Risk Proofing Nova Scotia Agriculture
A Risk Assessment Systems Pilot Project
Labour Supply Growth Projections
Nova Scotia Wine Industry
Final Report

Canmac Economics Ltd.

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Acknowledgements

Contents

Summary

This report examines and projects the labour demand and supply outlook for the Annapolis Valley economic region – the most significant region for the Nova Scotia wine industry. The projects are based on Canmac's proprietory models developed for the Nova Scotia economy. Canmac projects a stagnant population growth and tight labour market for the region.

The Nova Scotia wine sector is not a large direct employer but like much of the agriculture sector, it relies on general labour for harvest time. Overall employment both direct and spinoff has been estimated at 750 employees for the sector. The tightening of the labour market implies the sector will have increasing difficulty in finding labour. In particular, labour in the core labour force will tighten even more due to the projected decline in these population cohorts. Key informant interviews with wine sector stakeholders reveal that a large number of small grape growers rely on family and friends for harvest. Also, labour availability tightens the closer the farm is to the Halifax Regional Municipality.

Traditionally, the sector has relied on the temporary foreign worker program to supply labour. Based on these projections, the temporary foreign worker program will become ever more important over time.

Chapter 1 – Introduction

1.1   Introduction

The purpose of this report is to provide a base case projection of the labour supply situation in the Annapolis Valley economic region.

The Nova Scotia Wine Industry competes for labour with other industries in the region.   An analysis of the overall emerging labour demand/supply projection for the region improves the ability for managers to plan operations and expansions.

Labour supply in a region is largely explained by population demographics and labour force participation rates. Canmac uses the latest Statistics Canada Nova Scotia projections to drive the demographic outlook for Annapolis Valley Region. Demand labour is derived from Canmac's econometric model of the region.

1.2   Approach and Model Overview

Canmac Economics provides outlooks for each of Nova Scotia's five economic regions on a regular basis. The approach is to develop a macro forecast of the Nova Scotia economy and then use a share model to develop a regional view. The final step in the approach is to adjust the model forecast to reflect Canmac's more up to date anecdotal information on the regional economy.

The Annapolis Valley Region macro model consists of 1) a population module and 2) a macro module. The population module provides a forecast out to 2035 of population by major age groups, 0-14 years, 15-24 years, 25-64 years,

and 65 plus years. Population forecasts are derived in a two-step procedure. First Canmac updates the Nova Scotia population forecast provided by Statistics Canada (Scenario M) with the latest actual population estimates. Then forecasts of regional shares of population for each of Nova Scotia's five regions are developed. These are estimated as a recursive relationship as the most recent share plus the change in share in the most recent actual year.

The macro economic variables for the Annapolis Region are also forecast out to 2026 using a share model. Canmac develops forecasts of Nova Scotia's gross domestic product and employment. Each of the five regions are then forecast as a share of the provincial gross domestic product and employment using historic shares. Regional gross domestic product data does not exist. Canmac estimates these using proxies (employment). Labour force and employment data is available at the regional level.

1.3   Report Outline

This report contains three chapters including the present one. Chapter 2 is the main chapter of the report. It contains the outlook for the Annapolis Region. Chapter 3 provides conclusions.

Chapter 2 – Demographic and Labour Supply Outlook

The overall population for the Annapolis Region has shown weak growth over the years. In 2001, the total population was estimated to be 124,412 and by 2016 stood at an estimated 125,503. The reasons for this weak growth is an ageing population and out migration due to better economic opportunities elsewhere. Table 2.1 provides the growth components of the population from 2002 to 2016. By 2016, deaths were greater than births. The region has some success in attracting immigrants, but this is negated by the domestic population outmigration to other provinces and within Nova Scotia (primarily the Halifax Region).

Table 2.2 shows Canmac's projections for the Annapolis Region population by major age groups. The region will see declining populations in the 15-24 and 25-64 age groups i.e. the core labour force population and a rise in the 65+ population group. Overall, the population is expected to show a decline from 125,503 in 2016 to 123,453 in 2030.

Table 2.1

	Births	Deaths	Immigrants	Net interprovincial migration	Net intraprovincial migration
Annapolis Valley - Components of Population					
2002	1117	1053	91	-237	-11
2003	1146	1047	64	42	15
2004	1061	1133	97	-78	240
2005	1113	1110	82	-211	209
2006	1087	1064	184	-440	285
2007	1178	1134	139	-590	-207
2008	1177	1101	104	-473	-176
2009	1123	1107	158	10	-339
2010	1189	1132	160	-161	80
2011	1222	1145	84	-2	-274
2012	1218	1130	167	-387	-121
2013	1152	1152	161	-524	-221
2014	1144	1177	182	-370	-123
2015	1141	1196	130	-290	-125
2016	1143	1225	261	-134	-125
Source: Documents>Current Projects>Nova Scotia Regions Macro Outlook 2017>0510059 Population by economic region - Tables for Appendices					

Table 2.2

|	Both Sexes; 0-14 years	Both Sexes; 15-24 years	Both Sexes; 25-64 years	Both Sexes; 65+ years	Both sexes; All ages
Annapolis Valley Population by Age Group and Total					
2001	23,590	15,298	68,138	17,386	124,412
2002	23,002	15,403	68,391	17,653	124,449
2003	22,707	15,556	68,591	17,979	124,833
2004	22,191	15,690	69,006	18,308	125,195
2005	21,726	15,681	69,384	18,659	125,450
2006	21,293	15,769	69,624	19,101	125,787
2007	20,780	15,713	69,364	19,498	125,355
2008	20,449	15,518	69,289	19,989	125,245
2009	20,105	15,442	69,403	20,546	125,496
2010	19,862	15,477	69,668	21,085	126,092
2011	19,587	15,412	69,596	21,734	126,329
2012	19,266	15,420	68,804	22,589	126,079
2013	18,941	15,233	67,799	23,531	125,504
2014	18,776	15,067	66,915	24,356	125,114
2015	18,556	14,983	66,212	25,139	124,890
2016	18,690	14,881	65,882	26,049	125,503
2017	18,647	14,709	65,272	26,819	125,447
2018	18,604	14,494	64,577	27,673	125,348
2019	18,574	14,302	63,786	28,570	125,231
2020	18,559	14,106	62,962	29,509	125,136
2021	18,544	13,948	62,131	30,464	125,086
2022	18,501	13,855	61,207	31,390	124,953
2023	18,416	13,842	60,253	32,373	124,884
2024	18,331	13,827	59,233	33,272	124,663
2025	18,235	13,854	58,269	34,213	124,570
2026	18,137	13,907	57,156	35,141	124,341
2027	18,013	14,002	56,112	36,069	124,197
2028	17,888	14,126	55,006	36,941	123,961
2029	17,738	14,193	53,955	37,813	123,700
2030	17,615	14,317	53,019	38,502	123,453
Source: Documents>Current Projects>Nova Scotia Regions Macro Outlook 2017>0510059 Population by economic region - Tables for Appendices					

2.1   Economic Outlook - modest growth with tight labour market

The Annapolis Valley region is characterized as an agriculture economy with associated strengths in manufacturing and trade. The education and other services are also sectors of strength. The following chart shows the degree of specialization of the Annapolis Valley region in 2001 to 2016, relative to the Nova Scotia economy. A coefficient greater than one reveals that that particular sector has a higher concentration of employment than does the Nova Scotia economy – a measure of its competitiveness.
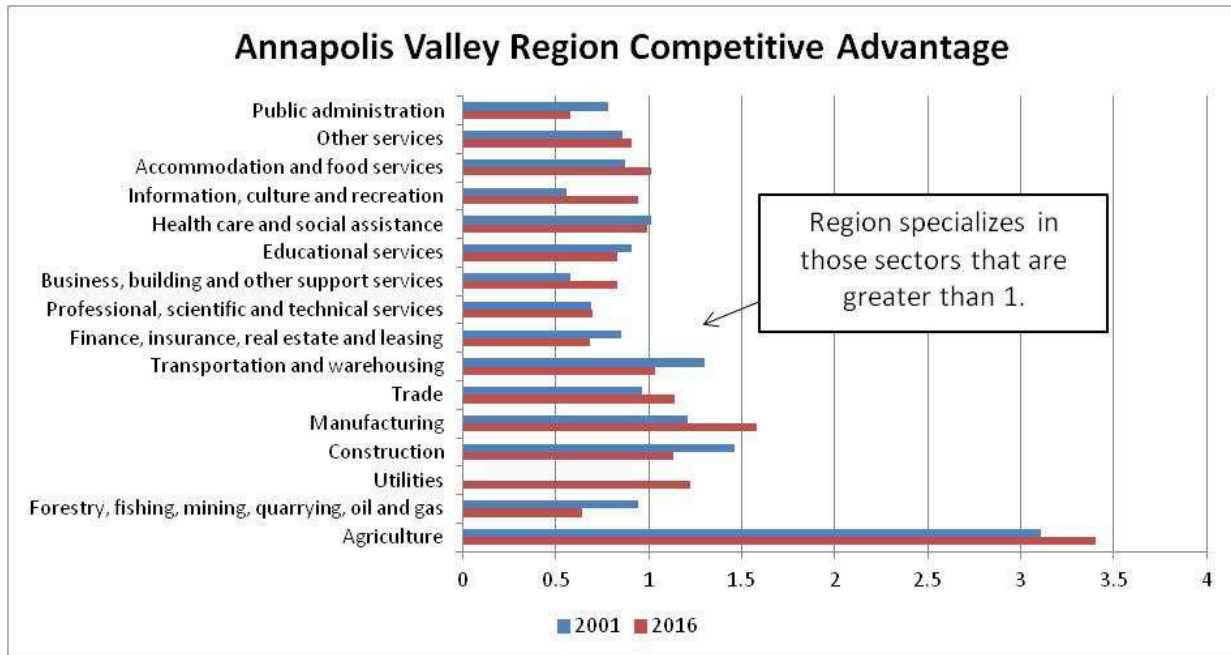
Source: Computed by Canmac Economics, Statistics Canada Labour Force Historical Review, 2010

The Annapolis Valley region is a vibrant component to the provincial economy as Nova Scotia's leading agriculture economic cluster. Its close proximity to the Halifax region makes it a significant day trip destination for Halifax households. The region also has a presence in the fishery and boat building

sector which continues to provide growth opportunities for the region's entrepreneurs. Growth in the wine industry has also contributed to the region's outlook.

Canmac's macroeconomic outlook for the Annapolis region over the 2018 to 2026 period is provided in Table 2.3. In summary, we find

- GDP growth to average 0.84%.
- Labour force growth to average 0.65%.
- Employment growth to average 0.77%.

Hence, the region will experience a significant tightening in its labour market. By 2026, the unemployment rate will decrease to 5.4%.

Table 2.3

Annapolis Valley Outlook							
	2016	**2017**	**2018**	**2019**	**2020**	**2021**	**2026**
GDP	4,701.9	4,756.8	4,825.2	4,889.0	4,982.3	5,015.4	5,190.9
% Change		1.2	1.4	1.3	1.9	0.7	3.5
Employment	55.4	55.5	55.8	56.2	56.9	57.4	59.7
% Change		0.16	0.57	0.77	1.17	0.81	4.05
Labour Force	60.2	60.2	59.6	59.1	59.6	60.2	63.1
% Change		-0.05	-0.88	-0.84	0.83	0.97	4.85

2.2   Labour Supply in the Wine Sector

The Nova Scotia wine sector is not a large direct employer but like much of the agriculture sector, it relies on general labour for harvest time. Overall employment both direct and spinoff has been estimated at 750 employees for the sector. The tightening of the labour market implies the sector will have increasing difficulty in finding labour. In particular, labour in the core labour force will tighten even more due to the projected decline in these population cohorts. Key informant interviews with wine sector stakeholders reveal that a large number of small grape growers rely on family and friends for harvest. Also, labour availability tightens the closer the farm is to the Halifax Regional Municipality.

Traditionally, the sector has relied on the temporary foreign worker program to supply labour. Based on these projections, the temporary foreign worker program will become even more important overtime.

Chapter 3 – Conclusions and Moving Forward

The major findings in this report is that the Annapolis Region will face an increasingly tight labour market. This is likely the most important strategic issue facing the economy and the sector. There are three main policy channels for addressing the problem to ensure a sustainable sector. These are 1) increase migration, 2) increase labour force participation rates, and 3) increase labour productivity. The wine sector will have to use all three of these options. In particular, the temporary foreign work program which is already an important source of labour will become even more important over time.

Appendix A – References and Data Sources

References

Canmac Economics   Macro Outlook – Nova Scotia Regions 2017

Service Canada   Labour Market Bulletin, November 2017

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Data Sources

1) Cansim Table 051-0059

    Estimate of population by economic region sex and age groups for July 1

2) Cansim Table 051-0001
    Estimates of population by age group and sex, Canada and provinces July

3) Catalogue No. 91-520-X/Table 052-0005
    Population Projections for Canada, Provinces. Note, by year forecasts are in Cansim 052-0005 for Nova Scotia.