

Coming Up Short: Barriers to Apprenticeship and the Shortage of Labour

Changes to apprenticeship urgently needed to avoid an Atlantic labour crisis

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Atlantic Canada's demographic, immigration, and regional outmigration challenges threaten to plunge the region into a labour crisis. Nearly half of small business owners point to apprenticeship as a potential solution to shortage of labour issues; however, barriers such as high costs, poaching risks, information deficiencies, inflexible training arrangements, and lack of regional consistency, make it difficult, if not impossible, for many employers to hire and train apprentices.

Introduction and Context

The Shortage of Labour

Canada is in the midst of a labour shortage. In many occupations, the number of workers nearing retirement outnumbers those who will replace them (see Appendix 1).¹ According to the Atlantic Institute for Market Studies, if current trends continue, by 2026 one job in every eight in Canada will be vacant.²

While the labour shortage is a national problem, Atlantic Canada's demographic and immigration realities make the issue a pressing and immediate concern. At present, the private sector job vacancy rate in Atlantic Canada is 2.2 per cent, representing about 15,400 unfilled jobs.³ When asked about the greatest challenges facing Atlantic Canada in the next five years, 60 per cent of small business owners in the region pointed to the shortage of labour (see Figure 1).

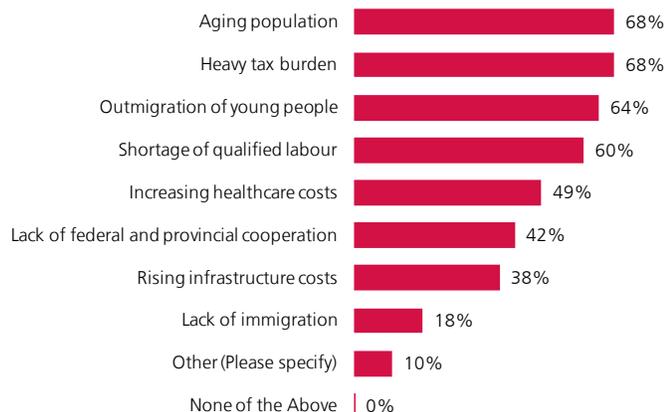
¹ Statistics Canada, 2013, *Education in Canada: Attainment, Field of Study and Location of Study*.

² McNiven, J.D and Michael Foster, 2009, *The Developing Workforce Problem: Confronting the Canadian Labour Shortages in the Coming Decades*, Atlantic Institute for Market Studies.

³ Calculations based on Mallett, Ted, 2013, *Help Wanted: Private Sector Job Vacancies in Canada: Q2 2013*, Canadian Federation of Independent Business. (CFIB).

Figure 1

Greatest challenges facing Atlantic Canada in the next 5 years



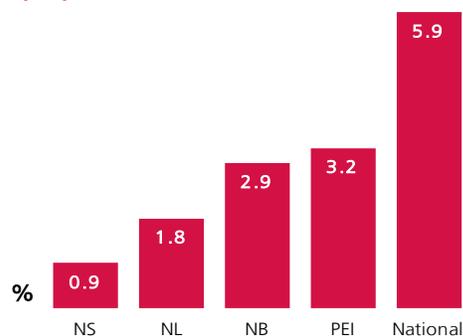
Source: CFIB, *Atlantic Skilled Worker and Apprenticeship Survey*, August 2013, n=665.

Demographic Difficulties

With a population of about 2.3 million, Atlantic Canada is one of the least populated regions in Canada.⁴ Although population growth rates between 2006 and 2011 increased, the Atlantic provinces still lag well behind the national average (see Figure 2).⁵

Figure 2

Population growth rate 2006–2011, by region (% total population)



Source: Statistics Canada, 2012, *The Canadian Population in 2011: Population Counts and Growth*.

⁴ Statistics Canada, 2012, *Population Counts, Canada, Provinces and Territories, 2011 and 2006 Censuses*.

⁵ Statistics Canada, 2012, *The Canadian Population in 2011: Population Counts and Growth*.

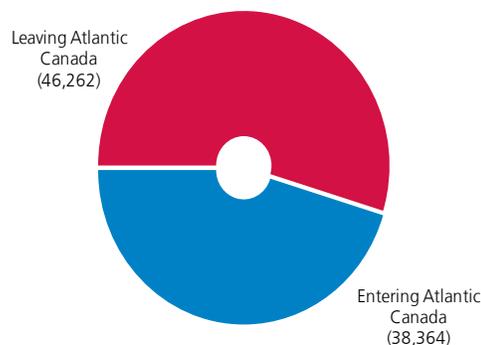
Atlantic Canada is also home to the fastest growing aging population in the country. Currently, more than 16 per cent of the population are aged 65 or older.⁶ This demographic reality has not gone unnoticed by small business owners—68 per cent identify the aging population as a serious issue facing the region in the next five years (see Figure 1). Pair this increasing aging population with some of the lowest fertility rates in Canada,⁷ and it becomes clear why the region is struggling to produce workers for the labour force.

Immigration Challenges

Aside from demographics, Atlantic Canada also faces immigration challenges. Thousands of interprovincial migrants leave the region every year for the Central and Western provinces. Because more migrants leave than enter, Atlantic Canada actually has a *negative* net migration of 7,898 (see Figure 3).⁸

Figure 3

Interprovincial immigration in Atlantic Canada in 2009–2010



Source: Calculations based on *Statistics Canada Table 051-0019* and *051-0018 CANSIM* (database).

When it comes to international immigration, the region does not fare much better. About four per cent of Atlantic Canada’s population

⁶ Calculations based on Statistics Canada, *Table 051-0001 CANSIM* (database).

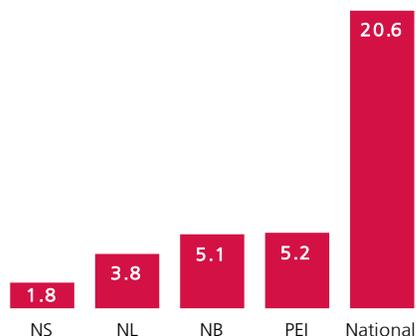
⁷ Statistics Canada, *Table 102-4505 CANSIM* (database).

⁸ Calculations based on Statistics Canada, *Table 051-0019 CANSIM* (database) and Statistics Canada, *Table 051-0018 CANSIM* (database).

is foreign born, a stark contrast to the 20.6 per cent national average (see Figure 4).⁹

Figure 4

Foreign-born residents in 2011, by region (% of total population)



Source: Calculations based on Statistics Canada, 2011 National Household Survey and Statistics Canada, 2012, Population Counts. 2011 and 2006 Censuses. Statistics Canada, 2013, *Immigration and Ethnocultural Diversity in Canada*.

Atlantic Canada’s poor interprovincial and international immigration rates raise significant concerns for small business. Sixty-four percent of Atlantic business owners identified youth outmigration as one of Atlantic Canada’s greatest challenges, and 18 per cent flagged the lack of immigration as a major issue for the region (see Figure 1).

The Need for Change

With more than 385 major investment projects in various stages of development across Atlantic Canada,¹⁰ the demand for skilled labour will remain an ongoing concern unless significant changes are made. Our demographic landscape has changed greatly over the past 50 years; however, governments continue to operate under policies designed to meet the needs of a very different generation.

In the late 1960s, labour market policies were devised to accommodate the flood of baby-boomers entering the workforce. Now, decades later, the baby-boomers are retiring but the

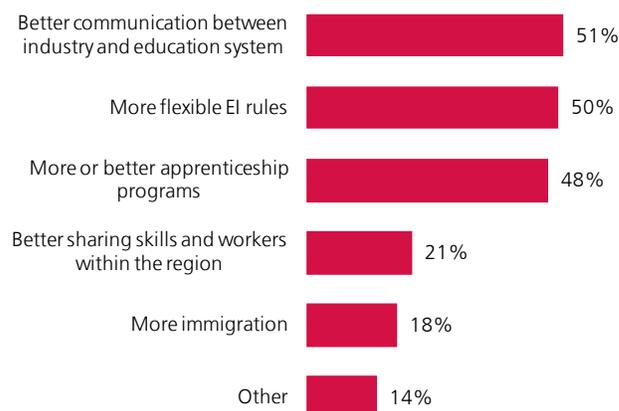
policies have remained largely the same. In order to deal with current demographic realities and labour needs, outdated policies must be revised.¹¹ In particular, rules surrounding apprenticeship need to be re-examined in order to help stave off the impending labour crisis.

What is Apprenticeship?

Apprenticeship is one aspect of an overall solution to the shortage of labour¹² responsible for preparing hundreds of Atlantic Canadians for the workforce every year. When asked what would mitigate hiring difficulties and shortage of labour issues, 48 per cent of Atlantic small business owners pointed to apprenticeship (see Figure 5).

Figure 5

What would help your business deal with hiring difficulties (or shortage of labour issues)?



Source: CFIB, *Atlantic Skilled Worker and Apprenticeship Survey*, August 2013, n=665.

The term “apprenticeship” refers to the on-the-job training trades students receive as part of their education. This vocational training is designed to complement technical training, giving students hands-on experiences they would not otherwise get in the classroom.

⁹ Statistics Canada, 2013, *Immigration and Ethnocultural Diversity in Canada*.

¹⁰ Atlantic Provinces Economic Council, 2013, *Major Projects Inventory 2013: Investment Potential for Atlantic Canada Continues to Improve*.

¹¹ McNiven and Foster, *The Developing Workforce Problem*.

¹² Andrew, Judith, and Plamen Petkov, 2007, *Apprenticeship Training: Lessons Not Learned*, CFIB.

Apprentices receive their training from certified tradespeople known as journeypersons. A journeyperson will be the apprentice's mentor for the duration of the apprenticeship. They are responsible for teaching and guiding the apprentice through the required competencies.

After an apprentice has completed the necessary technical and vocational training, they may choose to become certified.¹³ Students who pass the certification exam earn the title of journeyperson and the ensuing benefits such as a higher pay grade and increased demand for their skills.

Apprenticeship, however, is not the only pathway to the trades. It is possible to receive trades training without taking part in an apprenticeship program.¹⁴ Those who take this route can still write the certification exam as long as they have amassed sufficient work experience. Individuals who write or "challenge" the exam are known as trade qualifiers. A passing trade qualifier will receive the same journeyperson certificate as a completing apprentice. Typically, the trade qualifier route takes longer to complete than an apprenticeship program and has lower pass rates.

Terms of the Trades

Designated Trade:

A trade regulated by the province's Apprenticeship Department.

Apprenticeable Trade:

A designated trade in which apprenticeship training is available.

Compulsory Trade:

A trade in which registration as an apprentice or certification as a journeyperson is mandatory.

Voluntary Trade:

A trade in which registration/certification is not mandatory.

Red Seal Trade:

A trade in which interprovincial standards exist, enabling portability of credentials across provinces.

¹³ Excluding compulsory trades, where certification is mandatory.

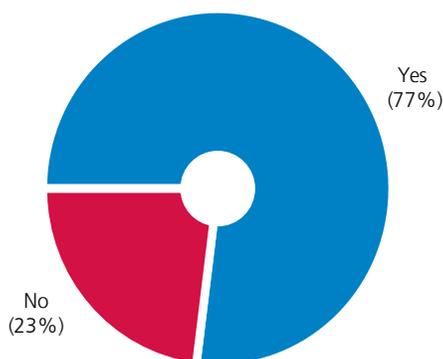
¹⁴ Unless the trade is compulsory.

Barriers to Apprenticeship

It is clear apprenticeship plays an integral role in producing skilled tradespeople for the workforce. What is not clear, however, is why apprenticeship is not utilized more often, especially considering current labour conditions. Government representatives and other stakeholders are quick to blame employers for low participation rates. Small business, however, is highly engaged in apprenticeship. In fact, survey results show that of the 40 per cent of small business owners in the region that have employed tradespeople, 77 per cent provided apprenticeship training within the past 5 years (see Figure 6).

Figure 6

Has your business¹⁵ provided on-the-job training to any apprentices during the past 5 years?



Source: CFIB, *Atlantic Skilled Worker and Apprenticeship Survey*, August 2013, n=665.

As these numbers indicate, the majority of employers understand the value of apprenticeship and make efforts to provide training. But these efforts do not come easy. Survey responses also show that employers struggle to participate in apprenticeship because of a number of barriers that make providing training incredibly difficult or impossible. Identifying and addressing these barriers will help grow Atlantic Canada's workforce by increasing participation to

¹⁵ Figure 6 illustrates the responses of small business owners in a position to hire tradespeople (i.e. apprentices, trade qualifiers).

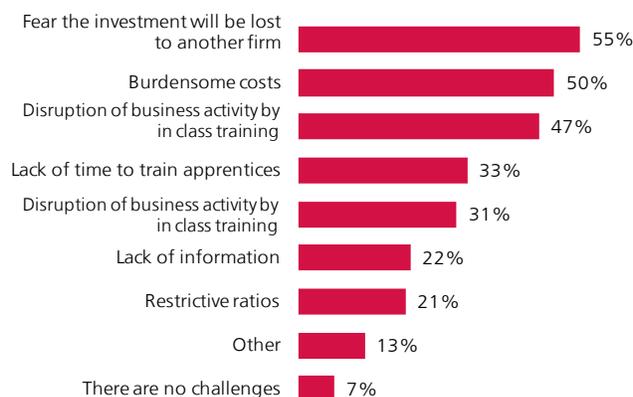
include those who currently do not provide training, and help those who already engage in apprenticeship to do so on a larger scale.

Costs

Employers provide on-the-job training to apprentices mostly at their own expense.¹⁶ Wages, benefits, disbursements, administration and other training costs are all paid for by the employer. While large firms may be able to absorb apprenticeship costs, small businesses often struggle to foot the bill. Half of Atlantic small business owners surveyed identified the costs associated with supervising and training apprentices as a challenge in providing apprenticeship training (see Figure 7).

Figure 7

Main challenges in providing apprenticeship training



Source: CFIB, *Atlantic Skilled Worker and Apprenticeship Survey*, August 2013, n=665

About 71 per cent of apprenticeship costs come from paying wages and benefits.¹⁷ The wage of an apprentice is between 40 to 90 per cent of what a journeyperson makes. This number usually equates to an amount well above minimum wage. Comparatively, in several European countries such as Austria, England, France, Germany, and Switzerland, apprentices are paid at a much lower rate. This “apprentice allowance/wage” recognizes the

¹⁶ The Apprenticeship Job Creation Tax Credit (AJCTC) does help to offset costs in some cases.

¹⁷ Canadian Apprenticeship Forum (CAF), 2009, *It Pays to Hire an Apprentice*.

apprentice’s status as trainee, and allows employers to recoup some of their training costs.¹⁸

While there are some provincial programs that offer financial assistance, many are focused on the apprentice rather than the employer. The few provincial programs that are open to business owners, such as the START program¹⁹ in Nova Scotia and the Apprenticeship Wage Subsidy²⁰ in Newfoundland and Labrador, give preference to employers who hire persons from under-represented groups. Increasing opportunities for members of these groups is no doubt important, but with the current shortage of labour, many employers do not have the option of hiring from an under-represented group. More general financial incentives aimed at helping businesses bear the costs of apprenticeship are needed in order to increase participation levels.



Aside from quantitative costs, employers also incur opportunity costs when providing apprenticeship training, as hiring an apprentice requires an employer to divert a considerable amount of their journeyperson’s time. The hours a journeyperson spends teaching and mentoring an apprentice reduces overall business productivity. Lost

¹⁸ Steedman, Hilary, 2010, *The State of Apprenticeship in 2010: International Comparisons*, The London School of Economics and Political Science.

¹⁹ Nova Scotia Department of Labour and Advanced Education and Employment Nova Scotia, 2013, *START Guidelines*.

²⁰ Newfoundland and Labrador Department of Advanced Education and Skills, *Apprenticeship Wage Subsidy Fact Sheet*.

journey person time represents the second biggest expense for employers, making up about 23 per cent of total apprenticeship costs.²¹

The costs associated with providing apprenticeship training are a significant deterrent for employers. Although some studies have shown that apprentices do eventually yield a net positive return,²² small businesses often do not have the funds to make the initial investment. While SMEs recognize the value of training the next generation of journeymen, the reality is many cannot afford to provide apprenticeship training.

Poaching

Considering how significant an investment apprenticeship is for an employer, it is not surprising poaching is an oft-expressed concern. Poaching occurs when a competitor hires a recently qualified journey person that an employer trained as an apprentice.²³ This experience can be very frustrating for the employer, who has just expended considerable resources training their apprentice. About 55 per cent of Atlantic business owners fear the investment they make in apprenticeship training will be lost to another firm (see Figure 7).

Aside from the lost financial investment, poaching also deprives an employer of the benefits of working with a journey person who has been trained in-house. Studies show employers consider homegrown journeymen more productive than outside hires. They are cited as making fewer mistakes, being a better fit with the organization, having better customer relations and a stronger health and safety performance.²⁴

²¹ CAF, *It Pays to Hire an Apprentice*.

²² CAF, 2006, *Apprenticeship-Building a Skilled Workforce for a Strong Bottom Line*; CAF, *It Pays to Hire an Apprentice*.

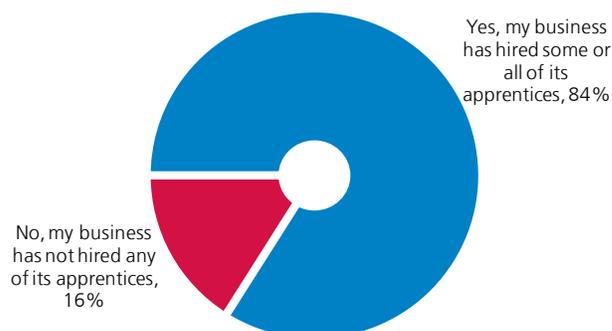
²³ CAF, *Apprenticeship-Building a Skilled Workforce for a Strong Bottom Line*.

²⁴ CAF, *It Pays to Hire An Apprentice*.

Poaching is particularly problematic for SMEs, whose limited resources make the loss of any employee detrimental. When surveyed, small business owners in the region expressed a strong desire to retain the apprentices they train, with 84 per cent hiring some or all of their apprentices after they finished their trades training (see Figure 8).

Figure 8

Has your business²⁵ hired any of its apprentices after they completed their trades training?



Source: CFIB, *Atlantic Skilled Worker and Apprenticeship Survey*, August 2013, n=665.

Lack of Information

Apprenticeship is governed by a mountain of rules and regulations that can have significant repercussions if not properly followed. Considering these requirements, employers *should* be able to access clear and correct information about the apprenticeship process. However, 22 per cent of business owners surveyed identified lack of information about apprenticeship as an obstacle in providing training (see Figure 7).

The most easily accessible apprenticeship resources in Atlantic Canada are provincial apprenticeship division websites. These websites, however, are often lacking in up-to-date, comprehensive information. Toll-free customer service lines are likewise often unreliable, providing incomplete and sometimes incorrect answers. Poor

²⁵ Figure 8 illustrates the responses of small business owners in a position to hire tradespeople (i.e. apprentices, trade qualifiers).

information resources such as these seriously hinder employer engagement in apprenticeship.

I had to search long and hard to find the contact information to then call and learn about the program, it was not readily available online, which seems dated considering the times.

—CFIB member, motor vehicle repair

Information deficiencies are particularly apparent when it comes to the apprentice hiring process. If business owners wish to employ apprentices they must track them down themselves. This hiring process can be onerous, especially in Atlantic Canada where there are no databases, matching services, or other resources to connect would-be apprentices with employers.²⁶ Difficulties finding apprentices was identified as a barrier to apprenticeship by 47 per cent of surveyed business owners (see Figure 7).

Employers in some provinces outside of Atlantic Canada, however, do have access to free, online databases that function as apprenticeship networks. Web-based services in Ontario and British Columbia, for example, allow employers to search and find apprenticeship candidates that meet their needs and requirements.²⁷ At present there are no comparable resources available for employers in any of the Atlantic provinces.

Inflexible Training System

The apprenticeship regimes in Atlantic Canada are inflexible and out-of-step with business

realities. Although apprenticeship training falls squarely on the shoulders of employers, apprenticeship systems do not take into account the employer or their needs. While there are many instances of inflexibility within Atlantic apprenticeship systems, this report will focus on the three most important to SMEs: block release training, the lack of responsiveness to labour market needs, and ratios.

Block Release Training

Block release training refers to the release of trades students from their in-school training to work on-the-job as apprentices. During the release period the apprentice must work a specified number of hours and achieve competency in certain skills. How long a student spends in the workplace depends on the trade and how much time it takes to attain the required experience.

The block release training model is an inefficient way of combining technical and vocational training. It is premised on the idea that employers will be able to provide the exact skills required by the apprentice within a relatively short amount of time. A business, however, cannot dictate its workload. Skills needed by the apprentice may not be needed by the business during the apprentice's release. Additionally, because block schedules are not in tune with business cycles, an apprentice may be released during known off seasons.

In this way, apprentices sometimes end up spending more time on release than they ever planned. It is not uncommon for 4-year apprenticeships to take seven or eight years to complete. According to Statistics Canada's most recent Apprenticeship Survey, more than one in four surveyed apprentices had been in their program for 1.5 times longer than the prescribed duration.²⁸ This delay into the

²⁶ The Office to Advance Women Apprentices (OAWA) is funded by the Government of Newfoundland and Labrador.

²⁷ See <http://apprenticebc.ca/apprentice-search/>, <http://www.stepbc.ca/>, <http://www.tradeability.ca/>, <http://www.apprenticesearch.com/>.

²⁸ See Ménard, Marinka, Cindy K.Y. Chan, and Merv Walker, 2008, *National Apprenticeship Survey: Canada Overview. Report 2007* and CAF, 2011, *Investigating Apprenticeship Completion in Canada: Reasons for Non-Completion and Suggested Initiatives for Improving Completion*.

workforce represents a significant obstacle for both employers and apprentices alike.

Another issue with block release training is the disruption of business activities following an apprentice's return to school. After receiving the required work experience, apprentices must leave their employer to complete another block of technical training. In small firms where apprentices represent a considerable portion of the staff, this departure can be detrimental to the business. About 31 per cent of employers pointed to this issue as a major barrier to providing apprenticeship training (see Figure 7).

A more flexible training model, such as one that allows for training to take place evenings, weekends, or one day a week instead of for extended periods of time would lessen business disruption. Training arrangements such as these are already used in countries like Austria, France, and Germany.²⁹ Additionally, the apprenticeship systems in Switzerland and Australia have incorporated "group training," which involves an apprentice rotating between different employers in order to gain skills. This method helps small firms who would not otherwise be able to meet apprenticeship requirements.³⁰ In Canada, collaborative approaches to on-the-job training are already practiced in other fields like law and medicine. Taking a similar approach in apprenticeship may lessen the burden placed on small business owners and result in a more comprehensive learning experience for the apprentice.³¹

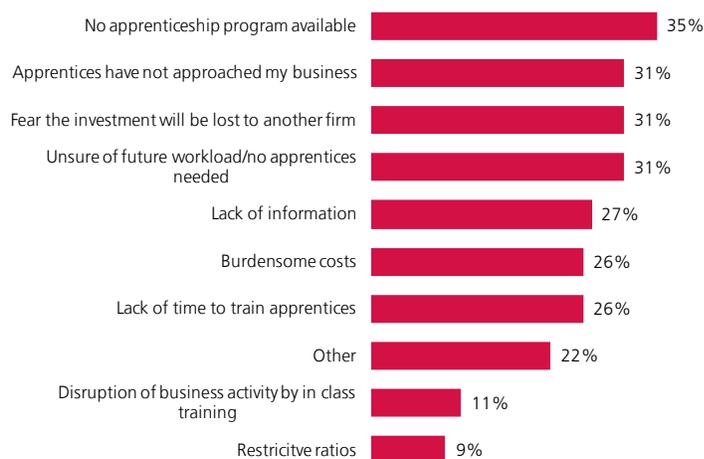
Unresponsiveness to Labour Market Needs

Rather than evolve with market changes, apprenticeship in Atlantic Canada has largely remained static. One of the best examples of poor responsiveness to labour market needs is the lack of apprentice training programs. About 35 per cent of designated trades in Atlantic Canada are not apprenticeable, even though many are desperately needed by

employers. When Atlantic small business owners who had not engaged in apprenticeship in the past five years were asked what prevented their business from providing training, 35 per cent stated that there were no apprenticeship programs available for the trades used in their business (see Figure 9).

Figure 9

What has prevented your business from providing on-the-job training to apprentices?



Source: CFIB, *Atlantic Skilled Worker and Apprenticeship Survey*, August 2013, n=665.

Specifically, small business owners identified non-apprenticeable trades in their province such as baker, crane operator, alarm technician, and appliance repair technician as trades needed by their business. With no training programs available, individuals interested in pursuing apprenticeship in those trades will be forced to leave their home province, and possibly even the region. The likelihood of their return is low, especially if they are offered permanent employment with the firm that provided their training.

The importance of responsiveness to the needs of industry was recently highlighted in Nova Scotia's Apprenticeship Review. Among several recommendations contained in the report, the reference group stressed the importance of developing an apprenticeship system that is in step with labour market needs and adapts to

²⁹ Steedman, *The State of Apprenticeship in 2010*.

³⁰ Ibid.

³¹ CAF, 2004, *Assessing and Completing Apprenticeship Training in Canada: Perceptions of Barriers*.

shifting economic and industry conditions.³² This recognition of the need for labour market alignment demonstrates how poorly the current system reflects industry realities. The labour shortage is itself a prime example of the failure to incorporate employer input on sectoral needs. Without an open, ongoing dialogue between government, teaching institutions, and business, the apprenticeship system will not be able to maintain the workforce. Better cooperation and coordination is needed to ensure shortages and saturations do not occur in the future.

Our governments must make a full commitment to apprenticeship programs, and discuss specific skill needs with industry before choosing where to focus their energy.

—CFIB member, management consulting

Ratios

The term ratio refers to the number of journeypersons that must be employed for every apprentice. Twenty-one per cent of small business owners in the region point to restrictive ratios as an obstacle in providing apprenticeship training (see Figure 7).

In New Brunswick and Nova Scotia, the ratio is one journeyperson for every apprentice.³³ In Newfoundland, the provincial government recently increased the ratio to allow two apprentices for every one journeyperson. An employer can also apply for a permit to hire three apprentices per journeyperson, as long

³² Nova Scotia Department of Labour and Advanced Education, Apprenticeship Training Division, 2013.

³³ Except for the following trades in Nova Scotia: Floorcovering installer = 2:1, Automotive Glass Technician = 2:1, Blaster = 2:1, Landscape Horticulturist = 2:1. Additionally, Painter/Decorator and Sheet Metal Worker both have secondary ratios of 1:3 (i.e. three journeypersons for the second hired apprentice).

as the third apprentice is in his or her final year of apprenticeship.

Prince Edward Island is the only Atlantic province that does not have a mandatory ratio. Instead, the province has a *recommended/voluntary* ratio of one apprentice to one journeyperson. A key difference between mandatory and voluntary ratios is the penalties. Provincial apprenticeship divisions with mandatory ratios can administer penalties if a business owner is not compliant, whereas a division with voluntary ratios would not be able to do so. Considering that failure to comply with a mandatory ratio could cost a business thousands of dollars in fines, the difference between mandatory and voluntary is significant.

What is a ratio variance?

A ratio variance exempts an employer from an imposed ratio, allowing more apprentices to be hired per journeyperson. Variances, however, are not a *carte blanche* for the employer. They have a time limit and can also be location/project specific.

While it is possible for employers to apply for a ratio variance, the process is highly inaccessible. Most business owners are not aware that they can get a variance, let alone know how to apply for one. This reflects fears of being inundated with such requests from business owners. Gate keeping such as this is highly unfair as it prevents businesses with justified claims from ever getting the exemption they deserve.

While ratios differ throughout Atlantic Canada, there are a few things they all have in common. For one, no ratio in the region adapts to take into account the size, location, or nature of a business. Additionally, no ratio in any of the provinces leaves room for any degree of apprentice turnover.³⁴ This is a serious issue considering the high attrition rate of apprentices.³⁵ The region's ratios are

³⁴ Gunderson, Morley, 2001, *Skills Shortages in the Residential Construction Industry*.

³⁵ According to the 2007 *National Apprenticeship Survey*, 17 per cent of surveyed apprentices

also similar in that they all discourage growth. If a firm wishes to expand the business and hire more apprentices they will have to employ more journeymen. This increases the cost of labour, thus reducing the incentive to grow.³⁶

We could have hired another apprentice this season but were unable to as we only have one journeyman on staff.

—CFIB member, automotive repair & maintenance

Lack of Regional Consistency

Complicating apprenticeship even further is the inconsistency of apprenticeship rules across the four Atlantic provinces.

Jurisdictional differences permeate almost every aspect of apprenticeship. Each province has its own unique set of designated trades, compulsory trades, and apprenticeable trades. The apprenticeship training hours required by each trade also vary widely across the region. For example, to become a bricklayer in Newfoundland 7,200 hours of apprenticeship training are required; however, in New Brunswick, the same trade only requires 5,400 hours. Out of nearly 100 trades regulated, there is not one that is consistent across the four Atlantic provinces (see Appendix 2).

Another example of jurisdictional inconsistency is course sequencing. Although the Atlantic provinces generally agree on what should be taught to trades students, they often disagree on the order in which to teach the material. This inconsistency means what students learn in their first year in one province may differ from what their counterparts learn in another province.

discontinued their apprenticeship. See Ménard et al, *National Apprenticeship Survey* and CAF, *Investigating Apprenticeship Completion in Canada*.

³⁶ Brydon, Robbie and Benjamin Dachis, 2013, *Access Denied: The Effect of Apprenticeship Restrictions in the Skilled Trades*, C.D. Howe Institute.

Course sequencing issues are particularly pronounced when combined with the lack of available technical training. If an apprentice's block of technical training is not being offered that year, the apprentice will not be able to receive training in another Atlantic province because of differences in course sequencing. Jurisdictional differences such as these seriously hinder labour mobility and exacerbate the region's skilled worker shortage.

Recently, the Council of Atlantic Premiers formed the Atlantic Workforce Partnership (AWP), a working group tasked with harmonizing apprenticeship programs across Atlantic Canada.³⁷ The AWP will be taking a trade-by-trade approach to harmonization, aligning every aspect of each trade to create uniformity across the region. All changes made will be based on research completed on best practices in that particular trade. The first four trades to be harmonized are cook, instrumentation technician, bricklayer, and construction electrician. Following that, six more unidentified "high volume" trades will be aligned. The AWP projects it will take two years to harmonize the first four trades and another two years to harmonize the remaining six.³⁸

While the AWP's goal is laudable, their approach is problematic. Atlantic Canada needs changes to apprenticeship now, not years from now. The trade-by-trade approach stalls progress by queuing trades that need immediate attention. Atlantic Canada's labour force is nearing crisis and requires urgent action encompassing as many trades as possible. The AWP's approach will take too long to get too little done. Additionally, because their mandate only includes existing apprenticeship programs, more than 70 trades across the region will never see any direct benefit. Without a more comprehensive and immediate solution, Atlantic Canada will continue to struggle to maintain and grow its skilled workforce.

³⁷ Council of Atlantic Premiers, 2013, *Atlantic Workforce Partnership Supports Skilled Trade Apprenticeship*. News release.

³⁸ Ibid.

Conclusion and Recommendations

The shortage of labour is an urgent issue for Atlantic Canadians, especially considering the region's demographics, regional outmigration, and low immigration rates. If current trends continue, the Atlantic provinces will experience a full-scale labour crisis. To counter this looming threat, Atlantic Canada's apprenticeship systems need to change. Specifically, the barriers to apprenticeship identified in this report must be recognized and removed.

Recommendations for solving apprenticeship challenges can be organized around two pillars: accessibility and flexibility. For Atlantic Canada's labour force to see any meaningful change, these pillars must ground and guide future reform.

Accessibility

- ▶ To offset some of the costs associated with apprenticeship training, small businesses need accessible financial assistance. Providing a more general financial incentive, for instance in the form of a tax credit that would be open to a wider group of participants, would help alleviate cost struggles.
- ▶ Information deficiencies are one of the most critical barriers to apprenticeship. Making more clear and comprehensive information available for employers is essential for increased participation.
- ▶ Greater access to apprenticeship networks, databases, and other matching services would ease the apprentice hiring process. Apprenticeship networks like those in Ontario and British Columbia also help establish early connections between employers and apprentices, fostering stronger relationships and decreasing poaching risks.
- ▶ Ratio variances need to be more accessible to employers. This means making information on variances and the application process publicly available.

Supplying an online application form, as Manitoba's Apprenticeship Department does, is one possible way this could be accomplished.

Flexibility

- ▶ Employers and apprentices would both benefit from more flexible training arrangements. Permitting collaborative approaches to training or allowing apprentices to work evenings, weekends, or once a week instead of extended periods of time are potential ways to increase flexibility and compensate for business realities.
- ▶ Technical training institutions and apprenticeship divisions throughout Atlantic Canada must work together to create a more flexible approach to course sequencing. Additionally, partnerships between teaching institutions could ensure blocks of technical training are always available in at least one province in the region, decreasing education-based outmigration.
- ▶ Ratios cannot be restrictively applied. There must be some flexibility to take into account the size, location, and nature of a business. A less rigid application would also help mitigate apprentice turnover and remove ratio-based barriers to growth.
- ▶ For apprenticeship to keep pace with sectoral needs, provincial apprenticeship divisions and trade schools must have an open, ongoing dialogue with business. Greater employer consultation and collaboration will help apprenticeship systems evolve to reflect labour market realities.
- ▶ Inconsistent apprenticeship rules and regulations across the Atlantic provinces significantly hinder labour mobility. To remedy this, provincial apprenticeship divisions must communicate more effectively with one another to align training requirements and trade designations.

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Appendix 1

Number of adults aged 25-34 having a postsecondary credential minus number of adults aged 55-64 having a postsecondary credential

Field of Study	Trades Certificate	College Diploma	University Degree
Mechanic & Repair Technologies	-36,530	-1,690	-
Construction Trades	-5,600	-810	-
Personal & Culinary Services	10,025	15,825	0
Business, Management, Marketing & Related Support Services	-34,760	-17,455	134,745
Health Professions & Related Programs	-11,440	-13,790	58,745
Precision Production	-12,925	-85	-35
Engineering Technologies & Engineering-Related Fields	-5,320	645	60
Transportation & Materials Moving	1,160	1,540	430
Family & Consumer Sciences/Human Sciences	-1,975	24,415	3,965
Agriculture, Agriculture Operations & Related Sciences	1,970	3,515	320

Source: Statistics Canada, 2013, *Education in Canada: Attainment, Field of Study and Location of Study*, Catalogue no. 99-012-X2011001, <http://www12.statcan.gc.ca/nhs-enm/2011/as-sa/99-012-x/99-012-x2011001-eng.pdf>. Accessed August 8, 2013.

Appendix 2

Comparison of apprenticeship requirements across Atlantic provinces

Designated Trade	NS Training hours	PEI Training hours	NL Training hours	NB Training hours	Compulsory Trade? (Y=Yes)
Agricultural Equip Technician	N/A	8,000	N/A	7,200	
Alarm & Security Technician	N/A	Not designated	Not designated	Not designated	
Appliance Service Technician	N/A	N/A	N/A	5,400	
Automotive Glass Technician	N/A	Not designated	Not designated	Not designated	
Automotive Painter	N/A	N/A	N/A	3,600	
Automotive Repairer	Not designated	Not designated	Not designated	3,600	
Automotive Service Technician (Service Station Mechanic)	6,000	Not designated	Not designated	Not designated	Y (NS)
Automotive Service Technician (Steering, Suspension, Brakes)	Not designated	Not designated	Not designated	5,400	Y (NB)
Automotive Service Technician	8,000	8,000	7,200	7,200	Y (NS, NB, PEI)
Baker	N/A	N/A	N/A	N/A	
Blaster	N/A	Not designated	3,360	N/A	
Boat Builder	6,000	Not designated	Not designated	Not designated	
Boilermaker	5,400	6,000	5,400	Not designated	Y(NS)
Boom Truck Operator	Not designated	Not designated	2,400	Not designated	Y (NL)
Bricklayer	6,000	6,000	7,200	5,400	Y (NB)
Cabinetmaker	N/A	8,000	7,200	7,200	
Carpenter	8,000	8,000	7,200	7,200	
Commercial Trailer Technician	Not designated	Not designated	Not designated	5,400	
Communications Technician	N/A	Not designated	Not designated	Not designated	
Computerized Numerical Control Machinist	Not designated	Not designated	Not designated	7,200	
Concrete Finisher	N/A	N/A	5,400	N/A	
Construction Boilermaker	Not designated	Not designated	Not designated	5,400	
Construction Craft Worker	N/A	4,000	N/A	Not designated	
Construction Electrician	8,000	8,000	7,200	9,000	Y (NB, NL, PEI)
Cook	6,000	6,000	5,400	5,400	
Distribution Construction Lineman	Not designated	Not designated	Not designated	5,400	
Distribution System Operator	Not designated	Not designated	Not designated	N/A	

Designated Trade	NS Training hours	PEI Training hours	NL Training hours	NB Training hours	Compulsory Trade? (Y=Yes)
Electric Motor System Technician	N/A	N/A	N/A	7,200	
Electronics Technician (Consumer Products)	Not designated	Not designated	Not designated	N/A	
Engineering Assistant	Not designated	Not designated	Not designated	N/A	
Farm Technician	Not designated	6,000	Not designated	Not designated	
Floorcovering Installer	N/A	N/A	N/A	N/A	
Gas Fitter (III-II-I))	III-600 II-2,000 I-4,000	Not designated	Not designated	Not designated	
Glazier	N/A	N/A	N/A	N/A	
Hairstylist	N/A	6,000	4,000	N/A	
Heat Treatment Technician	Not designated	Not designated	Not designated	N/A	
Heavy Duty Equip Technician	8,000	8,000	7,200	7,200	
Heavy Duty Equip Operator	N/A	Not designated	5,400	7,200	
Industrial Electrician	8,000	8,000	7,200	7,200	Y (PEI)
Industrial Mechanic (Millwright)	8,000	8,000	7,200	7,200	
Instrumentation & Control Technician	8,000	8,000	7,200	7,200 (Under Industrial Instrument Mechanic)	
Insulator (Heat and Frost)	8,000	N/A	5,400	5,400	
Ironworker (Generalist)	6,000	6,000	7,200	5,400	
Ironworker (Reinforcing)	3,000	N/A	N/A	3,600	
Ironworker (Structural/Ornamental)	5,000	N/A	N/A	3,600	
Landscape Horticulturist	N/A	N/A	5,400	5,400	
Lather (Interior Systems Mechanic)	N/A	N/A	5,400	5,400	
Locksmith	N/A	Not designated	Not designated	N/A	
Machinist	8,000	8,000	7,200	7,200	
Marine Fitter	Inactive	Not designated	Not designated	Not designated	
Marine Service Technician	N/A	Not designated	Not designated	Not designated	
Metal Fabricator (Fitter)	8,000	8,000	5,400	7,200 (Under Steel Fabricator - Fitter)	
Mine Electrician	Inactive	Not designated	Not designated	Not designated	

Designated Trade	NS Training hours	PEI Training hours	NL Training hours	NB Training hours	Compulsory Trade? (Y=Yes)
Miner	Not designated	Not designated	N/A	Not designated	
Mobile Crane Operator	N/A	6,000	5,400	3,000	Y (NL)
Mobile Crane Operator (Hydraulic)	N/A	Not designated	Not designated	Not designated	
Mobile Hoisting Equip Operator	Not designated	Not designated	Not designated	300	
Motor Vehicle Body Repairer (Metal & Paint)	8,000	8,000	7,200	7,200	
Motorcycle Mechanic	N/A	N/A	N/A	N/A	
Oil Heat System Technician	6,000	6,000	5,400	7,200 (Under Oil Burner Mechanic)	
Painter and Decorator	6,000	6,000	5,400	5,400	
Partsperson	N/A	N/A	N/A	N/A	
Plumber	8,000	8,000	7,200	7,200	Y (NB, PEI)
Power Engineer (I-II-III-IV)	6yrs-4.5 yrs-2 yrs-2yrs	Not designated	Not designated	See below	
Power Engineer (2nd Class)	Not designated	Not designated	Not designated	7,200	
Power Engineer (3rd Class)	Not designated	Not designated	Not designated	3,600	
Power Engineer (4th Class)	Not designated	Not designated	Not designated	1,800	
Powerline Technician	8,000	8,000	7,200 (Under Powerline Technician (operating))	7,200	
Powerline Technician (construction)	Not designated	Not designated	5,400	Not designated	
Power Systems Operator	Not designated	Not designated	5,400	Not designated	
Process Operator	Not designated	Not designated	5,400	Not designated	
Recreation Vehicle Service Technician	N/A	N/A	N/A	5,400	
Refrigeration & Air Conditioning Mechanic	8,000	8,000	7,200	7,200	Y (NB)
Restoration Stone Mason	8,000	Not designated	Not designated	Not designated	
Residential Electrician	Not designated	Not designated	4,800	Not designated	Y (NL)
Rig Technician	N/A	N/A	N/A	Not designated	
Roofer	6,000	N/A	Training available but unlisted	5,400	
Sheet Metal Worker	8,000	8,000	7,200	7,200	

Designated Trade	NS Training hours	PEI Training hours	NL Training hours	NB Training hours	Compulsory Trade? (Y=Yes)
Small Equip Repair/Service Technician	Not designated	N/A	5,400	Not designated	
Sprinkler System Installer	8,000	8,000	7,200	7,200	Y (NB)
Staker - Detailer	Not designated	Not designated	Not designated	N/A	
Steamfitter/Pipefitter	8,000	8,000	7,200	7,200	Y (PEI)
Stonemason	Not designated	Not designated	7,200	Not designated	
Switchboard Operator	Not designated	Not designated	Not designated	5,400	
Tilesetter	N/A	N/A	N/A	N/A	
Tool & Die Maker	N/A	N/A	N/A	N/A	
Tower Crane Operator	N/A	Not designated	N/A	Not designated	Y (NL)
Transport Refrigeration Service Technician	Not designated	Not designated	Not designated	5,400	
Transport Trailer Technician	N/A	N/A	N/A	Not designated	
Truck and Transport Mechanic	8,000	8,000	7,200	Not designated	
Truck and Transport Service Technician	Not designated	Not designated	Not designated	7,200	
Underground Hard Rock Miner	Not designated	Not designated	Not designated	4,500	
Water Well Driller	Not designated	Not designated	Not designated	5,400	
Welder	6,000	6,000	5,400	5,400	

*N/A = No apprenticeship training available

Sources: Provincial apprenticeship websites (NS: <http://nsapprenticeship.ca/>, NL:

<http://www.aes.gov.nl.ca/app/>, NB:

http://www2.gnb.ca/content/gnb/en/services/services_renderer.2195.Apprenticeship_and_Occupational_Certification.html, PEI: <http://www.gov.pe.ca/ial/index.php3?number=1027715>) and the Ellis Chart from

Human Resources and Skills Development Canada (<http://www.ellischart.ca/h.4m.2@-eng.jsp>).

Information as of August 16, 2013.