxy⁴ labour productivity index (Table 8 and Figures 20 and 21). In order to calculate a labour productivity index, an index of

⁴ Labour productivity index is a proxy that does not take into consideration the effects of changes in the ratio of capital to labour and the ratio of intermediate purchases to labour. Only industry multifactor productivity measures relate output to the combined inputs of labour, capital, and intermediate purchases. However, because of the enormous data requirements for the measurement of capital and intermediate purchases, a very limited number of industry multifactor productivity measures have been published.

Table 8. Labour Productivity Index Q_t/Q_0 : L_t/L_0 by industry sector, Nova Scotia, 2002-2007.

Industry	Q_t/Q_0	L_t/L_0	Q_t/Q_0 : L_t/L_0
Industrial Aggregate	1.08	1.04	1.04
Goods Producing Sector	1.02	0.99	1.03
Primary Industries	0.89	0.96	0.93
Agriculture, Forestry, Fishing & Hunting	0.89	0.95	0.94
Mining, Oil & Gas Extraction	0.85	1.16	0.73
Utilities	0.96	0.84	1.14
Secondary Industries	1.10	1.00	1.10
Manufacturing	1.09	0.95	1.14
Construction	1.13	1.08	1.04
Services Producing Sector	1.11	1.05	1.05
Private Sector	1.11	1.06	1.05
Wholesale Trade	1.03	0.93	1.11
Retail Trade	1.12	0.99	1.13
Transportation & Warehousing	0.99	1.03	0.96
Information & Cultural Industries	1.07	1.01	1.06
Finance, Insurance, Real Estate & Leasing	1.16	1.16	1.00
Professional, Scientific & Technical Services	1.18	1.39	0.85
Administrative, Support & Waste Management	1.33	1.25	1.06
Arts, Entertainment & Recreation	1.02	1.22	0.84
Accommodation & Food Services	0.97	1.02	0.95
Other Services	1.05	0.97	1.09
Public Sector	1.09	1.03	1.06
Educational Services	1.10	1.04	1.06
Health Care & Social Services	1.11	1.07	1.03
Public Administration	1.07	0.99	1.09
Federal Public Admin. (except Military)	1.04	1.01	1.02
Defense Services	1.07	0.92	1.16
Provincial Public Administration	1.11	1.01	1.10
Municipal & Local Public Administration	1.14	1.05	1.08

Source: Statistics Canada, CANSIM Tables 383-0010 and 379-0025.

industry output was divided by an index of hours:

$$Q_t/Q_0 : L_t/L_0$$

where:

Q_t/Q_0 = the index of output in the current year (2007),

L_t/L_0 = the index of labour input in the current year (2007),

t = the current year (2007)

0 = the base year (2002)

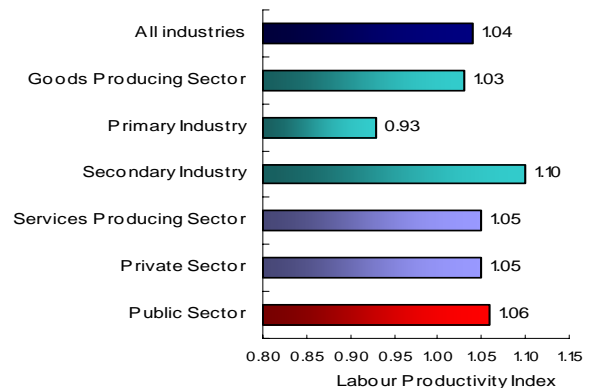
Over the five year period 2002-2007, labour productivity growth for all industries in Nova Scotia was 1.04, and was slightly higher in the services producing sector compared to the goods producing sector, as illustrated by the labour productivity indexes equal 1.05 and 1.03, respectively, for 2002-2007.

However, within the goods producing sector, the labour productivity index was much lower in the primary industries than in the secondary industries, with $Q_t/Q_0 : L_t/L_0$ indexes equal 0.93 for the primary sector compared to 1.10 for the secondary industries.

Within the services sector, the productivity growth in the public sector was slightly higher than in the private sector, with $Q_t/Q_0 : L_t/L_0$ indexes equal 1.06 for the public sector compared to 1.05 for the private sector (Figure 20).

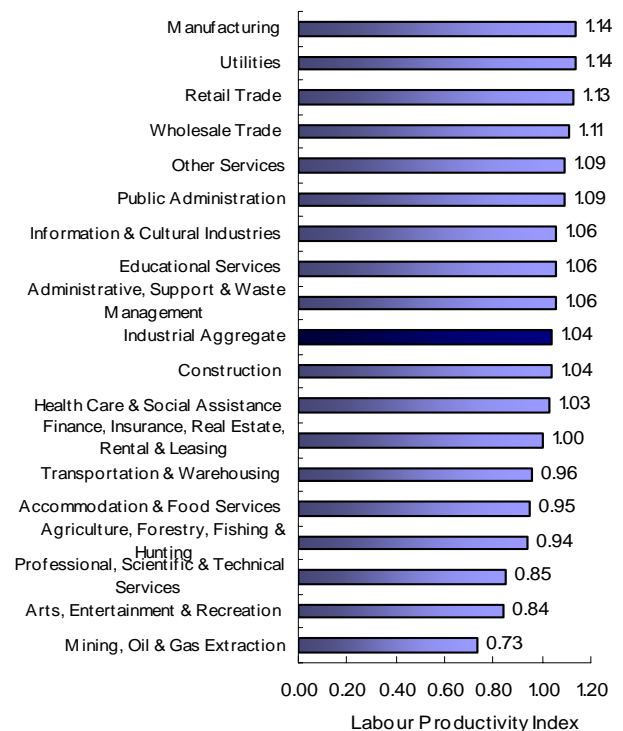
There is also a wide variation of performance at industry level. The most dramatic gain in labour productivity in Nova Scotia was observed in the manufacturing sector and utilities where

Figure 20. Labour Productivity Index $Q_t/Q_0 : L_t/L_0$ by Sector, Nova Scotia, 2002-2007.



Source: Statistics Canada, CANSIM Tables 383-0010 and 379-0025.

Figure 21. Labour Productivity Index $Q_t/Q_0 : L_t/L_0$ by Industry, Nova Scotia, 2002-2007.



Source: Statistics Canada, CANSIM Tables 383-0010 and 379-0025.

$Q_t/Q_0 : L_t/L_0$ index equals 1.14 for both sectors for the five-year period 2002-2007. The productivity gain in the utilities sector was reflecting a significant decline in employment, at the compound annual rate of -7.5%, a decline in wages and salaries at the compound annual growth rate of -0.9%, despite a negative growth in GDP, at the compound annual growth rate of -0.8% for 2002-2007.

The labour productivity increase in the manufacturing sector was mainly attributed to the higher than average provincial growth in GDP, at the compound annual growth rate of 1.7%, a strong growth in capital expenditures, at the compound annual rate of 6.3%, combined with a decline in employment, at the compound annual rate of -1.0%, and a slow growth in wages and salaries, at the compound annual growth rate of 0.4%, between 2002 and 2007.

Retail trade, wholesale trade, other services, and public administration also experienced a significant growth in labour productivity, with $Q_t/Q_0 : L_t/L_0$ ratios equal to 1.13, 1.11, 1.09 and 1.09, respectively, over the 5-year period 2002-2007.

The labour productivity gain observed in the retail trade sector was a result of a double digit growth in capital expenditures, at the compound annual growth rate of 11.5%, and above average growth in GDP, at the compound annual growth rate of 2.3%, combined with a negative growth in employment, at the compound annual growth rate of -0.4%, between 2002 and 2007.

Wholesale sector experienced the increase in labour productivity due to a strong growth in capital expenditures, at

the compound annual growth rate of 7.6%, coupled with a slow growth in GDP, at the compound annual growth rate of 0.7%, a moderate growth in wages and salaries, at the compound annual growth rate of 3.6%, and above average growth in average weekly wages and salaries, at the compound annual growth rate of 3.0% for 2002-2007.

The labour productivity gain observed in the public administration was mainly attributed to a strong growth in capital expenditures, at the compound annual growth rate of 3.9%, coupled with a slightly below average growth in GDP, at the compound annual growth rate of 1.4%, a strong growth in employment, at the compound annual growth rate of 2.8%, and an increase in wages and salaries, at the compound annual growth rate of 4.2%, over the 5-year period 2002-2007.

Educational services, information and cultural industries, and administrative, support and waste management services also registered the growth in the labour productivity, with $Q_t/Q_0 : L_t/L_0$ ratios equal 1.06 for 2002-2007 (Figure 21).

The increase in the labour productivity observed in the educational services was due to the above average growth in capital expenditures, at the compound annual growth rate of 3.1%, and a moderate growth in GDP, at the compound annual growth rate of 2.0%, combined with a growth in employment, at the compound annual growth rate of 2.0%, above average growth in wages and salaries, at the compound annual rate of 4.0%, and the below average growth in average wages and salaries, at the compound annual rate of 1.0%, over the 5-year period 2002-2007.

Administrative, support and waste management services experienced the increase in labour productivity due to a double digit growth in capital expenditures, at the compound annual growth rate of 35.7%, and a strong growth in GDP, at the compound annual growth rate of 5.8%, combined with a fast growth in employment, at the compound annual growth rate of 4.7% and a strong growth in average weekly wages, at the compound annual growth rate of 3.8% between 2002 and 2007.

The increase in labour productivity observed in the health care and social assistance sector was mainly attributed to the above average growth in GDP, at the compound annual growth rate of 2.1%, combined with a strong growth in employment, at the compound annual growth rate of 4.4%, a strong growth in wages and salaries, at the compound annual growth rate of 5.8%, and in average weekly wages, at the compound annual growth rate of 3.5%, over the 5-year period 2002-2007.

Between 2002 and 2007, a decrease in labour productivity was registered in the transportation and warehousing sector ($Q_t/Q_0 : L_t/L_0 = 0.96$), accommodation and food services ($Q_t/Q_0 : L_t/L_0 = 0.95$), agriculture, forestry, fishing and hunting ($Q_t/Q_0 : L_t/L_0 = 0.94$), professional, scientific and technical services ($Q_t/Q_0 : L_t/L_0 = 0.85$), arts, entertainment and recreation sector ($Q_t/Q_0 : L_t/L_0 = 0.84$), and mining and oil and gas extraction ($Q_t/Q_0 : L_t/L_0 = 0.73$), as shown by $Q_t/Q_0 : L_t/L_0$ ratios less than 1.00 (Table 8 and Figure 21).

The labour productivity remained unchanged in the finance, insurance, real estate, rental and leasing sector, as

indicated by $Q_t/Q_0 : L_t/L_0$ ratio equal 1.00 for 2002-2007 (Table 8 and Figure 21).

The labour productivity decrease in the transportation and warehousing ($Q_t/Q_0 : L_t/L_0 = 0.96$) was attributed to a negative growth in GDP, at the compound annual growth rate of -0.2%, combined with declining employment growth, at the compound annual growth rate of -1.9%, and a very slow growth in average weekly wages and salaries, at the compound annual growth rate of 0.5%, and despite significant growth in capital spending, at the compound annual growth rate of 9.8% for 2002-2007.

Accommodation and food services experienced a decline in the labour productivity ($Q_t/Q_0 : L_t/L_0 = 0.95$) mainly due to a decline in GDP growth, at the compound annual growth rate of -0.6%, combined with a very slow growth in employment, at the compound annual growth rate of 0.1%, and a strong growth in average weekly wages and salaries, at the compound annual growth rate of 3.7%, and despite double digit growth in capital spending, at the compound annual growth rate of 14.1%, for 2002-2007.

A decline in labour productivity in the agriculture, forestry, fishing and hunting ($Q_t/Q_0 : L_t/L_0 = 0.94$) was attributed to a negative growth in GDP, at the compound annual growth rate of -2.4%, negative growth in capital expenditures, at the compound annual growth rate of -2.5%, combined with a negative growth in employment, at the compound annual growth rate of -3.5%, and a slow growth in wages and salaries, at the compound annual growth rate of 0.5%, between 2002 and 2007.

Professional, scientific and technical services experienced a decline in the labour productivity ($Q_t/Q_0 : L_t/L_0 = 0.85$), despite a moderate growth in GDP, at the compound annual growth rate of 3.3%, and a strong growth in capital expenditures, at the compound annual growth rate of 5.6%, a very slow growth in employment, at the compound annual growth rate of 0.1%, combined with a strong growth in wages and salaries, at the compound annual growth rate of 5.7%, and a slow growth in average weekly wages and salaries, at the compound annual growth rate of 1.1%, for 2002-2007.

A decline in labour productivity in the arts, entertainment and recreation sector ($Q_t/Q_0 : L_t/L_0 = 0.84$) was due to a very slow growth in GDP and average weekly wages, at the compound annual growth rates of 0.3% and 0.6%, respectively, for 2002-2007. This decline in labour productivity was softened by a strong growth in capital expenditures, at the compound annual growth rate of 6.0% over the same time period.

The labour productivity decrease in the mining and oil and gas extraction ($Q_t/Q_0 : L_t/L_0 = 0.73$) was attributed to a negative growth in GDP, at the compound annual growth rate of -3.2%, negative growth in capital spending, at the compound annual growth rate of -33.9%, combined with declining employment, at the compound annual growth rate of -1.3%, and a strong growth in wages and salaries, at the compound annual growth rate of 4.1%, between 2002 and 2007.

Appendix

Sectors' Performance Ranking based on a Composite Index

Table 9. Ranking of Sectors' Performance based on a Composite Index of the Compound Annual Growth Rates of Economic Indicators and Labour Productivity for Nova Scotia, 2002-2007.

Industry	Real GDP	Employment	Wages and Salaries	Average Weekly Wages	Capital Spending	Labour Productivity Index	Ranking of Sectors Performance
Industrial Aggregate	1.5	1.1	3.9	2.4	2.4	1.04	
Goods Producing Sector							
Agriculture, Forestry, Fishing & Hunting	(2.4)	(3.5)	0.3	X	(2.5)	0.94	18
Mining & Oil & Gas							
Extraction	(3.2)	(1.3)	4.1	X	(33.9)	0.73	17
Utilities	(0.8)	(7.5)	(0.9)	X	X	1.14	15
Manufacturing	1.7	(1.0)	0.4	2.5	6.3	1.14	10
Construction	2.4	2.5	6.2	3.1	9.4	1.04	2
Services Sector							
Private Sector							
Retail Trade	2.3	(0.4)	3.6	2.4	11.5	1.13	5
Wholesale Trade	0.7	0.0	3.6	3.0	7.6	1.11	7
Transportation & Warehousing	(0.2)	(1.9)	1.2	0.5	9.8	0.96	16
Finance, Insurance, Real Estate, Leasing	3.0	1.5	3.9	X	5.4	1.00	3
Professional, Scientific & Technical Services	3.3	0.1	5.7	1.1	5.6	0.85	9
Information & Cultural Industries	1.3	2.2	2.5	3.6	(1.3)	1.06	8
Arts, Entertainment & Recreation	0.3	N/A	N/A	0.6	6.0	0.84	14
Accommodation & Food Services	(0.6)	0.1	N/A	3.7	14.1	0.95	13
Administrative, Support & Waste Management	5.8	4.7	N/A	3.8	35.7	1.06	1
Other Services	1.0	0.8	N/A	3.0	0.3	1.09	12
Public Sector							
Educational Services	2.0	2.0	4.0	1.0	3.1	1.06	11
Health Care & Social Assistance	2.1	4.4	5.8	3.5	(4.8)	1.03	4
Public Administration	1.4	2.8	4.2	2.8	3.9	1.09	6

Note 1: There are some compatibility issues due to the slightly different definitions of few sectors. For example a definition of the information and cultural industries according to NAICS classification is less inclusive than the broader definition of this sector for employment.

Note 2: X – Suppressed to meet the confidentiality requirements of the Statistics Act.

	Total of 6 indicators	Ranking
Administrative, Support & Waste Management	27	1
Construction	29	2
FIRE Sector	39	3
Health Care & Social Assistance	41	4
Retail Trade	41	5
Public Administration	41	6
Wholesale Trade	48	7
Information & Cultural Industries	49	8
Professional, Scientific & Technical Services	50	9
Manufacturing	50	10
Educational Services	51	11
Other Services	59	12
Accommodation & Food Services	60	13
Arts, Entertainment & Recreation	67	14
Utilities	71	15
Transportation & Warehousing	71	16
Mining & Oil & Gas Extraction	72	17
Agriculture, Forestry, Fishing & Hunting	76	18