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Holland College Fiscal Sustainability Analysis

February 2018

Contents

1. Executive summary

PwC has been retained by Holland College (also referred to as "the College") to provide an independent assessment of its fiscal sustainability over the next decade to 2026/27.[1] To that end, we have analysed the current fiscal condition of Holland College and conducted interviews with members of the administration in order to augment our understanding as to how recent economic and demographic trends have affected the College's financial condition, as well as the challenges and opportunities they foresee over the next decade.

Based on the above as well as our own research, we developed a baseline model to project the College's fiscal position from 2017/18 to 2026/27 (the "Projection Period") if the status quo is maintained (i.e., in the absence of further measures to increase revenues or decrease expenses). The baseline model shows that the College would face an operating shortfall starting in 2017/18 that would grow to a substantial deficit by the end of the Projection Period. On a system-wide basis, our baseline model projects an operating deficit of just over $7 million by the year 2026/27, and a cumulative debt of $36.7 million over the entire Projection Period. We note that Holland College is not permitted to carry a deficit; therefore these projections are intended to be an illustration of what would happen in the absence of further action.

The following is a summary of our principal findings subject to the nature of our mandate, scope of review and the limitations noted in Appendix B of this report.

Sources of fiscal pressure

- **Demographic changes**: like many regions in Canada and other developed countries, PEI is facing a decreasing number of college-aged residents. To some extent this can be offset by enrolling more international students; however there is a limit to this strategy as it is costly to recruit students and provide adequate support. Additionally, the College's primary focus is on serving the needs of PEI.

- **Inadequate grant funding:** for the past several years, overall grant funding[2] increases have barely kept pace with cost of living, and in 2016/17 the real value of overall grant funding decreased.[3] Additionally, according to the College's own assessment of its needs, provincial operating grants have consistently fallen short of its needs.

- **Constraints on tuition increases:** Holland College currently has the second highest college tuition in the country and is more expensive than its peers in Atlantic Canada. This limits the extent to which further funds can be raised through tuition increases without decreasing the College's ability to attract students.

- **Past fiscal restraint:** the College has faced fiscal pressure for several years, which we understand has forced it to focus in recent years on cost reduction and revenue increases. It has become difficult to further reduce costs and increase revenue without threatening enrolment or the quality of education and student experience.

Our main observations and conclusions

- Holland College plays an important role in PEI as it relates to providing skilled workers, encouraging young people to stay in the province and attracting new residents.

[1] All years in this report refer to academic years.
[2] Overall grant funding refers to the total amount of provincial and federal grant funding received.
[3] Real figures are adjusted for inflation.

- In the absence of any changes, Holland College is facing a significant imminent increase in projected deficit that would continue to increase, growing to $7 million by 2026/27.

- In order to address the deficit, we have explored, through a sensitivity analysis, the possibilities of increasing grant funding, increasing tuition levels, or decreasing staff expenditure. The following table shows the annual increases that would be needed in order for each factor, on its own, to balance the College's budget in each year of the projection.

Model Assumption	Required Annual Nominal[4] Increase
Grant Funding	6.4%
Tuition (Domestic and International)	7.4%
Labour Costs	-0.4%

We note that action on any one of these factors by themselves would likely not be able to address the projected funding shortfall, as the increases needed do not appear realistic under the current circumstances. In the case of tuition, Holland College has limited scope for increases as they are already more expensive than their peers in Atlantic Canada and across the country. Substantial increase in tuition would likely threaten enrolment levels, which would counteract any gains in revenue. Additionally, a nominal freeze on labour income would require substantial decreases in staffing levels, which would impact quality of education and student experience. This too is likely to threaten the College's ability to attract students. Grant funding is provided at the discretion of the province, and in the past has not kept pace with the College's requirements.

Given the above, a combination of factors will be necessary in order to avert a fiscal shortfall while still allowing the College to maintain its quality and reputation. We have provided four potential combinations of funding changes that could allow the College to maintain a balanced budget.

[4] Nominal figures are not adjusted for inflation.

2. Introduction

We have been retained by Holland College (also referred to as “the College”) to conduct an analysis of its fiscal sustainability (the “Assessment”). The purpose of this Assessment is to provide a high-level overview of the College’s current financial situation, and to project how the fiscal position of the colleges may change over the next ten years under several alternative scenarios.

This report (the “Report”) presents the findings of our Assessment, the scope of our review, the data collected, as well as our analysis.

The remainder of this Assessment summarizes our findings regarding the recent history and context of the current fiscal situation, sets out the rationale behind our baseline model assumptions, discusses the sensitivity of our results by exploring several alternative scenarios and assumptions, and provides our overall conclusions.

All projected figures are reported in nominal dollars.[5] PwC’s compensation is not contingent on any action or event resulting from the use of the Assessment. This Assessment is subject to the limitations noted in Appendix B: Limitations.

[5] Nominal figures are not adjusted for inflation.

3. Scope of review

To prepare this Assessment, we have reviewed and, where appropriate, relied upon various documents and sources of information.

By general classification, these sources include:

- Population projections prepared by Statistics Canada
- Statistics Canada Labour Force Survey
- Interviews with eight administrators at Holland College
- Income statements of Holland College and peer institutions
- Annual reports of Holland College and peer institutions
- The Conference Board of Canada

A full list of sources and articles used for the purpose of this Assessment is available in Appendix A: References.

4. Historical context

Holland College was founded in 1969 and is the English language community college on Prince Edward Island ("PEI"). It currently offers over 70 programs across 12 campuses. Its stated mission is "learning for life in a dynamic world," and its vision is "to be a leader in relevant applied learning in our provincial, national, and international communities."

In addition to assisting in developing and maintaining a skilled workforce in PEI, Holland College plays a role in developing the economies of Maritime Provinces through several programs that are not provided by any other institutions in Atlantic Canada.

Holland College receives an annual operating grant from the province of Prince Edward Island, as well as special purpose grants from the province, and federal grants. Like other community colleges, it is mandated by statute to maintain a balanced budget. The College presents an Annual Report to the Provincial Legislature. Holland College is overseen by a board of governors, which provides the College flexibility in decision-making around finances.

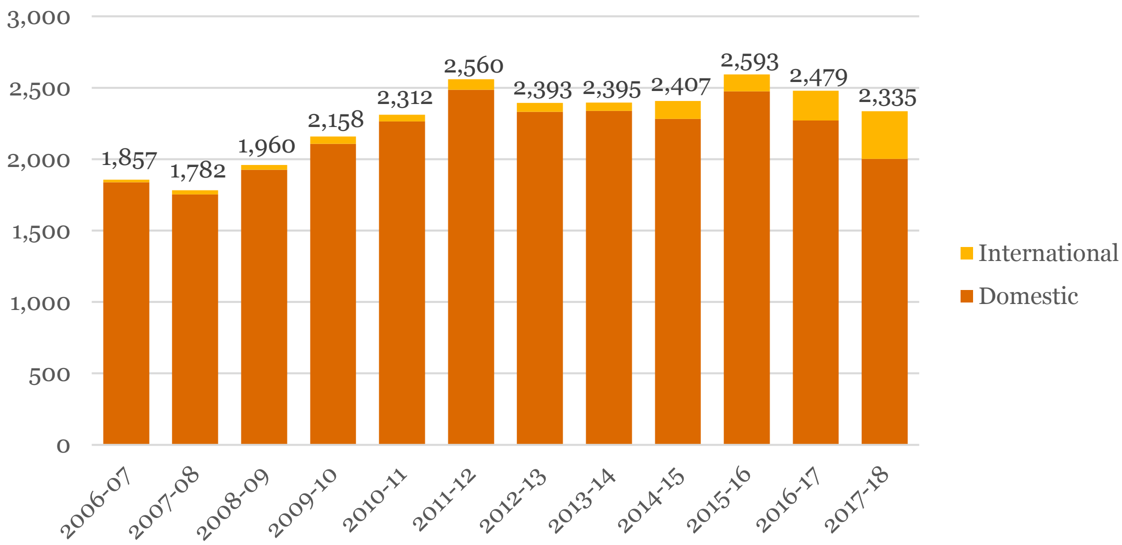
For several years, Holland College has faced fiscal pressures from a number of sources. Grant funding, which represents the largest source of funding to the College, has not kept pace with inflation over the past few years. On a per student basis, and as a percent of total operating revenue, Holland College receives the lowest provincial grant funding of any post-secondary institution in the region. Additionally, like many other educational institutions, Holland College is facing flat or decreasing domestic enrolment due to demographic trends in the Maritime Provinces. Currently, Holland College has the second most expensive tuition of any college in Canada. In the face of such pressures, and in order to balance the budget, the College was forced to maintain these relatively high tuition rates. As a result, the College is concerned about its ability to maintain enrolment, particularly for out-of-province students who don't have access to PEI-based bursaries and awards. In 2016/17, out-of-province students, both domestic and international, comprised 35% of Holland College's postsecondary enrolment.

To further understand the pressures faced by the College, the following sub-sections review historical trends in revenues, expenses, and demographics, explaining how each has played a role in the current position of Holland College.

Enrolment

Figure 1 shows domestic and international enrolment at Holland College over the past ten academic years. Domestic enrolment refers to all Canadian students including those from outside of PEI. The ten year compound annual growth rate was 2.8% for domestic students, 25.4% for international students, and 3.4% overall. Enrolment grew steadily between 2007/2008 to 2011/2012, after which it fluctuated but stayed roughly flat, before beginning to decline in 2016/2017.

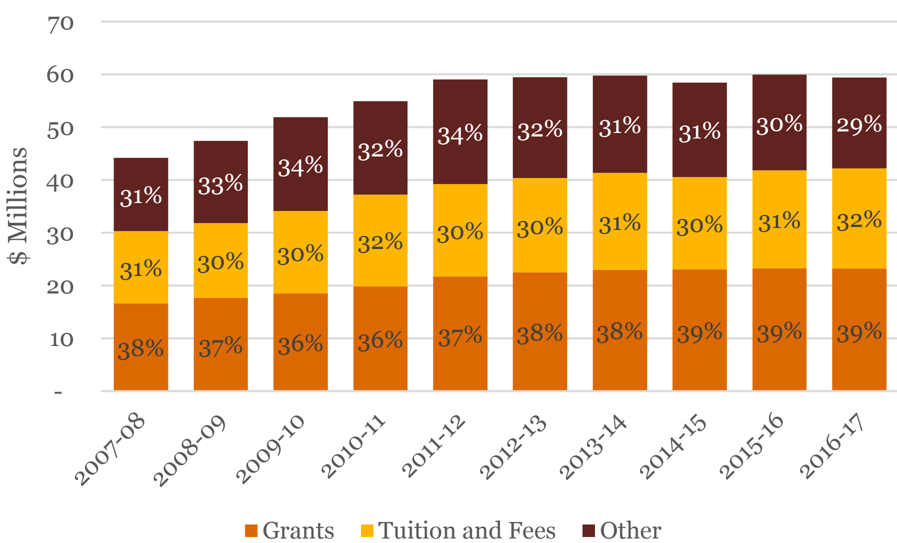
Figure 1: Enrolment at Holland College



Revenues

Holland College revenues can be divided into three main categories: grants, tuition and student fees, and other revenues. Other revenues include contract training, sales, recoveries, incidentals, and other contributions. For the past ten years, grants have represented the largest contribution to the College's revenues. Revenues were showing strong growth between 2007/08 and 2011/12, but were fairly flat between 2011/12 and 2016/17. Over the past ten years, grant funding has grown at a compound annual average growth rate of 2.8%, tuition and other fees have grown at an average rate of 3.3%, while other revenues have grown at an average rate of 2.2%.

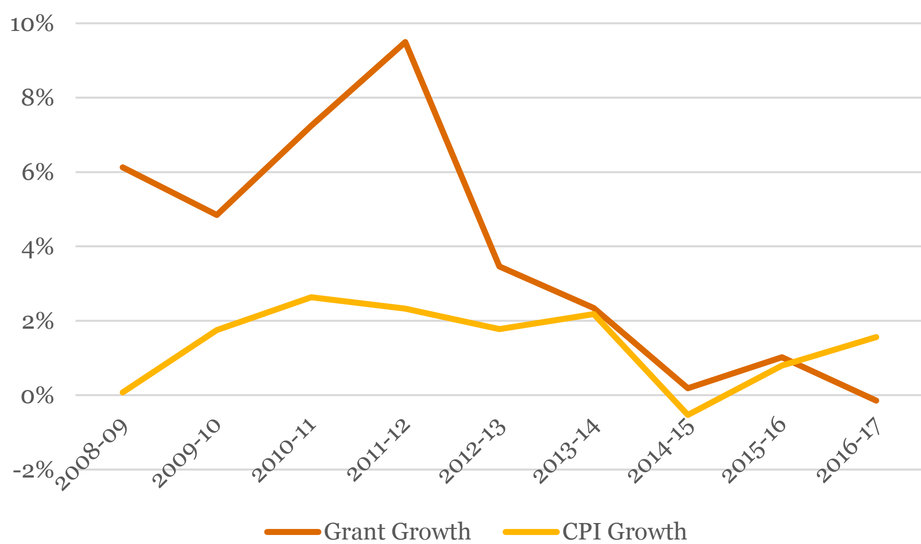
Figure 2: Revenue by category for Holland College[6]



[6] Holland College

Figure 3 shows the growth rate of overall grant funding for Holland College compared to the PEI consumer price index, a measure of the rate at which overall prices are increasing in the province. One-time grants or those intended for capital purposes are excluded from this figure. The annual growth rate of overall grant funding was on a downward trend between 2011/12 and 2016/17. Prior to 2013/2014 the annual growth rate of grant funding exceeded the annual increase of the provincial consumer price index (CPI). Since then, grant funding has been increasing, on average, at the rate of CPI and in 2016/17 the growth rate was lower than CPI growth or, in other words, the real value of grant funding decreased in the last year.[7]

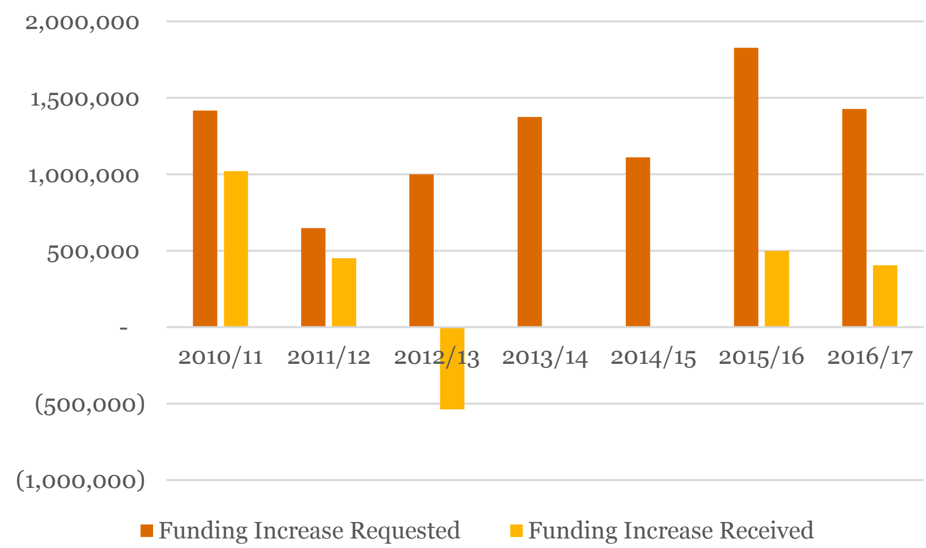
Figure 3: Annual growth rate of overall grant funding and PEI consumer price index[8]



A provincial operating grant accounts for the majority of overall grant funding, with other provincial and federal grants making up the rest. In addition to not keeping pace with CPI in recent years, the provincial operating grant has consistently been lower than what was requested by the College based on its own assessment of requirements, as seen in figure 4.

[7] Real values are adjusted for inflation.
[8] Holland College, Conference Board of Canada

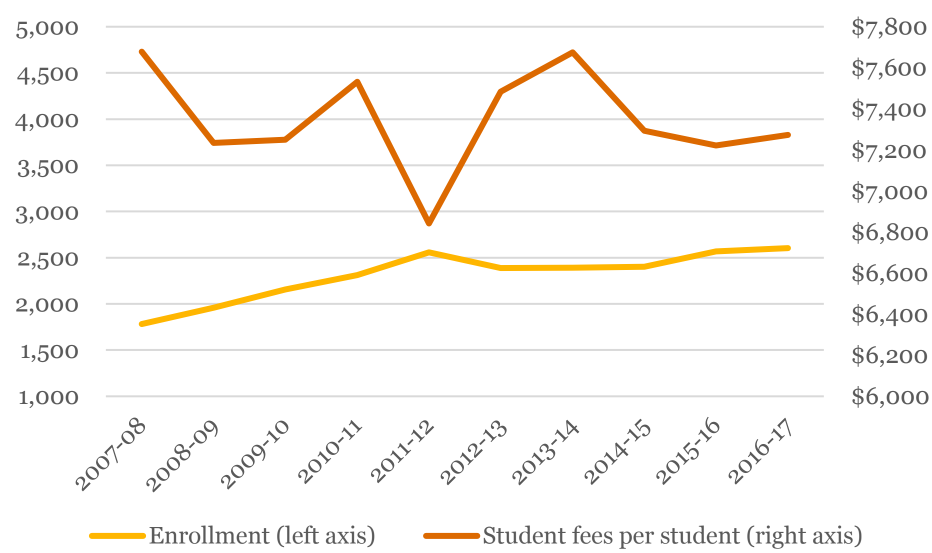
Figure 4: Grant increase requested and actual grant increase for Holland College[9]



Tuition and fees also account for a substantial share of revenues. As can be seen from Figure 5 below, tuition and fees collected per student have fluctuated over this time, increasing steeply between 2011/12 and 2013/14 and then decreasing somewhat since then. During the same period, enrolment continuously increased from 2007/08 to 2011/12 and since then has stayed relatively steady.

Based on discussions with Holland College administrators, we understand that there is an increasing share of students who are enrolled full-time, but who are taking less than a full load of courses. These students pay about 80% of the tuition and fees of students enrolled in a full load of courses.

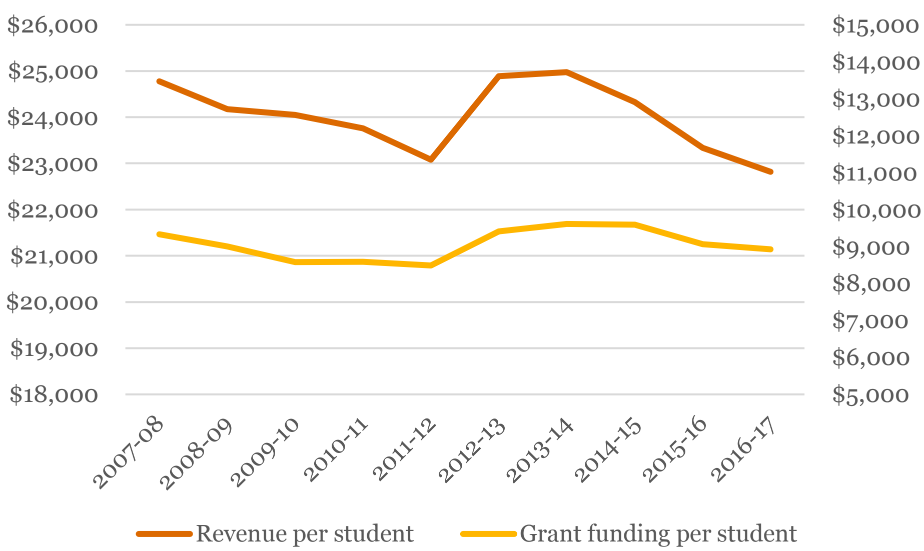
Figure 5: Enrolment and tuition and fees per student for Holland College[10]



[9] Holland College
[10] Holland College

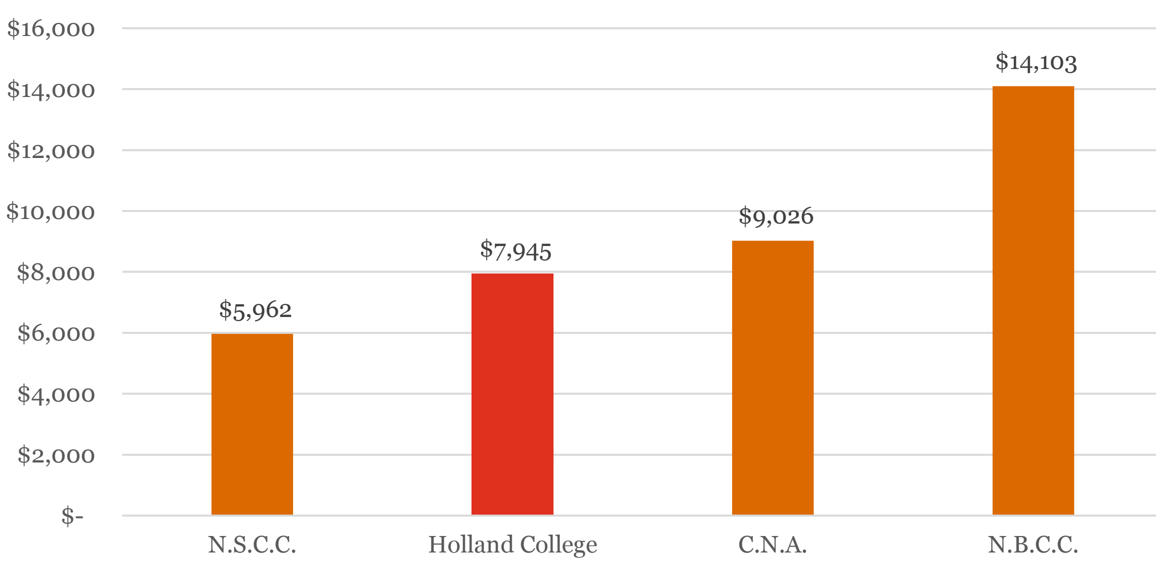
It is important to look at revenue in the context of enrolment, which to a large extent determines the need for college spending. As Figure 6 shows, total revenue per student and overall grant funding per student have both been decreasing starting in 2014/15, and both figures sit at a ten-year low.

Figure 6: Revenue per student and overall grant funding per student for Holland College[11]



Compared to its peers, Holland College has relatively low per-student funding in the form of grant funding, as shown in Figure 7. The peer institutions are Nova Scotia Community College (N.S.C.C.), Newfoundland's College of the North Atlantic (C.N.A.) and New Brunswick Community College (N.B.C.C.).

Figure 7: Overall grant funding per student[12]



[11] Holland College
[12] These figures are sourced from colleges' financial statements. Each institution defines funding slightly differently, but any support from governments has been included.

In contrast to Figure 7, Figure 8 shows all provincial funding, including Labour Market Development agreements, and apprenticeship and adult education funding. Compared to peer institutions, provincial funding as a share of overall revenue is substantially lower at Holland College. Instead, Holland College must raise a larger share of revenue from tuition and fees. Relatively low provincial funding is the main reason why Holland College has the highest tuition in the region. As discussed in the section on Tuition, this situation means that any increases to tuition and fees would likely threaten enrolment figures, making it difficult for Holland College to continue to increase revenue through tuition and fees.

Figure 8: Share of overall revenue by source, 2015/16[13]

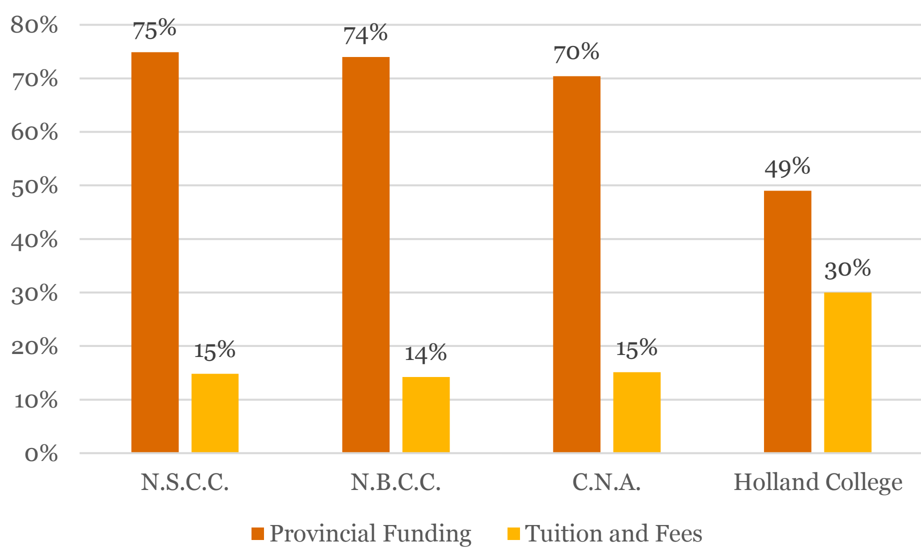
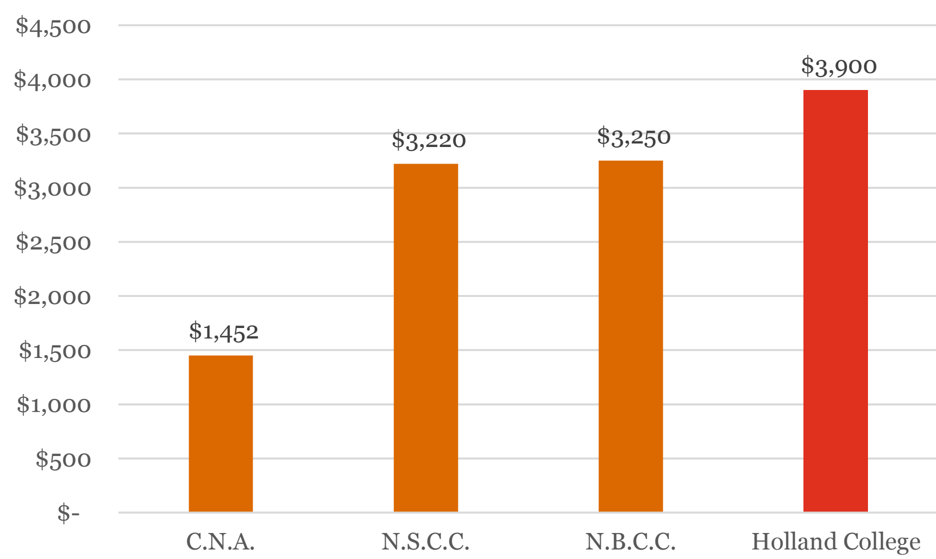


Figure 9: Base domestic tuition, 2016/17

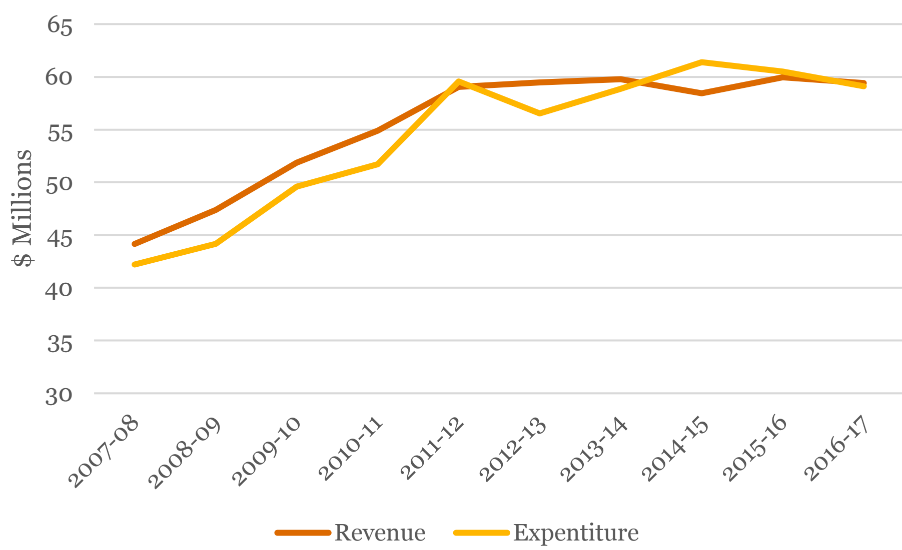


[13] Includes funding for Labour Market Development (LMDA), apprenticeships, and adult education.

Expenditures

As noted previously, Holland College is required to maintain a balanced budget, therefore expenditures and revenues have been closely related. Figure 10 below depicts the trend of revenues and expenditures. We note that in this Report, expenditures refer to operating expenditure and exclude any capital investments, purchase and sale of assets, etc.

Figure 10: Revenues and expenditures for Holland College[14]

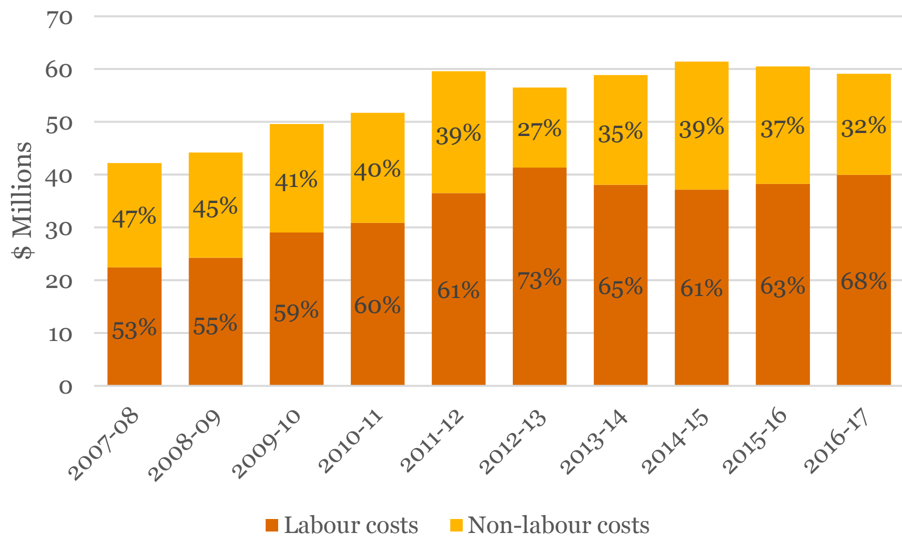


Labour cost accounts for the majority of spending at Holland College, and labour cost share of expenditures has increased over the past ten years. Labour cost is considered a "semi-variable" cost with respect to enrolment. Many programs have ratios of teachers to students that must be maintained so staffing levels do not change unless program enrolment reaches certain thresholds. Over the past ten years, labour costs have grown at a compound annual growth rate of 5.9% while non-labour costs have decreased at a rate of 0.3%.

In the past, when faced with fiscal pressure, Holland College has often opted to cut non-labour expenditure rather than reduce staffing levels. Many costs have been frozen or cut while labour expenditures per employee have continued to grow to keep up with inflation and career progressions. These cost-containment measures explain the growing share of labour as a percentage of total expenditures, as seen in Figure 11.

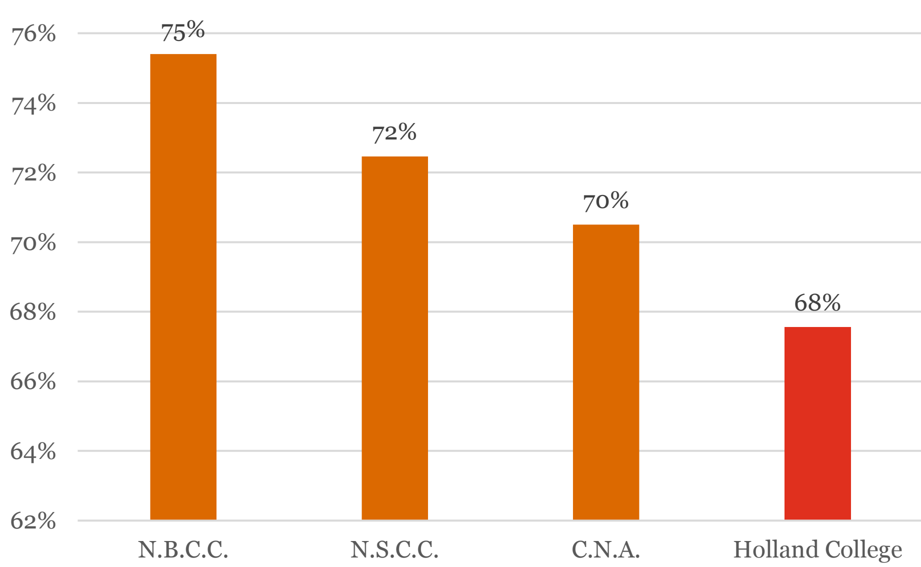
[14] Holland College

Figure 11: Labour and non-labour expenditure for Holland College[15]



Nevertheless, while labour costs at Holland College have been rising, targeted staffing reductions have allowed the College to maintain the lowest labour share of overall expenditure of its peer colleges in the Maritimes. As Figure 12 shows, Holland College's labour share of expenditure is 68% compared to 70% at the college of the North Atlantic, 72% at Nova Scotia Community College and 75% at New Brunswick Community College.

Figure 12: Wages and salaries as a share of total expenditure, 2016/17

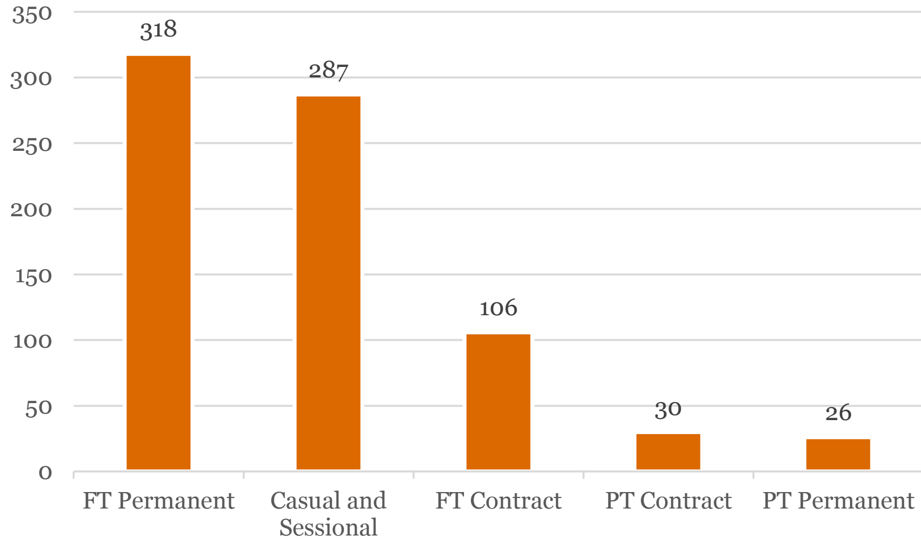


More than 90% of labour cost comprises salaries and wages, with the remaining being benefits and pensions.

The largest category of employees are full-time permanent employees, followed by casual and sessional employees (see Figure 13).

[15] Holland College

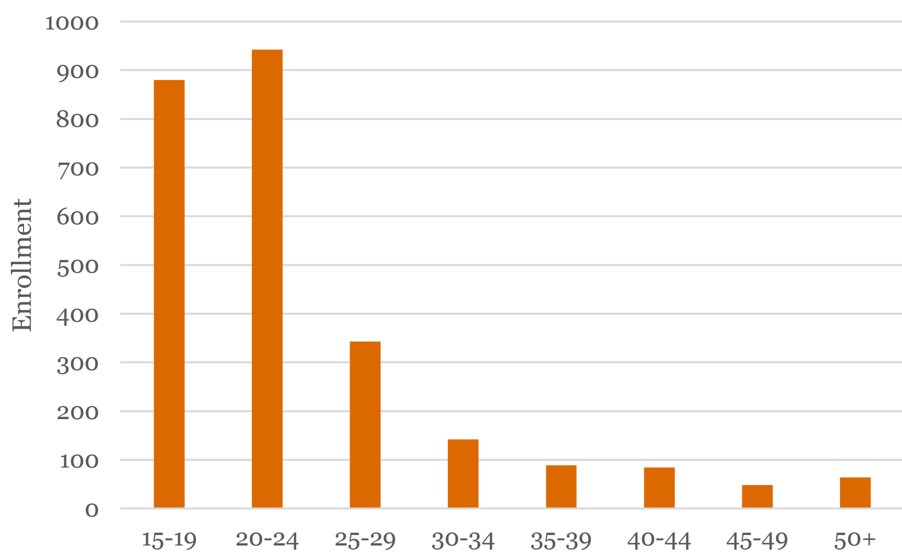
Figure 13: Employee count by type at Holland College in 2016/2017[16]



Demographics

The number of college-aged people in PEI and in Canada is a major driver of enrolment in postsecondary institutions. Figure 14 shows the age distribution of students at Holland College in 2016/17. The majority of students are between the ages of 15 and 24.

Figure 14: Age profile of students at Holland College 2016/17

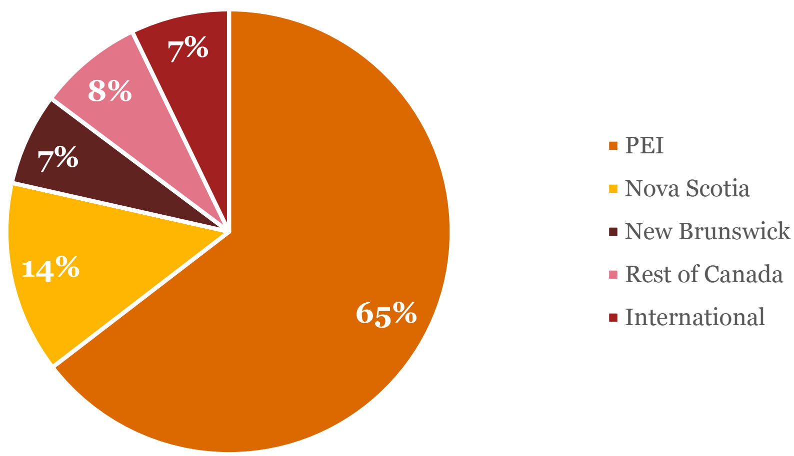


The majority of domestic students come from PEI, whose share of domestic students increased from 62% in 2006/07 to 70% in 2016/17. Therefore, demographic changes in PEI play a substantial factor in determining enrolment. Demographic trends in other Maritime Provinces also have a significant impact. The second highest number of students come from Nova Scotia, which has accounted for around 15% of domestic enrolment over the

[16] Holland College

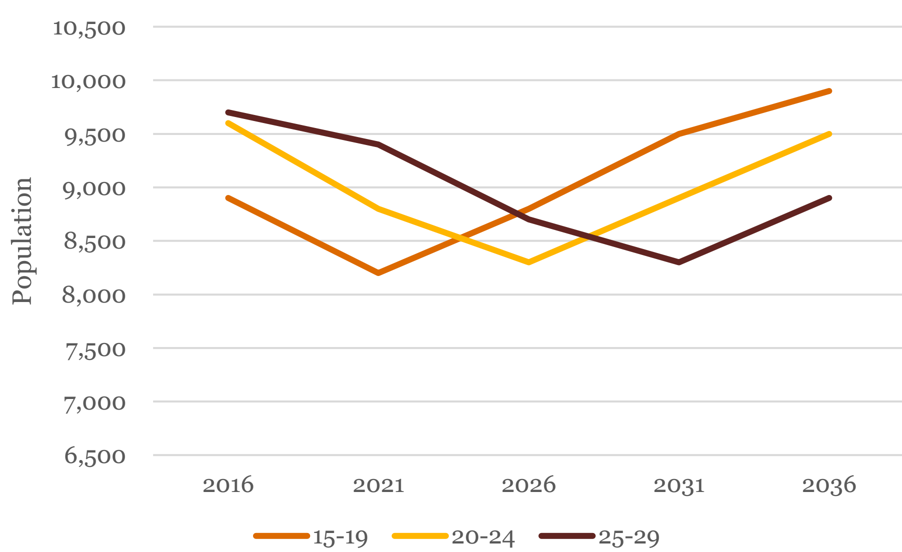
past ten academic years. The share of students coming from New Brunswick has decreased from 13% of total enrolment in 2006/7 to 7% in 2016/17. Figure 15 shows the source of students in 2016/2017.

Figure 15: Source of students at Holland College, 2016/2017[17]



The age groups of 15-19, 20-24, and 25-29 have historically accounted for the majority of enrolments, accounting for 84% in 2016/2017. Population projections for these groups are shown below for PEI, and for the rest of Canada.

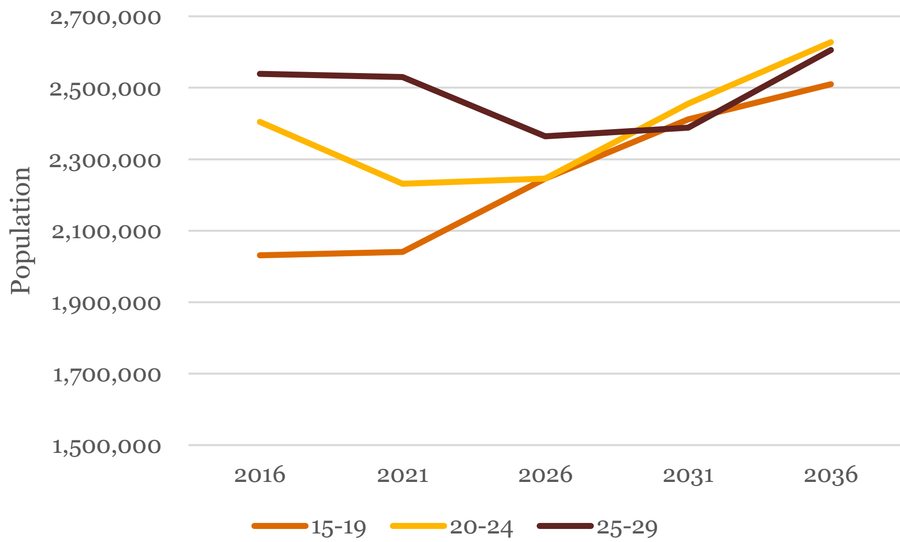
Figure 16: Population projections for PEI



Populations of all three age groups are projected to decline and then increase, with ages 15-19 beginning to increase in 2021, ages 20-24 beginning to increase in 2026 and ages 25-29 beginning to increase in 2031. Other Maritime Provinces are also facing similar trends including declines in these age groups over the next ten years.

[17] Holland College

Figure 17: Population projections for Canada



Canada as a whole is not expected to see decreases of the same magnitude as the Maritime Provinces. The Projections show no decrease for ages 15-19, and decreases followed by increases for ages 20-24 and 25-29.

One consequence of an aging population is an increasing dependency ratio. The dependency ratio measures the ratio of youth (under age 19) and seniors (over age 64) to working-age people (aged 20 to 64).[18] A higher dependency ratio indicates potential challenges for an economy and government, as people who are not of working age are more likely to be economically dependent on those of working age. This can also put a strain on government budgets. PEI's dependency ratio is 0.68, and is projected to increase to 0.92 by 2036. The dependency ratio in Canada is 0.62 and is projected to rise to 0.81 by 2036.

Increasing dependency ratios may put strain on the economy and public finances. Increasing the productivity of those of working age is one important step that governments can take to reduce the impacts of such demographic change. People with postsecondary education are more likely to be employed, and are more productive. Core-aged adults[19] in PEI with a postsecondary certificate or diploma have an 82% employment rate, compared to 71% for those with a high school degree and 76% overall.[20] This highlights the importance of a strong college system in PEI and elsewhere in Canada. A study done in 2014 by Economic Modelling Specialists International (EMSI) showed that graduating students of the 2012/13 year in Holland College would earn an extra $244,522 over their lifetimes, and that for every $1 invested by students in their education at Holland College, they can expect to earn an additional $4.10 in the future. The study also found that, taxpayers receive an internal rate of return of 7.6% on their investment in Holland College in terms of provincial government spending.

[18] (Statistics Canada, 2016)
[19] Aged 25-54.
[20] Statistics Canada CANSIM Table 282-0004

5. Baseline model

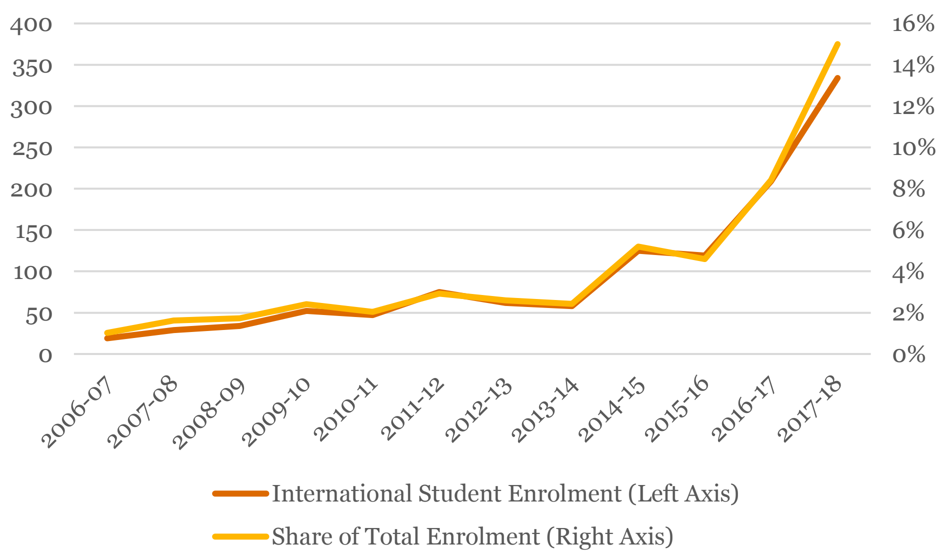
The baseline model is a projection of the college's fiscal situation if past trends continue. The Projection Period extends ten years from 2017/18 to 2026/27. In the past, Holland Collage has responded to fiscal pressures by decreasing expenditures and increasing revenues as needed in order to maintain a balanced budget. Therefore the purpose of this projection is to illustrate what would happen if past trends continue, rather than to predict the actual future fiscal situation of the college. The assumptions used in the projection model are outlined below, and baseline results are presented.

Enrolment

For the purposes of our projection, we have assumed that domestic students will come from the same provinces that they did in 2016/17. We have also assumed that students within each age group will maintain its rate of college attendance at the 2016/2017 level (ratio of students for each age group divided by number of people within this age group). We have used population projections from Statistics Canada for PEI, Nova Scotia, New Brunswick, and Canada as a whole. Domestic students from provinces other than PEI, Nova Scotia, and New Brunswick account for 8% of enrolment and are assumed to follow the same demographic trends as the country as a whole. We further assume that the age distribution of students coming from each province is the same as the College's overall age distribution.

We have assumed that international enrolment will grow at 10% per year until it reaches a level of 20% of overall enrolment. At that point it will grow at the same rate of domestic enrolment to maintain a share of 20%. This assumption was developed in consultation with College administrators in line with their plans for growth and international recruitment. Figure 18 shows past trends in international student enrolment.

Figure 18: International student enrolment and share of overall enrolment for Holland College[21]

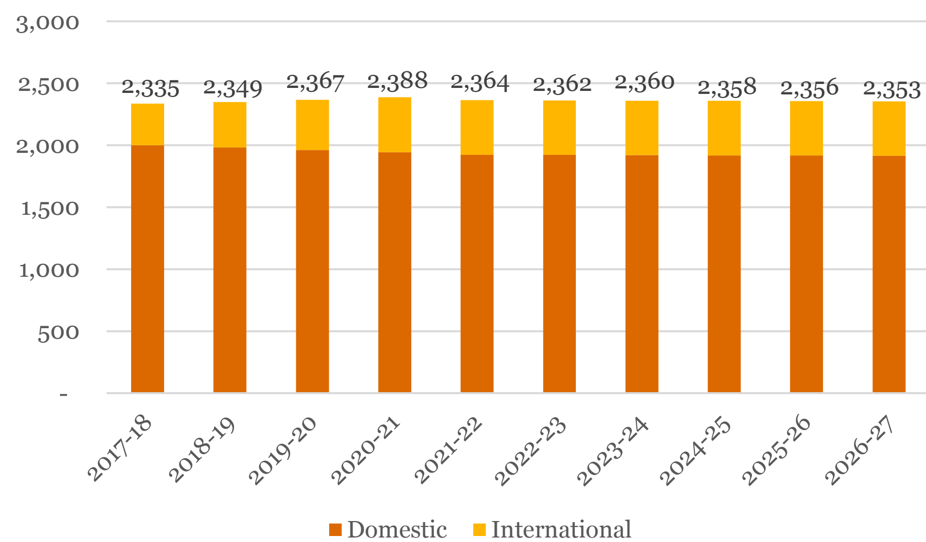


We note that while 2016/17 is the base year for the projections, actual enrolment figures have been used for 2017/18, and as such our projections for the purposes of this Assessment extend from this year onward. Figure 19

[21] Holland College

shows projected enrolment based on the above assumptions and using 2017/18 as a base year. Overall enrolment is projected to remain close to its 2017/18 levels, but the share of international students is projected to increase.

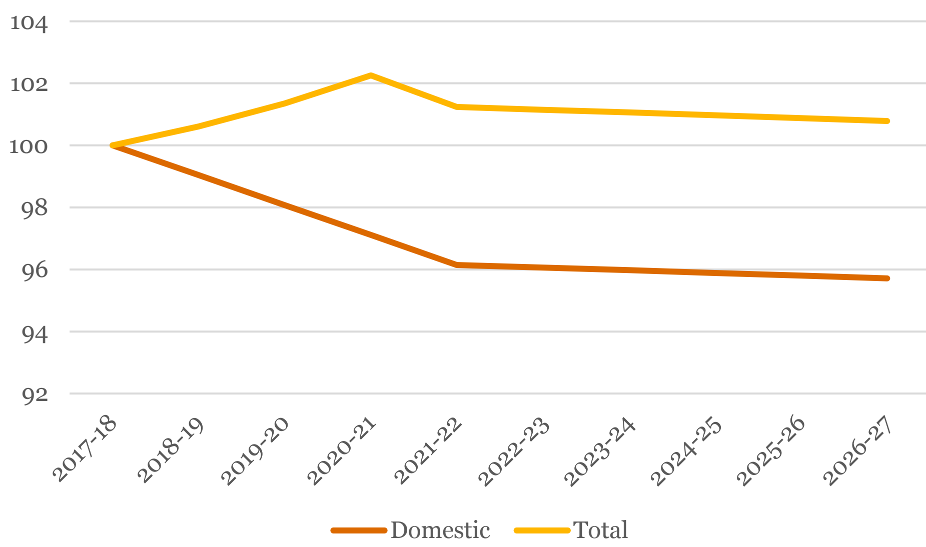
Figure 19: Projected total enrolment for Holland College[22]



As shown in Figure 20, domestic enrolment is projected to decrease while overall enrolment is projected to increase between 2017/18 and 2021/22. From that year onwards, both domestic and overall enrolment are projected to decrease slightly, as once international students reach 20% of enrolment, we have assumed that their enrolment will follow the same trend as domestic students in order to maintain an overall share of 20%. It is important to note that based on current enrolment trends, enrolment would shrink unless the College is able to continue to grow its international enrolment.

[22] PwC Analysis

Figure 20: Projected domestic and total enrolment for Holland College, 2017/18=100[23]



Revenues

As noted previously revenues are comprised of grant funding, tuition and student fees, and other sources such as contract training. The provincial operating grants are projected to grow at 1% per year, consistent with the trend over the past few years. As has been the College's experience in the past, grant funding is not linked to enrolment or the specific needs of the College. Other grant funding from the provincial and federal government is held constant at 2016/17 levels, in line with past trends.

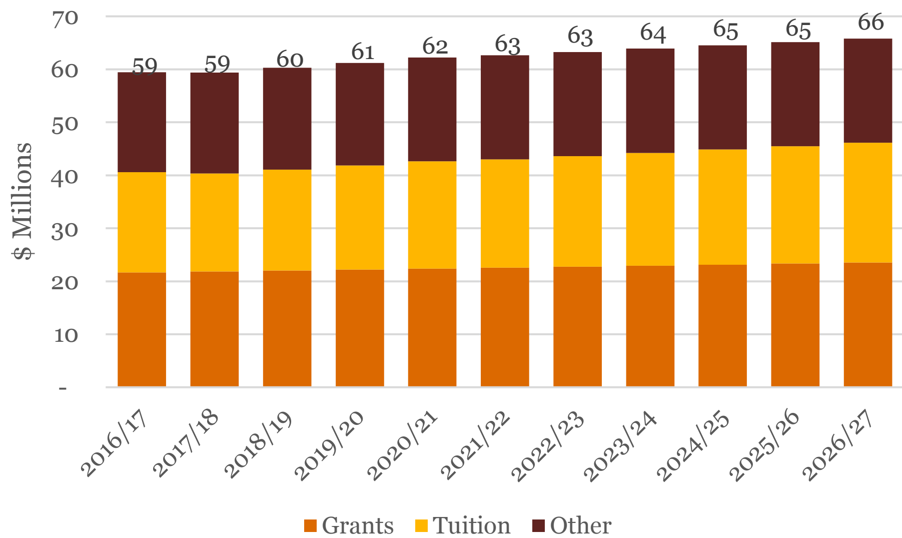
Average tuition and fees per student is assumed to grow at the rate of projected inflation, and total tuition and fee revenue is calculated as average tuition and fees per student multiplied by projected enrolment. This projection also takes into account the fact that international students pay a fee of $3,250 in addition to regular tuition and fees. As discussed previously, some students are enrolled full-time, but taking less than a full load of courses and therefore provide lower tuition and fee revenue per student. Based on discussions with administrators, we understand that there is an increasing trend in this type of enrolment, and the College has estimated that over five years starting in 2016/17 this share will gradually increase from 16% to 30%, decreasing overall tuition and fee revenue. Our analysis was based on this assumption.

Over the past five years, other revenues have been declining, so we have assumed that they will stay at their 2016/17 levels over the next ten academic years.

Based on the above assumptions, revenue has been projected over the next ten years as shown in Figure 21.

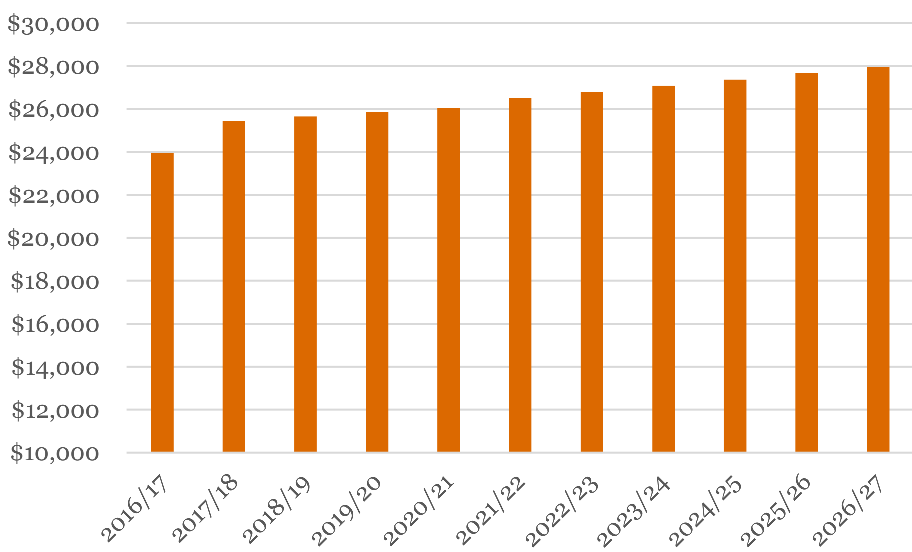
[23] PwC Analysis

Figure 21: Projected revenue for Holland College[24]



Over the Projection Period, the share of revenue provided by grants is projected to decrease slightly and the share provided by tuition and fees is projected to increase. As shown in Figure 22 below, per student revenues are projected to increase from $24,000 to $28,000 in nominal dollars. The increase in 2017/18 is due to the fact that enrolment dropped in this year while overall grant funding did not.

Figure 22: Projected revenue per student for Holland College[25]



24 PwC Analysis
25 PwC Analysis

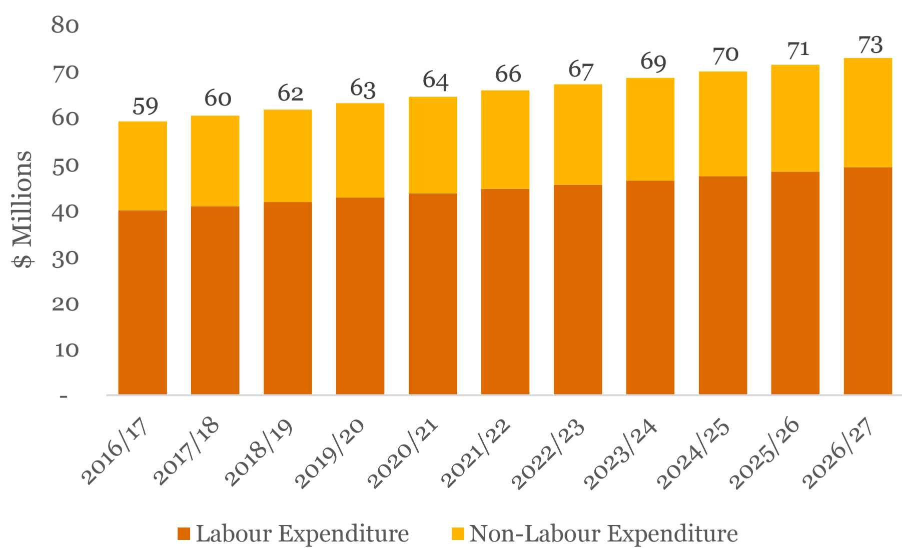
Expenditures

In order to project expenditures, we have made the following assumptions about how expenditures will change with enrolment and over time. In 2017/18, the College experienced a drop in total enrolment of 148 students or 6% compared to 2016/17. The extent to which a decrease in enrolment would allow the College to decrease spending on instructors depends on how enrolment in each program changes. Since some costs are fixed in nature (e.g. reduced number of students in a particular course will not necessarily change the number of instructors required for that course), it is not likely that the College will be able to decrease labour spending to the same degree that enrolment decreases. In order to account for this situation, we have assumed, for the purpose of this Assessment, that labour spending will change by half the magnitude of enrolment. For example, if enrolment decreases (or increases) by 10%, labour expenditure would decrease (or increase) by 5%. We have also assumed that labour expenditure will adjust to the decrease experienced in 2017/18 over five years. In addition, we assume that the expenditures on staff per student will increase at the rate of inflation.

We understand from conversations with administrators that most non-wage expenditures such as utilities, maintenance, and property taxes are of a fixed nature and would not decrease unless major facilities were shut down. Based on this we have assumed that these expenses will not change with enrolment levels and that they will grow in line with the overall rate of inflation.

Based on the above assumptions, we have projected expenditures as shown in Figure 23. Over the Projection Period, the share of expenditures going to labour is projected to remain stable.

Figure 23: Projected expenditure for Holland College[26]



Net revenues

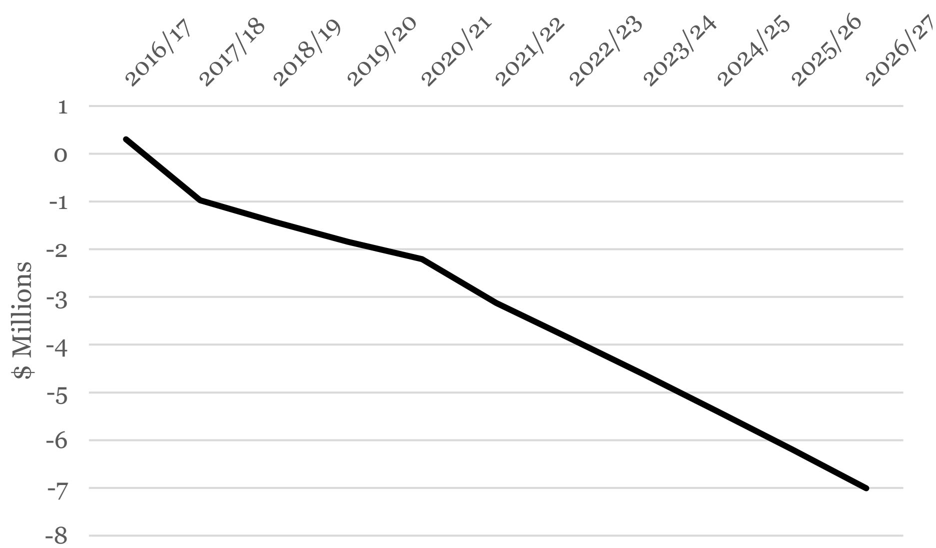
Based on the above assumptions, Figure 24 shows the projected net operating revenues for Holland College. Note that this does not include non-operating revenues such as capital grants and sale of properties. Based on the projections developed for the purpose of this Report, net revenues will decrease sharply in 2017/18 due to the drop in enrolment in that year. This shortfall in revenues is projected to continue to increase at an accelerating rate, reaching a deficit of over $7 million by 2026/27. The reason that net revenue decreases at a faster rate starting in

[26] PwC Analysis

2021/22 is the assumed steady state of international students enrolment as a percentage of total enrolment attained in that year.

As stated previously, this situation is not possible as Holland College is not permitted to carry a deficit. Thus, this model is an illustration of what the fiscal situation would be in the absence of any additional actions to increase revenues, decrease expenditures, or both. Sections 6 and 7 explore different ways that the College would be able to avert this decrease in net revenue.

Figure 24: Projected net operating revenue for Holland College



6. Sensitivity analysis

As indicated above, if existing trends continue, Holland College will face a large fiscal deficit within the next few years. In the past, the College has faced similar pressures and has taken various actions in order to keep the budget balanced. Four potential channels through which colleges can increase net revenues are an increase in tuition and fees, a reduction in labour costs, an increase in grant revenue, and an increase in international student enrolment. The following section explores to what extent each one of these factors would have to be adjusted in order to balance the budget over the Projection Period.

Grant revenue

As noted in Section 4, grant funding represents the largest source of revenue to Holland College, but in the past few years, real increases have been modest. The baseline model assumes that annual provincial operating grant will increase at 1% per year going forward. If the growth rate of provincial operating grant revenue was the only change to the baseline projection, in order to maintain a balanced budget over each year of the Projection Period, grant revenue would need to grow at 6.4% per year. This represents a cumulative growth rate of 86.1% over the Projection period. For example, for 2017/18, the grant would need to increase by $1.2 million compared to the baseline in order to balance the budget.

Table 1: Projected baseline grant increases and increase needed to balance the budget

Growth rate assumed in baseline	Annual growth rate needed for breakeven	Cumulative growth needed for breakeven
1.0%	6.4%	86.1%

Tuition

Another way to increase revenue is to raise tuition and student fees. This is one method that Holland College has used in the past in order to increase revenue. The baseline model assumes that tuition and fees for domestic and international students will increase at the rate of overall inflation, which is projected to range from 2.0% to 2.1% over the next ten years. In order for tuition and fees alone to balance the budget in each year, they would instead need to increase at a rate of 7.4% per year or a cumulative increase of 103.6% over ten years.

Table 2: Projected baseline tuition and fee increases and increase needed to balance the budget

Growth rate assumed in baseline	Annual growth rate needed for breakeven	Cumulative growth needed for breakeven
2.0-2.1%	7.4%	103.6%

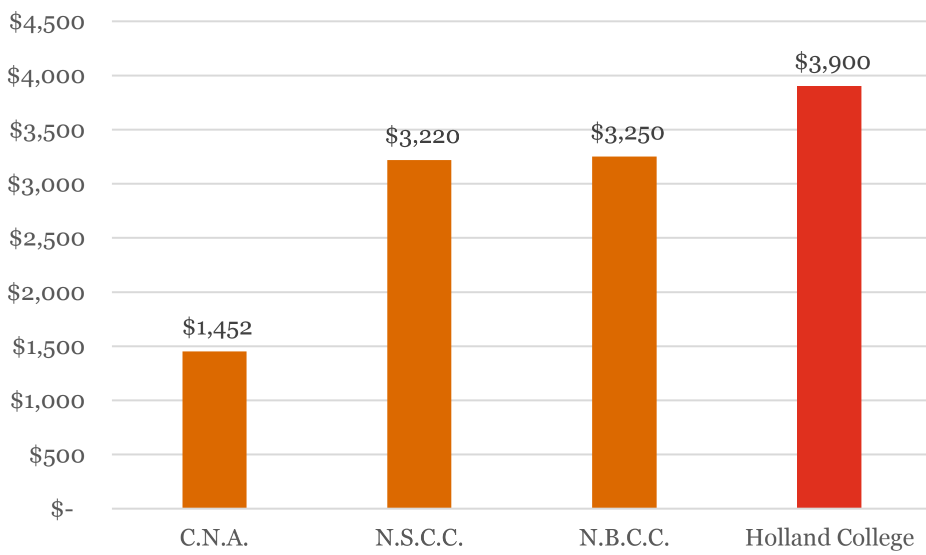
It would likely be difficult for Holland College to raise tuition and fees at the level needed, as they already have the highest college tuition in the region and the second-highest in the country. The majority of students from PEI are eligible for grants from the government that may alleviate this issue somewhat, but as noted, the College will be increasingly relying on students from elsewhere. In 2016/17, 35% of Holland College students come from outside the province.

Tuition varies depending on the program, but it is generally set based on historical precedent, program cost, and inflation. For most programs at Holland College, base tuition ranges from $3,900 to $6,165;[27] however tuition is as

[27] (Holland College, 2018)

high as $18,539 for students in the Atlantic Police Academy. These levels put Holland College at the highest tuition among its peers in Atlantic Canada, and make it the second-highest tuition in Canada, as seen in Figure 25.

Figure 25: Base domestic tuition, 2016/17



Recently the provinces of New Brunswick and Ontario have reduced or eliminated college tuition for low-income students, making it even more difficult for Holland College to compete for these students.

Given the above, it appears that raising tuition and fees to the level required would reduce enrolment at Holland College, which would reverse the fiscal benefits seen from increasing tuition and fees. Therefore, this would not be a tenable option to alleviate fiscal pressure.

Labour costs

Like other colleges, labour represents the largest component of expenditure at Holland College. These include salaries, wages, pensions, and benefits. In the past, per-student labour cost has increased faster than other costs faced by the college and faster than overall wage increases in PEI—as explained earlier in Section 4. In order to balance the budget, per-student labour cost would have to decrease by 0.4% per year or -4.2% over ten years.

Table 3: Projected baseline labour cost increases and increase needed to balance the budget

Growth rate assumed in baseline	Annual growth rate needed for breakeven	Cumulative growth needed for breakeven
2.0%-2.1%	-0.4%	-4.2%

In the past, Holland College has attempted to identify where there is overstaffing and understaffing in order to efficiently allocate staff. The College has not replaced some retired staff, and has made a number of changes to the pension program that has allowed them to reduce expenditure there.

We note that when reducing staff expenditures there is a risk that the quality of student experience may also decline, which would threaten enrolment and reputation. In order to decrease overall labour spending, the College would either have to decrease wages, which would likely be unacceptable to employees, or reduce staffing, likely leading to a reduction in the quality of students' experience. A reduction in staff would mean that fewer programs could be offered, hindering the College's ability to attract students. Thus, any reduction in enrolment levels would counteract the cost savings from labour expenditure and require further reductions in staff levels, making this strategy ineffective.

International student enrolment

Our analysis suggests that under any reasonable assumption of international enrolment growth rates, the shortfall in revenues cannot be breached unless a major increase in international tuition and fees takes place. Such an increase would likely threaten enrolment figures, as international students have many other options for colleges in Canada.

The potential risks of relying on international student growth are discussed in Section 9.

7. Alternative scenarios

As the analysis of the previous section shows, no one factor could by itself eliminate the deficit under plausible assumptions. . In this Section, we consider four alternatives, each of which is a combination of changes that may accomplish a balanced budget using less extreme measures. These alternative scenarios provide illustrative examples for combined impact of multiple changes, and are not meant to fully reflect the spectrum of alternatives. The choice of what combination of assumptions best balances the interest of various stakeholders (including students, employees, communities, and taxpayers) is one of policy and is beyond the scope of this report. The table below shows the annual rate of change that would have to occur every year in order to keep the budget balanced over the ten year projection period.

Table 4: Summary of alternative scenarios

Annual increase required to balance the budget in each year			
Alternative	**Provincial Operating Grant Funding**	**Tuition and Fees**	**Labour Costs**
1	2.0%	Baseline increase (2.0%-2.1%)	0.0%
2	Baseline increase (1.0%)	5.1%	1.0%
3	2.0%	6.4%	Baseline increase (2.0%-2.1%)
4	5.3%	2.0%	1.5%

Alternative 1: adjust grant funding and labour costs

This alternative has assumed that provincial operating grant funding keeps pace with projected CPI at around 2.0% compared to the 1.0% assumed in the baseline. In this case and given no other adjustments, labour costs would have to be frozen (an average annual increase of 0.0%), compared to the baseline assumption of 2.0%-2.1%.

Alternative 2: adjust tuition and fees and labour costs

This alternative represents a scenario where Holland College has some choice over both factors being adjusted. However, it should be noted that students and employees may respond to these choices in ways that are not modelled here, for example by choosing to attend another college if tuition is more expensive or by striking or finding another job if compensation is not adequate. In this case and given no other adjustments, labour costs would have to be limited to a 1.0% average annual increase, compared to the baseline assumption of 2.0%-2.1%. Tuition would have to increase by an average of 5.1% per annum, compared to a baseline assumption of 2.0%-2.1% which is in line with CPI projections.

Alternative 3: adjust tuition and fees and grant funding

This alternative assumes that provincial operating grant funding keeps pace with projected CPI at around 2.0% compared to the 1.0% assumed in the baseline. In this case and given no other adjustments, tuition and fees would have to increase by an average of 6.4% per year in order to balance the budget in each year.

Alternative 4: adjust grant funding, tuition and fees, and labour costs

In this option, three factors are assumed to change. Tuition and fees growth equals projected CPI at an annual average rate of around 2.0%, as assumed in the baseline. Labour costs increase at an annual average of 1.5%, below the 2.0-2.1% projected in the baseline. In this case, the provincial operating grant would have to increase at 5.3% per year, on average.

8. Value of Holland College to PEI

Skill provision

Holland College plays an important role in PEI and Atlantic Canada as a provider of skilled workers. They are the only community college in Atlantic Canada that provides police training and paramedicine programs. Additionally, Holland College is the only English-language community college on PEI, so to the extent that students do not want to leave the island for college training, it is essential for maintaining a skilled workforce there.

To date Holland College has been effective at providing practical skills to its students: 94% of graduates from the class of 2016 are employed one year after graduation.[28] The role of the College on PEI will be even more important, as the pace of technological change increases. See more about the role of economic changes and the college in Section 9: New program development.

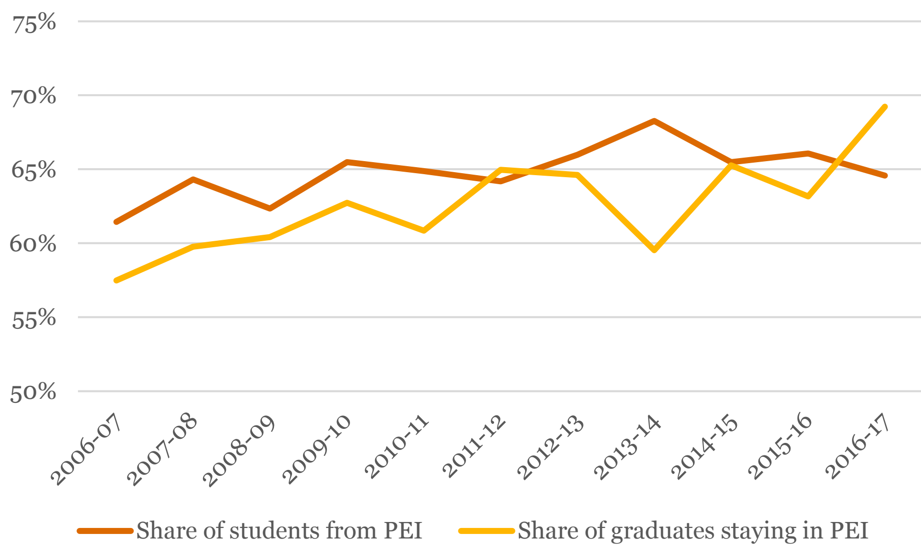
Demographics

Like other Maritime Provinces, population projections for PEI predict a decrease in the number of young people in the province. This trend may put pressure on government budgets and service provision, as well as decreasing the labour supply available. In addition to its role in providing skilled workers, Holland College plays a role in attracting young people to the province. In 2016/17 the share of graduates who stayed on PEI was greater than the share of students who originally came from PEI, meaning that the college makes a net positive contribution to the province's population in the form of graduates who are educated and of working age. As the province's international student enrolment continues to grow, this impact is likely to increase.

It should also be noted that program enrolment is limited by the fact that Holland College wants to maintain its strong employment record, which is a key element in its ability to attract students. By increasing enrolment, there is a risk that the PEI market will not be able to absorb all graduated students. Alternatively, graduates can seek work in other provinces, but this detracts from the ability to draw people to PEI.

[28] Holland College.

Figure 26: Share of students from PEI and share of graduates who stay in PEI for Holland College



9. Additional costs required to maintain the status quo

The baseline projections implicitly assume that Holland College will continue to enjoy its strong reputation in PEI. According to a 2015 survey by Atlantic Higher Education, it has one of the top three reputation ratings in Atlantic Canada.[29] However, based on our analysis it appears that in order to maintain such status, Holland College will be required to incur additional costs that were not considered in the baseline projections.

Areas where Holland College will likely need to incur additional costs in order to maintain its status include:

- New program development (including online delivery of current and new programs), which is likely to be required in order to maintain current enrolment trends;
- International student recruitment, which requires upfront investment in order to grow enrolment and additional resources to support this population; and
- Deferred maintenance, where the college has traditionally relied on outside funding.

New program development

We understand from interviews with College administrators that budget for new program development is often reduced when there is fiscal pressure. Given the increasing fiscal pressure predicted in our baseline model, this type of pressure is likely to grow. However, in order to continue to attract students, the programs offered by the college must continue to be in line with the skills required by the labour market. Based on student surveys, employment opportunities is the number one reason that students choose Holland College. Therefore, if a lack of investment in program development reduces the employability of graduates, enrolment could fail to meet the baseline level of assumed enrolment.

The need for new program development is likely to be increased, given the expected increasing pace of technological advances. This trend will likely mean that a larger number of people will need re-training, more often, in order to learn new skills in line with labour market needs. In order to fulfil this need and attract students looking for re-training, Holland College needs to significantly increase its offerings in online, blended, and flexible learning, as well as stay up to date with new technology and skill requirements of the labour market. Increasing these offerings will require substantial ongoing investments, but will be crucial to continuing to attract students.

The fact that many skills required in the labour market are increasingly technical will mean that in order to provide adequate training, Holland College will need to maintain and improve its technology teaching and associated facilities. An important part of technology studies for college students is learning how to use up-to-date technology effectively, which requires substantial ongoing investments. While Holland College was previously strong in hands-on learning, the budget for technology updates has decreased in recent years as a result of fiscal pressures. For example, in the past the College used to set funds aside for the greening of computer labs, which is not the case at the present time.

If additional investments are not made in new programs and program delivery models, Holland College is likely to lose students to institutions that are better funded and therefore able to make the necessary investments. A reduction in student enrolment is likely to exacerbate fiscal pressures that the College has been under.

One opportunity for further program development that has been explored by the College is partnerships with employers. For example, graduates from the paramedicine program go to work with only one employer, so there is

[29] (Atlantic Higher Education, 2016)

a possibility of partnering to deliver training. Linkages with industry can help the college to reduce costs, as well as strengthening job market connections for students.

Additionally, delivering programs partially online could help reduce costs and attract students who are interested in working while attending school. However, most programs also have a substantial practical component that will always need to be provided in person. There could be opportunities to develop programs in conjunction with other colleges that offer similar courses, but these may be limited as each college competes against others.

International and out-of-province student recruitment

In the baseline model, revenue growth depends on international students increasing at a rate of 10% per year. While this is below historical growth rates, overall numbers were fairly low to start with, so growth was less costly to achieve. Given the projected decrease of numbers of young people in PEI and other Maritime Provinces, international students will be needed to maintain fiscal sustainability. This is the case among many postsecondary institutions in the Maritimes.

In addition to international students, administrators also plan to increase the number of Canadian out-of-province students, increasing the overall ratio to 50/50. The increase of students from outside PEI will need to be balanced with continuing to meet the needs of students from PEI. To date, because of the demographic trends in PEI, this has not been an issue as students from the island have not been displaced by those from elsewhere.

Holland College is attractive to international students by virtue of providing an opportunity to move to Canada, as well as safety and security. Over many years, institutions can build up word-of-mouth reputations. In the past the Atlantic Canada Opportunities Agency has provided grants for Holland College’s international marketing and recruitment initiatives. If this funding was reduced or eliminated, the College would struggle to increase and even maintain its current level of international enrolment.

Additionally, as indicated previously, program variety is important to continuing to attract international and out-of-province students. To the extent that budgetary restraint may require programs to be cut, this could also threaten enrolment figures. Once students are at Holland College, it is important that they have a positive experience including getting the support that they need. Compared to domestic students, international students may require additional resources in order to succeed academically and find work after graduating. Positive outcomes are key for the long-term growth of international enrolment, as word of mouth is an important factor in continuing to attract students.

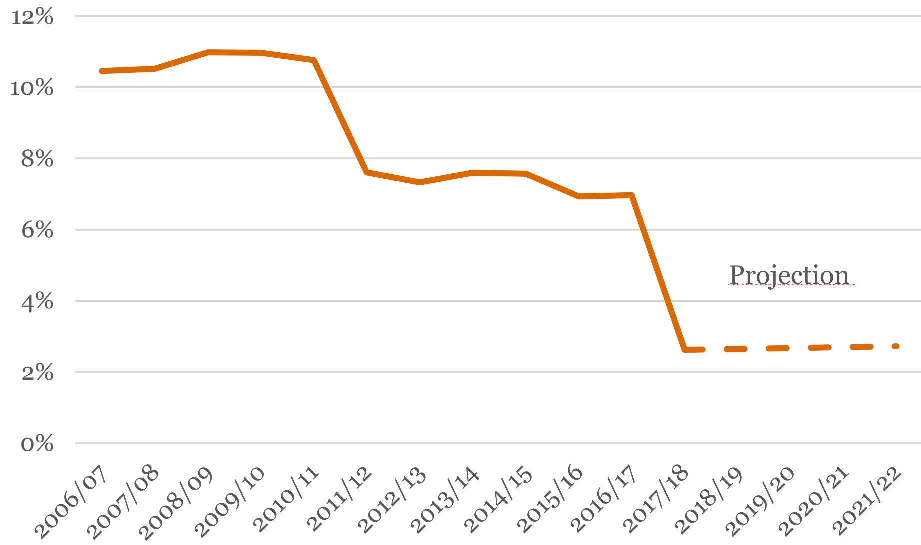
Accumulated deferred maintenance

Accumulated deferred maintenance (“ADM”) is defined by Holland College as “the backlog of unfunded major maintenance and renewal projects that have been deferred to future budgets.” Examples of deferred maintenance include leaking roofs, aged heating and cooling equipment, and corroded pipes. ADM is an issue facing many postsecondary institutions.

Over the past ten years, Holland College has been effective at reducing the impacts of ADM. One measure of the severity of deferred maintenance is the Facility Condition Index (FCI), which measures the value of deferred maintenance as a share of the replacement value of facilities. A lower FCI indicates a low value of ADM. It should be noted that the measurement of these factors depends on the way an institution determines the value of its facilities and assesses deferred maintenance value.

Figure 27 shows the FCI for Holland College including a projection period. The sharp drop in the FCI between 2016/17 and 2017/18 is attributable to a one-time $13.5 million dollar capital renewal grant from the Strategic Infrastructure Fund. Overall, Holland College compares favourably to the average FCI for Canada of 14% and the average for Atlantic Universities of 17%.

Figure 27: Facility Condition Index for Holland College



Holland College has prioritized funding in order to use this grant to deal with the worst ADM issues. However, the usual operating budget allocated for maintenance is $200,000, which does not fully cover the ongoing costs of maintenance. In typical years, the facilities department decides which maintenance issues to address using a centralized database. The facilities department has taken action to limit fiscal pressure including planning for the maintenance of a building throughout its life cycle, re-negotiating third party contracts, and preventative maintenance. However, some additional initiatives such as energy retrofits are not currently being pursued due to constraints on the operating budget.

The relatively low ongoing budget means that the College is reliant on external funding such as the SIF grant, suggesting that it cannot effectively plan ahead. We note that some universities in Atlantic Canada charge students a fee for facilities improvement.

Keeping facilities in good condition is important for attracting and retaining students, as well as for health and safety and the overall learning experience. If Holland College is not able to maintain its facilities to a high standard it may not be able to reach the assumed baseline enrolment growth.

Appendix A: References

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Appendix B: Limitations

To conduct this Assessment, PwC relied upon the completeness, accuracy, and fair presentation of all information, data, advice, opinions or representations obtained from various sources which were not audited or otherwise verified. These sources (collectively, the “Information”) are listed in the Scope of Review section of this report.

The findings of this Assessment are conditional upon such completeness, accuracy and fair presentation of the Information, which has not been verified independently by PwC. Accordingly, we provide no opinion, attestation or other form of assurance with respect to the results of this Assessment.

This Assessment has been prepared for Holland College for their exclusive use. PwC disclaims any contractual or other responsibility to other persons who may use or rely on this Assessment.

Receipt of new data or facts: PwC reserves the right at its discretion to withdraw or make revisions to this Assessment should we receive additional data or be made aware of facts existing at the date of the Assessment that were not known to us when we prepared this Assessment. The findings are as of January, 2018 and PwC is under no obligation to advise any person of any change or matter brought to its attention after such date, which would affect our findings.

Our Assessment must be considered in its entirety by the reader, as selecting and relying on only specific portions of the analyses or factors considered by us, without considering all factors and analyses together, could create a misleading view of the processes underlying this review and the conclusions there from. The preparation of an economic analysis is a complex process and it is not appropriate to extract partial analyses or make summary descriptions. Any attempt to do so could lead to undue emphasis on a particular factor or analysis.

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