

Nova Scotia Industry Outlook 2017 – 2021 NOVA SCOTIA



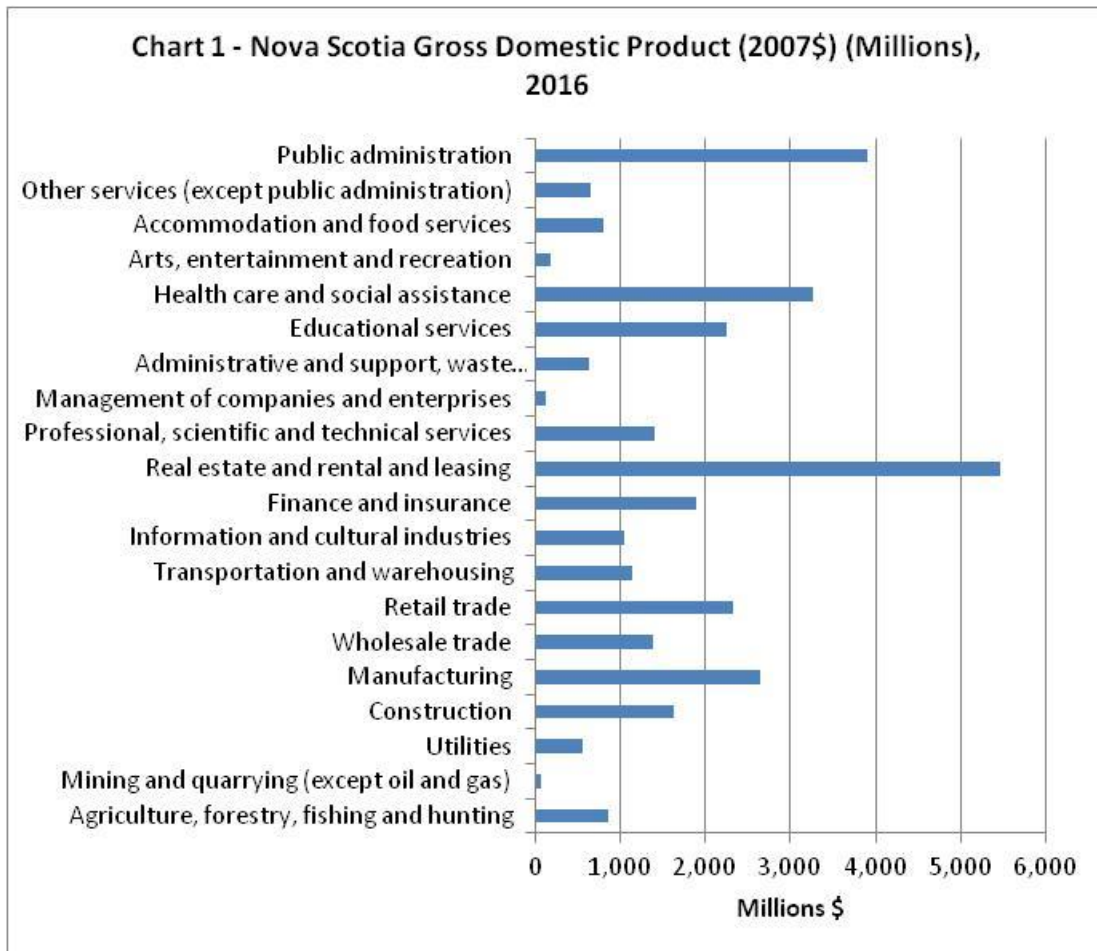
Canmac Economics Ltd.
Strategic Outlook Service
August, 2017

Canmac Economics Nova Scotia Industry Outlook 2016 - 2021

Canmac Economics Ltd. uses an evidenced based approach to providing an economic projection of Nova Scotia's industries. We link a model of industry growth to overall macro growth in the economy. The model simulation provides forecasts of gross domestic product, employment and wages by major industry. These forecasts provide a credible basis for policy analysts to spot emerging trends and to impact the future direction of the economy. Decision-makers should treat the economic outlook as a projection not a prediction. It is the most likely scenario for the economy given the assumptions. In particular, one purpose of the outlook is to influence policy so that any undesirable outlooks maybe overcome.

Section 1 – Historic Review

Nova Scotia’s largest industry is the real estate, rental and leasing industry with 2016 Gross Domestic Product of \$5,458.7 million (chained 2007\$), 16.95% of total GDP. Nova Scotia’s fastest growing sector – real estate, rental and leasing had growth of 1.55% of the 2015 to 2016 period. Nova Scotia’s weakest growth sector was mining and quarrying (except oil and gas) with growth of -7.33%. Chart 1 provides the relative size of Nova Scotia’s industry and Chart 2 provides the growth rates.



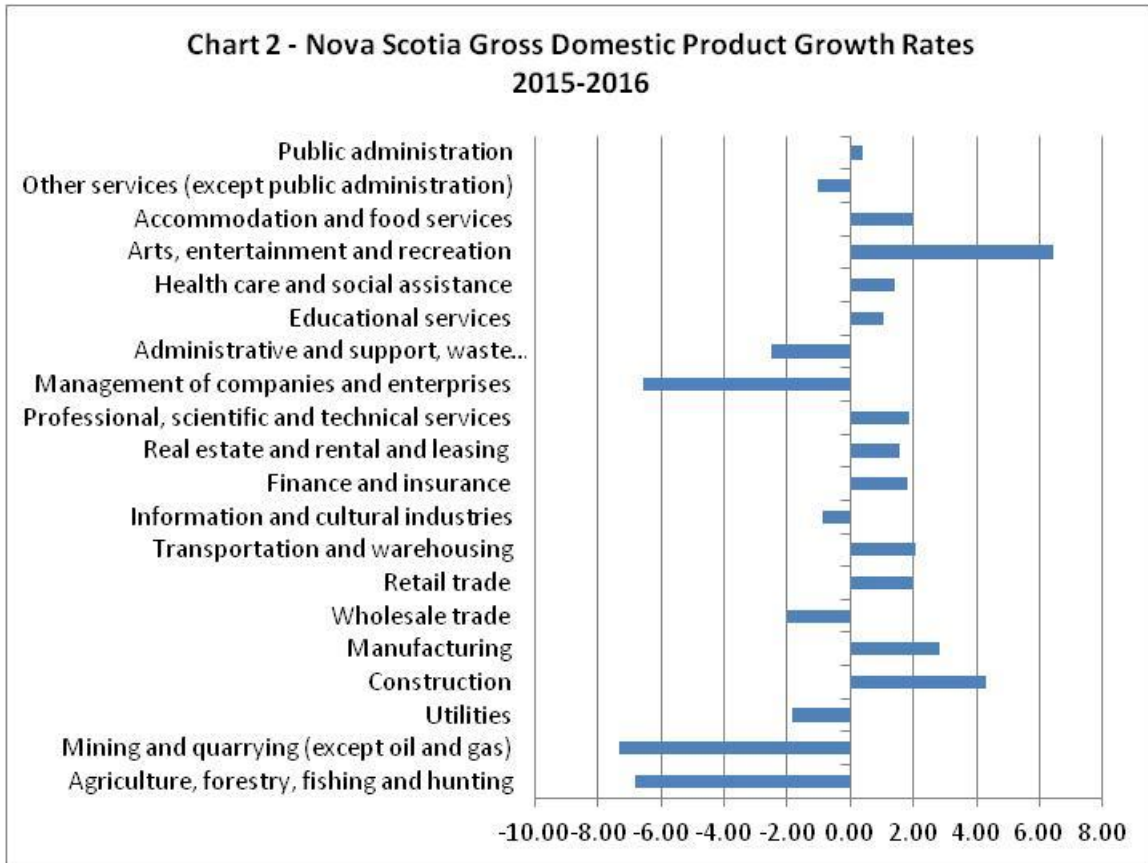


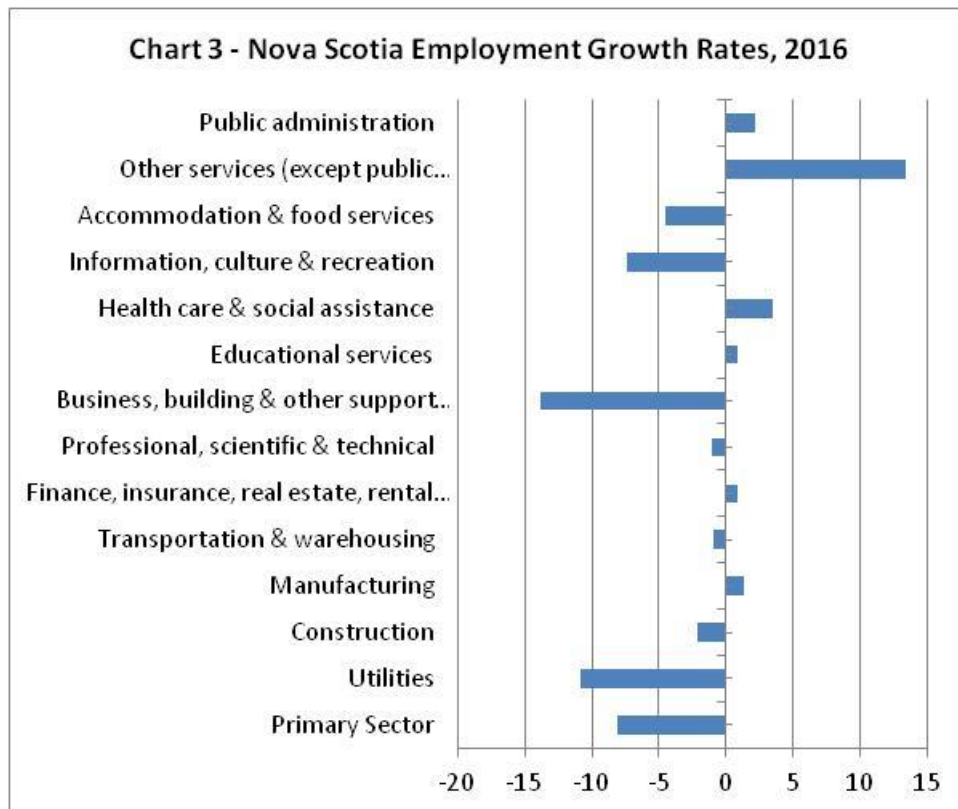
Table 1 provides a comparison of Nova Scotia and Canadian growth. Overall growth in Nova Scotia from 2006 to 2016 was 7.79 percent; in Canada the corresponding number was 16.73 percent. Nova Scotia’s top two growth contributors were real estate and rental and leasing (16.62%) and health care and social assistance (9.93%). In contrast, Canada’s top two industries were real estate and rental and leasing (13.11%) and manufacturing (10.40%). A review of Table 1 shows that Nova Scotia’s modest growth record is due to weak growth in all sectors and not due to its economic structure as the relative composition of industries that makeup Canada and Nova Scotia are similar. In particular, note that Nova Scotia recorded negative growth in 7 of its 21 sectors.

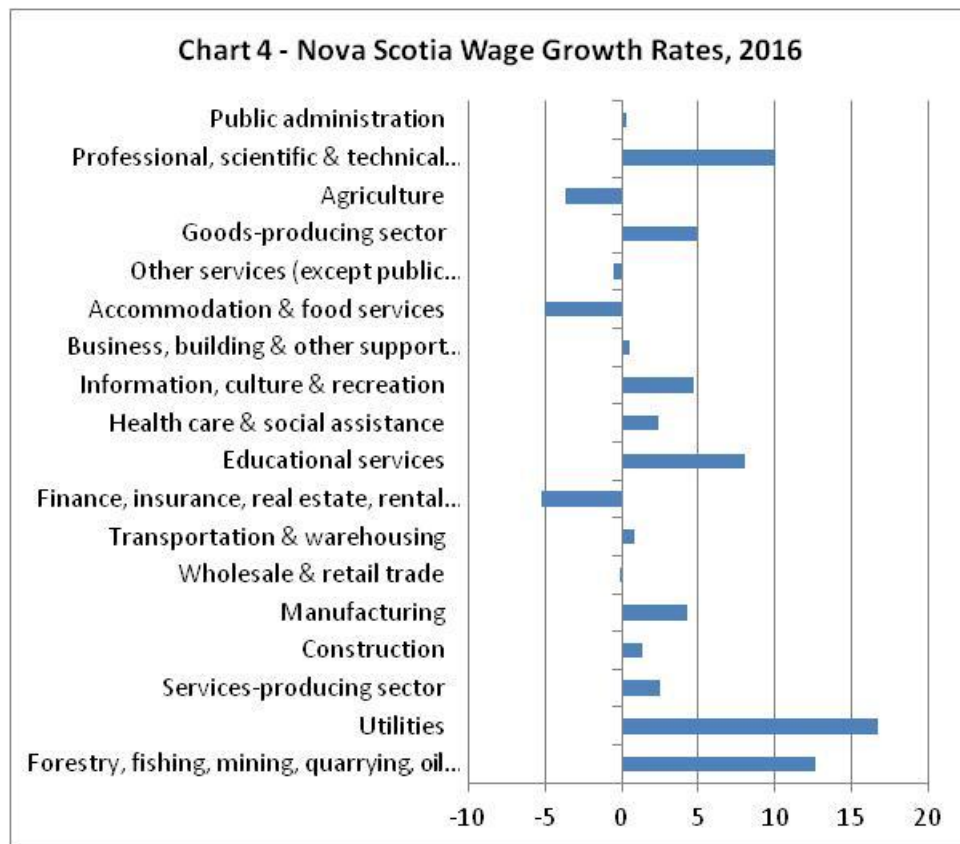
Table 1: Growth Accounting Framework by Sector
Chained (2007) Millions of dollars

	Nova Scotia		Canada		Nova Scotia		Canada	
	2016	% of Total	2016	% of Total	Growth 2006-2016	% of Total	Growth 2006-2016	% of Total
All industries	32,845		1,677,492		7.79		16.73	
Agriculture, forestry, fishing and hunting	851	2.59	28,479	1.70	8.88	1.70	27.06	1.70
Mining and quarrying (except oil and gas)	73	0.22	132,779	7.92	-63.17	7.92	8.92	7.92
Utilities	560	1.70	36,885	2.20	-10.88	2.20	7.90	2.20
Construction	1,624	4.94	117,520	7.01	5.06	7.01	19.87	7.01
Manufacturing	2,638	8.03	174,469	10.40	-1.49	10.40	-9.69	10.40
Wholesale trade	1,393	4.24	97,637	5.82	9.47	5.82	28.55	5.82
Retail trade	2,321	7.07	92,756	5.53	13.10	5.53	25.13	5.53
Transportation and warehousing	1,132	3.45	74,794	4.46	4.86	4.46	21.28	4.46
Information and cultural industries	1,047	3.19	50,829	3.03	-5.14	3.03	5.58	3.03
Finance and insurance	1,886	5.74	120,056	7.16	11.04	7.16	28.11	7.16
Real estate and rental and leasing	5,459	16.62	219,874	13.11	29.81	13.11	34.69	13.11
Professional, scientific and technical services	1,410	4.29	90,991	5.42	20.33	5.42	22.86	5.42
Management of companies and enterprises	131	0.40	12,214	0.73	-3.82	0.73	14.47	0.73
Administrative and support, waste management and remediation	637	1.94	42,237	2.52	-14.21	2.52	8.80	2.52
Educational services	2,241	6.82	88,111	5.25	11.49	5.25	19.32	5.25
Health care and social assistance	3,260	9.93	112,669	6.72	17.41	6.72	20.57	6.72
Arts, entertainment and recreation	190	0.58	12,310	0.73	-0.47	0.73	9.37	0.73
Accommodation and food services	810	2.46	35,471	2.11	10.30	2.11	18.95	2.11
Other services (except public administration)	646	1.97	32,302	1.93	1.59	1.93	13.95	1.93
Public administration	3,897	11.87	107,349	6.40	5.82	6.40	19.35	6.40

Source: Canmac Strategic Outlook Nova Scotia Industries 2017/GDP by Industry NS, Sheet: NSGDP

Charts 3 and 4 show the growth rates for Nova Scotia employment and wages for 2016. Based on this evidence, the Nova Scotia economy is showing a weak performance in employment growth and an above average performance in wage growth. The strongest employment growth for 2016 was recorded in other services sector (13.45) and the weakest performance was in the business, building and other support services (-13.79). As shown in the chart, 8 of the 14 sectors showed negative employment in 2016. For 2016, wage growth was highest in the utilities sector (16.76) and lowest in the finance sector.





Section 2 – Forecast 2017 – 2021

The basic assumptions for the industry outlook come from Canmac’s macro outlook for the Nova Scotia economy which provides a base case outlook in export and domestic markets. The key assumptions are as follows:

- Exports of goods to rest of Canada and rest of world will grow on average 2.3% per year over 2016 – 2021.
- Exports of services to rest of Canada and rest of world will grow on average 2.5% per year 2016 – 2021.
- Nova Scotia household income will grow on average 1.8% per year 2016 – 2021.

Canmac’s forecast of average growth over the five-year period for Gross Domestic Product, wages and employment for Nova Scotia industries are provided in the text. Appendix A provides forecast details.

Nova Scotia Business Inc. (NSBI) is the province’s economic development agency. NSBI is an important contributor to the Nova Scotia economy. For 2017 (up to April 2017), NSBI announced payroll rebates for various companies that imply an increase in wages and salaries of \$459.5 million and employment of 1,682 over the life of the agreements (typically 5 years).

Canmac’s projected fastest growing sector is the mining, quarrying and oil and gas extraction at a 2017 – 2021 average of 6.66%. The fastest employment growth is 5.45% for the business, building and other support services industry. The fastest growing wage sector is the finance, insurance, real estate, rental and leasing industry at 3.46%.

Primary Sector



The Nova Scotia primary sector is defined as the sum of agriculture, forestry, fishing and hunting plus mining, quarrying and oil and gas extraction industries.

The agriculture industry continues to exhibit modest growth. Over 50% of the sector is under supply management so that the pending renegotiation of NAFTA will be a major policy concern for the sector. The blueberry sector is currently facing low prices due to a supply glut. The mink industry appears to be stabilizing. Bright spots in the sector include an expansionary wine industry and aquaculture industry.

The fishery sector is dominated by shellfish notably lobster. The industry is volatile but recently showing signs of positive growth. The recent branding of the lobster as Nova Scotia Lobster should strengthen export sales.

The mining, quarrying and oil and gas sector is anticipated to show some strength over the forecast period – markets are opening up in the Caribbean for aggregates. Nova Scotia's gold mining sector is showing signs of life with active development at Moosehead and the Donkin Coal Mine is in the development phase.

	Historic GDP % 2011-2016	Forecast GDP% 2017-2021
<i>Agriculture, forestry, fishing & hunting</i>	1.01	1.95
<i>Mining, quarrying & oil & gas extraction</i>	-5.72	6.66

	Historic Wages % 2011-2016	Forecast Wages% 2017-2021
<i>Forestry, fishing, mining, quarrying, oil & gas</i>	5.00	1.09
	Historic Employment % 2011-2016	Forecast Employment% 2017-2021
<i>Primary sector</i>	-2.42	-0.40

Goods Production Sector



The Nova Scotia goods production sector consists of the following industries:

1. Utilities
2. Construction
3. Manufacturing
4. Wholesale Trade
5. Retail Trade
6. Transportation and Warehousing

Nova Scotia's construction sector will see modest growth over the forecast horizon.

The non-residential construction boom, particularly in the Halifax region is reaching its saturation level. On the positive side, the federal government has put a priority on infrastructure spending. There is significant municipal demand to upgrade water and

sewage treatment facilities and demand for highway twinning, particularly on the 102 highway.

The manufacturing sector is on a growth path led by the boatbuilding and shipbuilding sector. The \$30 billion Irving Shipyard contract continues to stimulate the economy but the actual impact appears significantly less than first projected.

Nova Scotia Business Inc.'s (NSBI) strategic initiative has an agreement with CME. Canadian Maritime Engineering Ltd. (CME) specializes in advanced manufacturing and repair, industrial services, and custom engineering for a variety of industries, has the potential to create up to a maximum of 80 new jobs under the payroll rebate agreement.

The wholesale and retail trade sector, along with transportation and warehousing follow the general income trend in the economy. Over the longer term, the impact of internet purchases on the sector will result in consolidation and a weakening of the sectors growth potential. In the short term, the province will see the opening of an IKEA store in the Halifax region. The store is anticipated to have employment in the 300 range.

	Historic GDP % 2011-2016	Forecast GDP% 2017-2021
<i>Utilities</i>	-2.28	-0.76
<i>Construction</i>	-3.22	3.06
<i>Manufacturing</i>	-0.36	3.20
<i>Wholesale Trade</i>	0.81	1.15
<i>Retail Trade</i>	0.72	1.78
<i>Transportation & Warehousing</i>	0.71	0.28

	Historic Wages % 2011-2016	Forecast Wages% 2017-2021
Utilities	5.10	-0.54
Construction	2.48	2.56
Manufacturing	2.40	2.28
Wholesale & retail trade	1.77	2.73
Transportation & warehousing	3.66	1.78

	Historic Employment % 2011-2016	Forecast Employment % 2017-2021
<i>Utilities</i>	-2.35	-0.45
<i>Construction</i>	0.26	2.62
<i>Manufacturing</i>	-1.83	0.18
<i>Transportation & warehousing</i>	0.79	-6.64

Basic Services Sector



The basic services sector is defined as the following industries:

1. Finance and Insurance (18)
2. Real Estate and Leasing (19)
3. Management of Enterprises (21)
4. Admin and Support (22)
5. Other Services (27)
6. Public Administration (28)

The basic service sector growth is tied to the overall growth of the Nova Scotia economy. The vibrant Halifax economy will continue to drive this sector.

	Historic GDP % 2011-2016	Forecast GDP% 2017-2021
<i>Finance & insurance</i>	1.25	2.22
<i>Real estate & rental & leasing</i>	2.28	2.32
<i>Management of companies & enterprises</i>	-0.65	4.78
<i>Administration & support</i>	-1.18	4.50
<i>Other services</i>	0.33	2.90
<i>Public administration</i>	0.01	1.55

	Historic Wages % 2011-2016	Forecast Wages% 2017-2021
<i>Finance, insurance, real estate, rental & leasing</i>	0.57	3.46
<i>Other services (except public admin)</i>	2.80	1.83
<i>Public administration</i>	1.71	2.61
<i>Business, building & other support services</i>	2.68	2.56

	Historic Employment % 2011-2016	Forecast Employment% 2017-2021
<i>Finance, insurance, real estate, rental & leasing</i>	1.49	-0.02
<i>Other Services (except public admin)</i>	0.86	-0.62
<i>Public administration</i>	-1.61	-0.61
<i>Business, building & other support services</i>	-5.29	5.54

Advanced Service Sector



The advanced service sector is comprised of the following industries:

1. Information and Cultural Services
2. Professional, Scientific and Technical Services
3. Education Services
4. Health Care and Social Assistance Services
5. Arts, Entertainment and Recreation Services
6. Accommodation and Food Services

Advanced service industries represent an important segment of Nova Scotia's economic base as it in part represents the knowledge based sector – the source of future growth for advanced economies.

Nova Scotia is showing promising growth and growth potential in its advanced service sector. Government and industry stakeholders are preparing documentation to apply

for significant Federal funding for the development of an ocean related super cluster – a priority documented in the latest federal budget.

NSBI remains active with significant announcements for the sector including:

- an approved amendment to the existing IBM business development incentive agreement, which begin in November, 2012. Four years into its eight year payroll rebate agreement, IBM is ahead of its plan to create 500 positions. With the amended agreement, the company is projected to create up to 250 more jobs in the province, for a total of 750 jobs over the eight-year span of the agreement.

The amendment includes an agreed-upon focus of continued hiring of new graduates and new Nova Scotians, as well as higher agreed-upon average salaries required to earn a rebate. Based on the new maximum growth forecast of the amended eight-year payroll agreement, NSBI estimates IBM would spend a total of \$251,397,422 in salaries and benefits.

Web.com Canada, Inc. is expanding in Nova Scotia, and has the potential to create up to a maximum of 330 jobs in its expansion of business operations in New Glasgow. Based on the maximum growth forecast of the eight-year payroll rebate agreement. NSBI estimates that Web.com Canada Inc. could spend \$78.8 million in salaries.

	Historic GDP % 2011-2016	Forecast GDP% 2017-2021
<i>Information & cultural industries</i>	-0.59	3.35
<i>Professional, scientific & technical</i>	1.66	2.56
<i>Educational services</i>	0.55	2.24
<i>Health care & social assistance</i>	1.32	1.65
<i>Arts, entertainment & recreation</i>	1.15	1.65
<i>Accommodation & food services</i>	1.15	0.67

	Historic Wages % 2011-2016	Forecast Wages% 2017-2021
<i>Information, culture & recreation</i>	2.32	2.08
<i>Professional, scientific & technical services</i>	2.19	1.71
<i>Educational services</i>	2.43	1.72
<i>Health care & social assistance</i>	2.68	2.45
<i>Accommodation & food services</i>	0.88	3.30

	Historic Employment % 2011-2016	Forecast Employment % 2017-2021
<i>Information, culture & recreation</i>	-3.00	1.16
<i>Professional, scientific & technical services</i>	4.61	2.93
<i>Educational services</i>	1.63	4.04
<i>Health Care & social assistance</i>	1.65	1.50
<i>Accommodation & food services</i>	-0.43	1.55

Appendix A – Forecast Tables

Nova Scotia Gross Domestic Product (chained 2007 millions \$)						
	2016	2017	2018	2019	2020	2021
Agric, Forestry Fishing and Hunting	850.9	869.3	887.1	904.3	921.5	937.3
Mining, Quarrying and Oil and Gas Extraction	650.4	706.9	759.3	808.3	854.2	897.5
Utilities	559.5	555.6	551.6	547.4	543.4	538.6
Construction	1,623.90	1,695.70	1,755.00	1,805.00	1,850.50	1,887.50
Manufacturing	2,638.00	2,773.00	2,873.80	2,954.50	3,026.90	3,087.10
Wholesale Trade	1,393.30	1,402.80	1,417.00	1,434.30	1,455.00	1,475.10
Retail Trade	2,320.60	2,362.50	2,404.90	2,447.70	2,491.30	2,534.70
Transportation and Warehousing	1,132.30	1,120.20	1,117.90	1,122.90	1,133.40	1,147.90
Information and Cultural Industries	1,047.30	1,095.20	1,136.70	1,173.00	1,206.40	1,234.80
Finance and Insurance	1,885.50	1,943.00	1,990.60	2,031.90	2,072.10	2,104.60
Real Estate and Rental Leasing	5,458.70	5,589.80	5,721.90	5,854.70	5,989.40	6,123.40
Professional, Scientific and Technical Services	1,409.70	1,444.90	1,482.20	1,520.80	1,560.10	1,600.00
Management of Companies and Enterprises	130.80	141.90	150.00	156.10	161.20	165.00
Administrative and Support, Waste Management and Remediation	636.50	675.60	710.10	740.60	768.60	792.90
Educational Services	2,240.50	2,296.70	2,350.90	2,403.10	2,454.90	2,502.70
Health Care and Social Assistance	3,260.40	3,317.40	3,373.60	3,428.80	3,485.60	3,537.90
Arts, Entertainment and Recreation	190.40	193.70	197.00	200.20	203.60	206.7
Accommodation and Food Services	809.50	814.30	819.90	825.50	833.60	837.2
Other Services (except public Administration)	646.20	670.50	692.10	711.40	729.60	745.30
Public Administration	3,897.40	3,963.70	4,030.10	4,096.30	4,164.00	4,229.20

Source: Canmac Nova Scotia Industry Model Scenario 6

Nova Scotia Gross Domestic Product - Percent Change						
	2016	2017	2018	2019	2020	2021
Agric, Forestry Fishing and Hunting	-6.83	2.17	2.05	1.93	1.90	1.72
Mining, Quarrying and Oil and Gas Extraction	-9.16	8.68	7.42	6.45	5.68	5.07
Utilities	-1.84	-0.69	-0.72	-0.77	-0.72	-0.88
Construction	4.3	4.42	3.5	2.85	2.52	2
Manufacturing	2.81	5.12	3.63	2.81	2.45	1.99
Wholesale Trade	-1.98	0.68	1.01	1.22	1.44	1.39
Retail Trade	1.97	1.81	1.79	1.78	1.78	1.74
Transportation and Warehousing	2.05	-1.07	-0.2	0.45	0.93	1.28
Information and Cultural Industries	-0.85	4.58	3.79	3.19	2.85	2.35
Finance and Insurance	1.84	3.05	2.45	2.07	1.98	1.57
Real Estate and Rental Leasing	1.55	2.4	2.36	2.32	2.3	2.24
Professional, Scientific and Technical Services	1.88	2.5	2.58	2.6	2.59	2.56
Management of Companies and Enterprises	-6.57	8.45	5.73	4.1	3.25	2.37
Administrative and Support, Waste Management and Remediation	-2.5	6.14	5.1	4.3	3.77	3.16
Educational Services	1.03	2.51	2.36	2.22	2.16	1.95
Health Care and Social Assistance	1.41	1.75	1.69	1.64	1.66	1.5
Arts, Entertainment and Recreation	6.43	1.74	1.69	1.65	1.66	1.53
Accommodation and Food Services	1.99	0.6	0.68	0.68	0.98	0.43
Other Services (except public Administration)	-1.04	3.76	3.22	2.79	2.56	2.16
Public Administration	0.4	1.7	1.67	1.64	1.65	1.56

Source: Canmac Nova Scotia Industry Model Scenario 6

Nova Scotia Average Weekly Wage						
	2016	2017	2018	2019	2020	2021
Forestry, fishing, mining, quarrying, oil and gas	1,303.40	1,302.40	1,311.50	1,328.70	1,351.50	1,375.90
Utilities	1,424.20	1,324.50	1,308.40	1,325.30	1,353.90	1,381.80
Construction	963.1	987.6	1,012.80	1,039.30	1,066.70	1,092.50
Manufacturing	930.1	943.7	967.4	994.1	1,020.60	1,041.20
Wholesale and retail trade	587.90	605.50	622.30	639.60	657.00	672.60
Transportation and warehousing	992.90	988.10	1,007.70	1,034.20	1,061.70	1,084.10
Information, culture and recreation	788.10	792.80	811.20	833.20	855.40	873.20
Finance, insurance, real estate, rental and leasing	835.9	874.9	907.40	937.40	965.80	990.70
Professional, scientific and technical services	1,107.60	1,088.20	1,120.40	1,151.30	1,181.80	1,204.70
Business, building and other support services	610.5	626.1	642	658.8	676.2	692.6
Educational services	1,028.50	1,027.80	1,044.10	1,068.70	1,095.90	1,120.00
Health care and social assistance	876.1	897.1	918.8	941.7	965.5	988.9
Accommodation and food services	392.50	413.40	427.60	440.30	452.50	462.70
Other services (except public administration)	723.80	728.40	740.30	756.80	775.40	792.50
Public administration	1,155.80	1,186.90	1,218.00	1,250.70	1,284.20	1,314.80

Source: Canmac Nova Scotia Industry Model Scenario 6

Nova Scotia Average Weekly Wage - Percent Change						
	2016	2017	2018	2019	2020	2021
Forestry, fishing, mining, quarrying, oil and gas	12.60	-0.10	0.70	1.30	1.70	1.80
Utilities	16.8	-7	-1.2	1.3	2.2	2.1
Construction	1.39	2.55	2.55	2.62	2.63	2.43
Manufacturing	4.29	1.47	2.51	2.77	2.66	2.02
Wholesale and retail trade	-0.15	2.99	2.78	2.77	2.72	2.37
Transportation and warehousing	0.82	-0.48	1.98	2.63	2.65	2.12
Information, culture and recreation	4.67	0.61	2.31	2.72	2.66	2.08
Finance, insurance, real estate, rental and leasing	-5.28	4.66	3.72	3.31	3.02	2.58
Professional, scientific and technical services	10	-1.76	2.96	2.76	2.65	1.94
Business, building and other support services	0.47	2.55	2.55	2.62	2.63	2.44
Educational services	8.03	-0.07	1.59	2.35	2.55	2.19
Health care and social assistance	2.36	2.39	2.42	2.49	2.53	2.42
Accommodation and food services	-5.07	5.31	3.43	2.99	2.77	2.25
Other services (except public administration)	-0.48	0.64	1.63	2.23	2.45	2.21
Public administration	0.31	2.68	2.62	2.69	2.67	2.38

Source: Canmac Nova Scotia Industry Model Scenario 6

Nova Scotia Employment						
	2016	2017	2018	2019	2020	2021
Primary Sector	15,800.00	15,687.00	15,603.90	15,545.20	15,506.70	15,483.80
Utilities	3,300.00	3,278.10	3,259.60	3,244.80	3,233.50	3,226.30
Construction	32,900.00	33,653.10	34,535.60	35,482.90	36,463.70	37,435.50
Manufacturing	29,100.00	29,171.00	29,327.60	29,430.70	29,451.10	29,359.40
Transportation and Warehousing	20,300.00	19,121.20	17,817.30	16,626.90	15,499.60	14,399.80
Information, Culture and Recreation	16,200.00	16,265.70	16,403.10	16,602.60	16,857.60	17,158.80
Finance, Insurance, Real Estate, Rental and Leasing	23,600.00	23,739.30	23,798.40	23,784.70	23,708.60	23,571.40
Professional, Scientific and Technical Services	27,500.00	28,420.50	29,269.70	30,101.60	30,935.50	31,776.90
Business, Building and Other Support Services	17,500.00	19,856.90	20,852.20	21,624.60	22,290.30	22,830.50
Educational Services	36,700.00	38,202.00	39,795.20	41,424.70	43,084.90	44,733.30
Health Care and Social Assistance	74,900.00	76,222.00	77,366.70	78,483.70	79,632.40	80,673.40
Accommodation and Food Services	29,500.00	30,432.90	30,946.60	31,291.60	31,625.70	31,852.40
Other Services (except public administration)	19,400.00	19,116.90	18,972.80	18,897.90	18,854.00	18,805.50
Public Administration	27,600.00	27,188.10	27,082.70	26,989.90	26,891.60	26,761.70

Source: Canmac Nova Scotia Industry Model Scenario 6

Nova Scotia Employment - Percent Change						
	2016	2017	2018	2019	2020	2021
Primary Sector	-8.14	-0.71	-0.53	-0.38	-0.25	-0.15
Utilities	-10.80	-0.70	-0.60	-0.50	-0.30	-0.20
Construction	-2.08	2.29	2.62	2.74	2.76	2.67
Manufacturing	1.39	0.24	0.54	0.35	0.07	-0.31
Transportation and Warehousing	-0.98	-5.81	-6.82	-6.68	-6.78	-7.10
Information, Culture and Recreation	-7.43	0.41	0.84	1.22	1.54	1.79
Finance, Insurance, Real Estate, Rental and Leasing	0.85	0.59	0.25	-0.06	-0.32	-0.58
Professional, Scientific and Technical Services	-1.08	3.35	2.99	2.84	2.77	2.72
Business, Building and Other Support Services	-13.8	13.5	5	3.7	3.1	2.4
Educational Services	0.82	4.09	4.17	4.09	4.01	3.83
Health Care and Social Assistance	3.45	1.77	1.5	1.44	1.46	1.31
Accommodation and Food Services	-4.53	3.16	1.69	1.11	1.07	0.72
Other Services (except public administration)	13.5	-1.5	-0.8	-0.4	-0.2	-0.3
Public Administration	2.22	-1.49	-0.39	-0.34	-0.36	-0.48

Source: Canmac Nova Scotia Industry Model Scenario 6