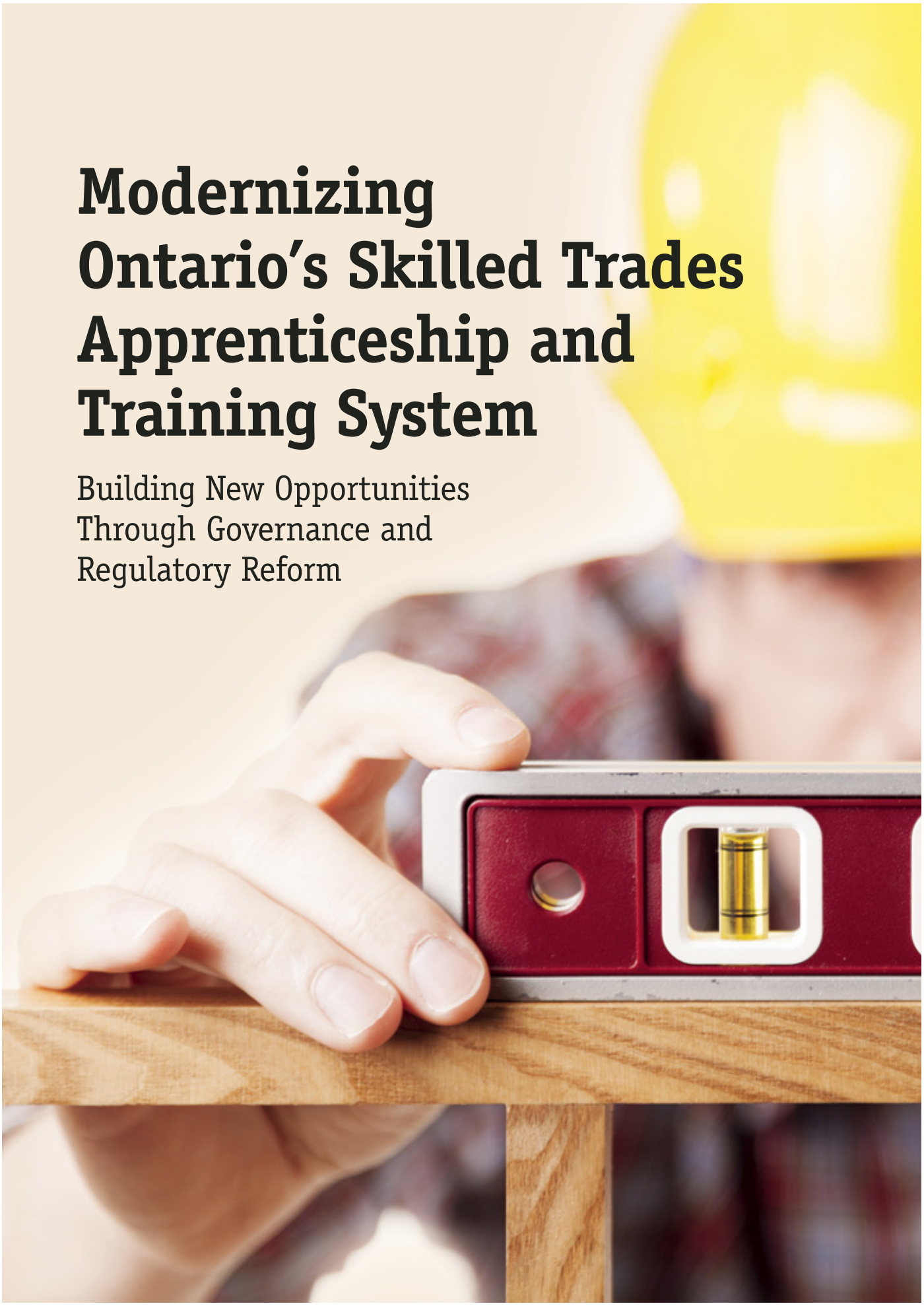
Modernizing Ontario's Skilled Trades Apprenticeship and Training System

Building New Opportunities Through Governance and Regulatory Reform



Building Industry and Land Development Association

Heavy Construction Association of Toronto

Ontario General Contractors Association

Ontario Home Builders Association

Ontario Road Builders' Association

Ontario Sewer and Watermain Construction Association

Residential Construction Council of Ontario

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By Dawson Strategic[1]

Ontario's construction industry is at a crossroads. The role of the industry is to provide safe and affordable homes, institutional, commercial, and industrial (ICI) buildings and infrastructure for more than 13 million Ontarians but a growing and often uncoordinated regulatory burden is threatening the industry's ability to meet this objective. Regulation in the service of health, safety, or quality is clearly in the public interest but other aspects of the public interest agenda are not well defined.

The Ontario College of Trades (OCOT) a regulatory body governed by a mandate set out in the 2009 ***Ontario College of Trades and Apprenticeship Act*** *(OCTAA). OCOT has an overarching duty to "serve and protect the public interest in carrying out the objects and functions" under the Act. It has been assumed that increased regulation of the occupational trades either through compulsory certification or new additional oversight is by default in the public interest, but in this report we will demonstrate that the public interest is much broader. OCOT's legislative mandate requires it to balance regulation with the often competing needs of promoting the trades, expanding education and skills opportunities, and supporting the Government of Ontario economic strategy.*

I
Our Concerns

Regulation is not synonymous with the public interest

There are numerous legal "objects" enumerated in the *Act*. Among OCOT's responsibilities are regulating the practices of the trades, establishing the scope of practice (what trades can do), issuing certificates of qualification, establishing apprenticeship and training programs, determining the ratio of journeymen to apprentices and deciding which trades should have compulsory certification status (OCTAA 2009: Section 11).

However, many of these regulatory activities have the potential to conflict with other of OCOT's objectives, such as the promotion of the practice of the trades and the

1 Authors: Laura Dawson, Miana Plesca, Janet Neilson, Scott Strickland and Jeffrey Phillips. Report design by Foothills Graphics. Comments or questions may be sent to ldawson@dawsonstrat.com. The authors are grateful for information provided by members of the Ontario construction sector. Economic analysis based on a quantitative report by Miana Plesca and Scott Strickland (March 2015).

service of the public interest. As we will argue in this report, OCOT is setting a pattern of favouring restrictive regulation in the construction trades, as the Sprinkler and Fire Protection Installer trade certification demonstrates. This limits access to the trades by new entrants, promotes exit to the underground economy or to other provinces, and increases costs and waiting times for residential, ICI, and civil construction in Ontario.

It is a false premise that more regulation is synonymous with the public interest. This report will provide evidence that increased licensing and certification of trades does not improve public safety, health, or quality but directly correlates with higher labour costs and fewer service providers.

Important decisions based on intuition or anecdote, not evidence

The Cardus report (Cardus 2011) echoes what stakeholders are saying, i.e. that OCOT process for decision making lacks adequate empirical evidence about economic impact, safety and quality outcomes and does not rely on consistent risk assessment practices. Decisions regarding the public interest in general and regulation of the construction trades in particular must be based on sound, evidence-based analysis. The OCTAA makes it clear that research in relation to the trades should be a core function of OCOT, but stakeholders involved in regulatory matters affecting the construction trades complain of a lack of information and ad hoc decision making.

OCOT's activities are not well integrated into the greater regulatory framework

To the external observer, the increasing restrictiveness of construction trades regulation in Ontario may make it seem as though OCOT alone is responsible for protecting health, safety, and quality outcomes. The observer would be surprised to discover that there is a multi-level regulatory framework already in place that includes rules, by-laws, inspections, and enforcement mechanisms throughout the entire construction cycle. OCOT is just one component of many.

Government regulation is not the only guardian of public interest. The builders of Ontario's housing and infrastructure are similarly bound to provide high-quality, safe and effective services to the public but often feel that their efforts to do so are at cross-purposes with OCOT's regulations and practices. In particular, rules for apprenticeship ratios, scope of practice definitions and an increasing bias towards compulsory certification are not consistent with the objectives of providing jobs for youth and helping Ontario's economy operate at its full potential.

This report does not seek to diminish the role of OCOT but to help modernize and rationalize its activities within the broader regulatory framework and to re-align its priorities with an expanded conception of the public interest. The following is a summary of the key priorities outlined in this report.

Construction trades regulation must include a broader understanding of the public interest

We argue that a renewed definition of public interest must also include consideration of Ontario's competitiveness and desirability as a place to live, work, and invest. As such, the broader public interest agenda should include:

1. Consumer interests

a. housing and renovations that are affordable
b. construction services provided by reliable and experienced tradespersons

2. Competitiveness linked to business growth and investment

a. accessible, affordable commercial construction
b. rapid deployment of development plans
c. reliable and up-to-date infrastructure

3. Workforce development

a. access to training and employment for youth and marginalized groups
b. training outcomes aligned with labour market needs
c. building Ontario's capacity as a North American leader in apprenticeship and skilled trades training

4. A rational and coherent regulatory framework

a. health and safety priorities delivered within a sound risk management framework,
b. promoting participation in the legitimate economy rather than pushing the exchange of construction services to the underground cash economy
c. regulatory actions are as aligned as possible with a broad, sustainable conception of the public interest
d. streamline regulation with the elimination of unnecessary duplication without compromising quality and safety

5. Information and research

a. evidence-based analysis to support employer and worker decisions and government policy development
b. A future orientation, recognizing both the challenges and opportunities facing the Ontario workforce and economy in the 21st century

This Report

As a relatively new entity, OCOT's regulatory functions have been the subject of significant scrutiny by organized labour, employer groups and the media. The appointment of Tony Dean in late 2014 to assess how well the OCOT is supporting Ontario's skilled trades, with a focus on measures related to compulsory certification and scope of practice, provides an ideal opportunity to highlight some of the challenges and opportunities facing employers in Ontario.

As noted above, stakeholders are concerned that there is too little empirical analysis to back up the decision making processes accompanying skilled trades regulation.

This report seeks to fill that gap using labour economics, case study, and stakeholder input to examine key areas of OCOT governance. While the academic literature provides very little analysis of Ontario's building trades specifically, we were able to locate numerous studies from comparable sectors and jurisdictions on the effects of compulsory licensing and certification schemes. We also use regression analysis and other quantitative tools to identify some of the specific costs for Ontario of the continuing trend of compulsory certification.[2]

The report begins with an examination of the skills gap, followed by major barriers encountered by Ontario's construction employers and their associated costs, and an in-depth examination of the implications of potential certification of the carpentry trade. General carpentry was chosen as a case study because it is the largest voluntary trade in Ontario and in addition to those who self-identify as carpenters there are thousands more performing 'carpentry work' as defined by Ontario regulations. This case provides an important illustration of the difficulties of accurately defining a scope of practice and then barring the performance of carpentry-related tasks by all other trades (as would be the case under compulsory certification). Finally, we present a set of conclusions and recommendations for OCOT governance modernization and reform.

II The Skilled Trades Gap in Ontario

There is disagreement about the size and scope of the skilled trades gap in Ontario. One of the main challenges is the tendency to confuse a skills shortage with a generalized labour shortage. With high youth unemployment it is easy to conclude that there are lots of workers available to fill vacancies. However, unemployment among older workers in Canada is at an all-time low, indicating that older workers are staying on the job longer and younger workers lack the skills to fill vacant positions (Cross 2014: 24).

Critics charge that the skills gap was invented by employers to avoid raising wages, because overall wage rates have not increased in Canada. Cross, however, argues that in spite of wage stability as a result of generalized slow growth in Central Canada after the recession, in high-demand sectors such as construction, skilled trades are indeed in short supply. Employers are finding creative ways to retain older workers, forestalling an outright labour shortage (Cross: 24). Moreover, if we control for age and experience (see below), there is clear evidence of rising wages (and concomitant worker shortage) in Ontario's construction sector.

The construction sector has become Canada's biggest job generator in percentage terms, setting consistently high performance levels before and after the 2008 recession. Since the late 1990s construction-related trades have posted double-digit increases in their shares of total employment and now account for almost 5% of total Canadian employment. In Ontario, construction employment has increased by approximately 200,000 workers since 1997 and now accounts for 6.9% of total Ontario employment. TD Economics explains the sector's vigour as the result of government incentives for renovation and construction, robust housing markets and a surge in ICI real estate activity (TD 2013a and 2013 b).

The best indicators of a construction skills shortage are increased vacancies, high rates of employment (and labour force participation) and a discernible and growing gap between wages in the construction sector and other occupations.

2 The full quantitative study and literature review is contained in Miana Plesca and Scott Strickland, "The impact of introducing mandatory licensing for construction in Ontario."

At present, we have poor data on vacancies (Statistics Canada is planning an employer survey in mid-2015), but labour force participation data confirms the demand for construction skills. At the national level, construction-related trades are represented in the overall workforce at rates much higher than the average: 90 percent participation rates for construction trades, compared to about 65 percent for other occupations.

Quantifying the Skilled Trades Shortage in Ontario

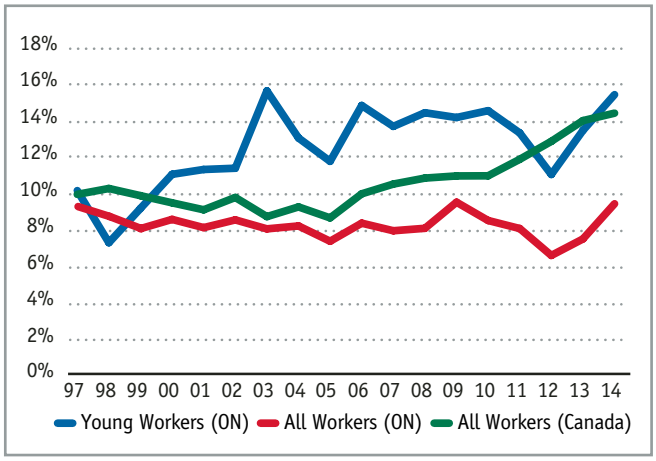
Table 1: Average Hourly Wages for Construction Trades

	Contractor	Construction Trades	Other Trades	Helpers
NF	31.1	24.0	27.1	18.5
PEI	22.0	18.2	19.9	14.7
NS	25.9	20.9	22.6	16.9
NB	24.8	21.8	23.1	16.9
QC	27.8	25.8	23.3	18.6
ON	28.9	23.9	25.2	18.8
MB	26.6	20.8	23.5	17.1
SK	31.4	24.0	27.5	19.6
AB	36.4	28.6	31.6	21.8
BC	32.1	24.5	28.5	21.2
Average	**30.0**	**24.4**	**25.9**	**19.1**

Source: Statistics Canada, Labour Force Survey 2014 using NOC codes 18, 29, 20, and 22.

From Table 1, it appears that wages for Ontario construction trades are actually below national averages, but we get a different picture when we use regression analysis to control for education and experience. These results confirmed what industry has been saying all along: Demand for construction skills is forcing wages to rise higher and faster than for other occupations in Canada. Among young workers in Ontario, returns to construction trades are about 15 percent higher[3] than for other occupations and this gap is increasing faster for young workers in particular – **clear evidence of a significant and growing skills shortage in Ontario's construction industry that will only intensify as older workers retire.**

Figure 1: The Construction Skills Gap



Source: Authors' calculations. Young workers are aged 30 and under.

The skills shortage in Ontario's construction trades is significant today and as aging baby boomers retire from the workforce it will become more problematic if more skilled workers are not brought in to replace them.

A Mismatch Between Skills, Employment, and Labour Market Demand

Ontario has many educated workers and many people looking for work, but it does not have enough of the right people in the right place with the right skills. Across sectors, skills mismatches cost Ontario's economy more than $4.1 billion in GDP and $627 million in provincial tax revenues annually (Stuckey and Munro 2013: ii).

Forty-one percent of employers are currently seeking employees with trades training. The highest demand is in the areas of construction and technology (Stuckey and Munro: 16). A 2013 membership survey by the Ontario Chamber of Commerce found that 30 percent of businesses had difficulty finding qualified candidates for job openings. The problem was most acute in skilled trades including construction, infrastructure, and engineering (Holmes and Hjartarson 2013: 4).

This problem is expected to get worse as baby boomers retire from the labour market. Ontario's working-age population as a share of the total population is expected to decline by almost 9 percent between 2011 and 2036 (Ontario Ministry of Finance, 2012 in Holmes and Hjartarson: 4). Not enough young people are entering the trades. Skills Canada states that 40 percent of new jobs created in the next decade will be in the skilled trades but only 26 percent of young people aged 13 to 24 are considering a career in these areas

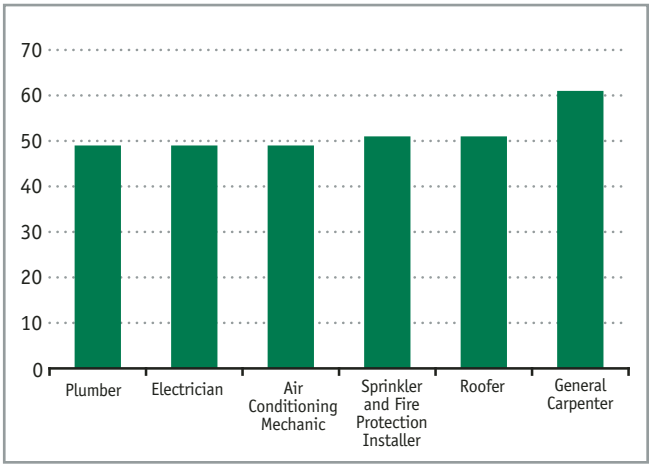
3 The wage differential varies according to skill. For contractors, it is 20 percent while the difference for labourers is 5 percent.

(Spence 2012). The problem runs deeper than the choices that young people are making or the guidance they receive in high school. Even young people who choose a career in the trades face significant barriers to entry, in particular finding an apprenticeship position.

The Youth Gap

Demographics are a major challenge facing the Ontario skilled trades labour market. According to data obtained by the Ministry of Training, Colleges and Universities the average age of a carpenter with a certificate of qualification in Ontario is 61 years old![4] Aging baby boomers dominate the skilled trades workforce (see Figure 2 below) and while large numbers of workers are exiting the skilled trades due to retirement, fewer people are entering creating an imminent shortage of workers that will be put profound stress on the system over the next two decades (Brydon and Dachis 2013).

Figure 2: Average Age of Ontario's Trades



Source: OHBA, One Isn't the Loneliest Number (August 28, 2013), and Ministry of Training, Colleges and Universities.

Many of the construction industry professionals interviewed for this report were alarmed by the skills shortage looming on the horizon once older workers retire. They also noted that it was getting harder to find younger people to fill the physically demanding jobs across the construction industry that older workers tend to avoid.

Summary

A significant and growing skills gap in construction, exacerbated by demographics and skills mismatches, is making it difficult to maintain a competitive construction industry in Ontario. Positive government policies and programs could help streamline the regulatory and financial barriers that are closing the sector to new workers. Instead, the situation is held in place and even exacerbated by what the CD Howe Institute calls "pernicious" provincial regulation (Brydon and Dachis 2013: 2). The next section will review the major regulatory impediments constraining the industry: high apprenticeship ratio requirements, fragmented and inefficient scope of practice definitions and a trend towards compulsory certification of trades.

> *"Residential plumbing is physically demanding. It is a young person's trade. Older plumbers prefer commercial or renovation work. With the current ratio requirement, we are simply not able to get enough young people into the business to meet homebuilder demand."*
>
> DICK BROUWER, BROUWER PLUMBING & HEATING, LONDON

III Major Regulatory Barriers

Ratio Requirements

Ratio requirements restrict the number of workers in a given occupation and lead to increased wages for these workers. In 1776, Adam Smith wrote about the ability of "incorporated trades" to lengthen apprenticeship programs and limit the number of apprentices per master, thereby ensuring higher earnings for persons in these occupations (see Box A). This characteristic is fully preserved in many modern economies (Moore 1961; Friedman 1962; Maurizi 1974; Kleiner and Krueger 2009; Pagilero 2010), with commensurate increases in wages (Bryson and Kleiner 2010).

4 Note that due to the definitional inconsistencies in defining the trade of carpentry, there is some variation in age estimates. Definitional challenges are discussed in more detail in the carpentry case study later in this report.

The first step to working in the skilled trades sector is usually on-the-job training as an apprentice under the supervision of a journeyperson (HRPA 2014: 3). For trades that are subject to compulsory certification, apprenticeship training is mandatory, although there are a few exceptions for workers trained outside of Ontario (discussed below).

> **The exclusive privilege of an incorporated trade necessarily restrains the competition**, in the town where it is established, to those who are free of the trade. To have served an apprenticeship in the town, under a master properly qualified, is commonly the necessary requisite for obtaining this freedom. The bye-laws of the corporation regulate sometimes the number of apprentices which any master is allowed to have, and almost always the number of years which each apprentice is obliged to serve. **The intention of both regulations is to restrain the competition to a much smaller number than might otherwise be disposed to enter into the trade.** The limitation of the number of apprentices restrains it directly. A long term of apprenticeship restrains it more indirectly, but as effectually, by increasing the expense of education.
>
> ADAM SMITH, *AN INQUIRY INTO THE NATURE AND CAUSES OF THE WEALTH OF NATIONS*, 1776, BOOK 1, CHAPTER 10, P. 61

Journeyperson to apprentice ratios are set by provincial regulations and determine the number of apprentices who may be sponsored or employed in relation to the number of journeypersons employed in particular trades. Ratio requirements vary across provinces. OCOT defends the variable ratio requirements on the basis that each trade and sector has particular needs and characteristics (Lapointe 2014). However, it is difficult for stakeholders to understand why four journeypersons are required to supervise the work of a single apprentice in a voluntary trade like drywall compared to a 1-to-1 ratio for the first four apprentices hired in the compulsory electrician trade. With up to six journeypersons required to train a single apprentice,[5] expert observers such as the Human Resources Professionals Association are drawn to conclude that Ontario's current system is restrictive, dated, and unjustifiable (2014).

As Table 2 illustrates, Ontario has some of the highest journeyperson-to-apprenticeship ratios in Canada.

Table 2: Ratio Requirements in Ontario and Other Provinces for Building Trades

Trade	ON	NS	MB	NB	SK	AB
Plumber	2:1	1:1	1:1	1:1	1:2	1:2
Residential Sheet Metal Installer	3:1	1:1	1:1	1:1	1:2	1:2
Carpenter	3:1	1:1	1:1	1:1	1:2	1:2

Source: OCOT 2014

Interpreting the Table: The ratio describes number of journeypersons required per apprentice, so 3:1 means a company must have 3 journeypersons employed for every 1 apprentice. In Ontario, most trades subject to ratios are granted a 1:1 ratio for the first apprentice they hire, but a higher ratio is often applied for any additional apprentices hired. The chart above shows the journeyperson-to-apprentice ratio for companies wishing to hire an additional apprentice (referred to as a secondary ratio).

Restrictive apprenticeship rules and high ratios create significant economic costs. CD Howe Institute finds that provinces that impose tight restrictions on apprenticeship have 44 percent fewer workers in those trades than provinces that have no restrictions (Brydon and Dachis 2013: 2). A ratio above one has a much larger effect on employment than a 1:1 ratio. For instance, occupations with higher ratios also tend to have 38 percent fewer younger workers aged 25 to 34 (Brydon and Dachis: 10). Not surprisingly, incomes in trades with high ratios are 10 percent higher than incomes in trades without legislated ratios (Brydon and Dachis: 10).

> *"High ratio requirements limit training opportunities and are particularly hard on family businesses. A father with two children and a 1:1 ratio requirement cannot bring both of them into the business. Small communities are especially dependent on family businesses for access to skilled workers."*
>
> MIKE MEMME, MOUNTAINVIEW HOMES, THOROLD ONTARIO

High ratio requirements tend to disproportionately harm small businesses that do not have many certified journeypersons as well as rural communities with fewer firms overall. High ratios are also a disincentive to firm growth. Before a firm can hire more apprentices, it has to hire a relatively more expensive journeyperson first, increasing the effective cost of labour (Brydon and Dachis: 8).

5 Secondary ratios for various electrician sub-trades require five and six journeypersons to each apprentice.

Although part of the OCOT mandate is to review and update ratio requirements, the process has raised concerns among many in the industry. Even though the process is supposed to rely on empirical research, such research often is not available, especially within the timeframes permitted for the reviews. Thus, panels are left with anecdotal information. The review panels are also criticized for using inconsistent decision making criteria that varies from panel to panel.

Mobility

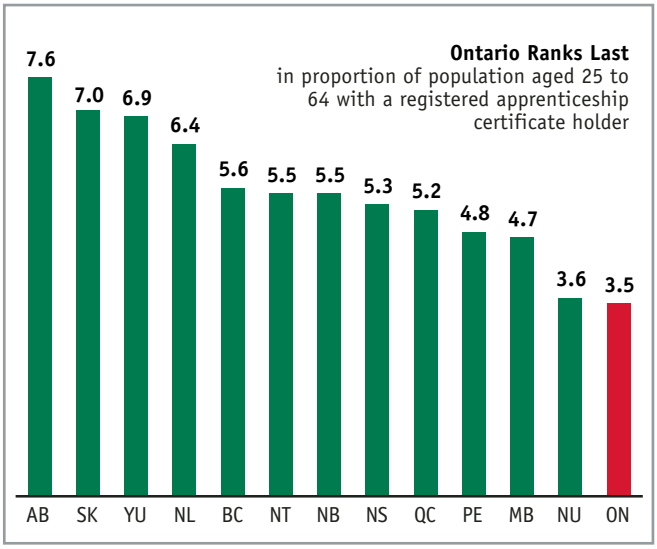
By restricting access to apprenticeships close to home, young Ontarians are motivated to seek apprenticeships in provinces with lower ratio requirements (see Table 2). After completing their apprenticeship (and spending their training investment elsewhere), they can return to the Ontario workforce. This is possible because the national Red Seal program and the interprovincial Agreement on Internal Trade provide mechanisms that allow certification granted by another province to be recognized by Ontario.[6]

> *"Lack of apprenticeship positions is sending Ontario youth to other provinces for training. Once they are gone, they are unlikely to return."*
>
> DICK BROUWER, BROUWER PLUMBING & HEATING, LONDON

Not only are Ontario youth leaving the province, but the ability to challenge the provincial certification exam makes it easier for employers to hire experienced workers from other provinces and other countries, bypassing the Ontario credentialing process almost entirely. In recent years, the number of external challengers receiving a Certificate of Qualification (CofQ) in sectors such as electrician[7] represents about a third of all CofQ's issued in 2012-2013 for "Electrician Construction and Maintenance".[8] With so many avenues available to bypass Ontario's strict ratio requirements, harmonization with other provinces is the sensible solution to provide fairness for workers that want to stay in Ontario to learn practical components in an apprentice-able trade.

The evidence clearly shows that Ontario's training mechanisms for skilled trades is in disarray. The province has one of the highest percentages of compulsory trades but the lowest rate of apprenticeship completions (see Figure 3). A 2008 survey indicates that fewer than 20 percent of employers hire apprentices. The survey, conducted by the Canadian Apprenticeship Forum, polled 16 different trades, several of them from the construction industry (Canadian Apprenticeship Forum 2009: xiii). This twenty percent figure has been repeated by OCOT at Board meetings to suggest additional capacity in the present system. Stakeholders speculate that employer reluctance is due to paperwork, complexity, or a poor fit between skills required to complete the apprenticeship and those actually required on the worksite. Within its mandate of providing research in trades activities, OCOT should be conducting comprehensive employer surveys to better understand the barriers and eventually remove them.

Figure 3: Percentage of Population Aged 25 to 64 with a Registered Apprenticeship Certificate Holder



Source: OHBA, Modernizing Ontario's Apprenticeship System, *n.d.* and Statistics Canada National Household Survey 2011.

Recommendation

The public interest must include considerations of economic competitiveness, access to skilled trades for Ontario's youth, and accessibility to affordable construction services throughout the province. The current model admits too few apprentices into high-demand sectors, raising costs and setting the stage for a labour shortage crisis in Ontario in the near future.

6 Chapter 7 of the Agreement on Internal Trade, given provincial effect the *Ontario Labour Mobility Act* (2009) provides for the recognition of certification granted outside of the province without any additional training or assessment.

7 "Electrician" is being used here as shorthand for the occupation classification of "Electrician Construction and Maintenance (309C)."

8 Author's calculations from OCOT, "External Data Report: April 1 2013 – September 30 2013 – 2nd Quarter – Cumulative Totals," (October 1, 2013)."

Limiting access to training runs counter to the strong culture of entrepreneurship in the skilled trades. Learning a trade provides a lifetime of opportunities, providing not only short-term employment but also the skills and experience to eventually start a new business. An open, well-functioning training environment must support new apprentices on the path to becoming a journeyperson and ultimately a business owner.

Compulsory Certification and Scope of Practice

In Canada, trades are regulated by the provinces. Some trades are deemed compulsory, meaning that a person cannot legally work in the trade in that province unless they hold a Certificate of Qualification from the corresponding regulatory body, or they are registered in a recognized apprenticeship program. If a trade is voluntary, the person may seek certification but s/he can also work without it (Heinrichs, 2014).

Classification of trades is a responsibility of OCOT and the terms are outlined in the *Ontario College of Trades and Apprenticeship Act*, 2009. Of the 44 construction trades listed for Ontario (see Annex 1), 11 are compulsory with two more under review for reclassification.[9]

Determining whether a trade is voluntary or compulsory is a highly subjective exercise. It is not based on objective criteria (risk, complexity, skills required) and the decision to certify or not varies widely across provinces: a bricklayer is a compulsory trade in New Brunswick and Nova Scotia but not in the western provinces; a plumber is a compulsory trade in Ontario but not Manitoba.[10]

Scope of Practice

A scope of practice (SoP) in the construction trades lists the activities and processes undertaken by someone employed in that trade. An SoP for a voluntary sector operates more as a set of descriptive guidelines because there is no mechanism to enforce adherence, but for a compulsory sector, the SoP defines the tasks that can be performed only by a certified journeyperson. Other trades are legally prohibited from carrying out these tasks. A review of the OCOT SoPs for the construction sector indicates a great deal of overlap between trades. These conflicts are not particularly problematic as long as most trades are voluntary, but with the number of compulsory trades increasing, greater conflicts are inevitable. An additional level of complexity arises with the consideration of the scope clauses that are negotiated in collective agreements. No two agreements are the same. Construction is broken down into seven sectors with scope clauses ranging from single board areas to province-wide agreements.[11]

If more trades become compulsory, it will be difficult to rationalize and allocate scope across the trades. Reserving certain activities – especially those that are not particularly risky or complicated – to be performed exclusively by one trade will create enormous inefficiencies without offering any offsetting benefits.

Tradespeople interviewed for this report noted that almost every worker on a construction site handles wood products – from the electrician installing a light fixture on a wooden mount to a drywaller putting up walls. If handling wood is reserved as the exclusive responsibility of a general carpenter (under conditions of compulsory certification), then activity on a jobsite will virtually cease while other trades waited for a carpenter to cut, move, or install any components made of wood.

Classification Process

The process of designating a trade as compulsory begins with a classification review, initiated by OCOT at the request of a trade board. Once the review is initiated, anyone interested in presenting an opinion on the potential reclassification is invited to make a written submission to the review panel, a group of three persons selected from OCOT's roster of adjudicators.

The seven criteria that a review panel is required to use by O.Reg 458/11 to determine whether a voluntary trade should become compulsory are:

1. The scope of practice of the trade.
2. How the classification or reclassification of the trade may affect the health and safety of apprentices and journeypersons working in the trade and the public who may be affected by the work.
3. The effect, if any, of the classification or reclassification of the trade on the environment.
4. The economic impact of the classification or reclassification of the trade on apprentices, journeypersons, employers and employer associations and, where applicable, on trade unions, employee associations, apprentice training providers and the public.

9 See http://www.collegeoftrades.ca/about/trades-in-ontario
10 Apprenticeship Manitoba, "Understanding Compulsory Trades."
11 These issues discussed in more detail in the carpenter case study in this report.

5. The classification of similar trades in other jurisdictions.
6. The supply of, and demand for, journeypersons in the trade and in the labour market generally.
7. The attraction and retention of apprentices and journeypersons in the trade.

Stakeholders have been broadly critical of the review process that has evolved since OCOT's inception in 2009. Their concerns include the following:

- **Lead time** – Stakeholders are not adequately informed about the trade status review process. Despite a mandate to solicit broad-based input and empirical evidence, timelines are tight and the criteria for participation is narrowly constrained.
- **Definitions and Jurisdictional Issues** –The scope of trade under review is not clearly defined or shared with stakeholders in advance of the process. Scope conflicts must be dealt with in advance of further certification reviews, given the often contradictory scopes outlined in O.Reg 275/11 as opposed to Ontario Labour Relations Board case history and actual practice (see Carpenter Case later in this report).
- **Rationale for Reclassification** – There is no burden of proof that must be met before a trade's status is reviewed. The process should include a needs analysis to determine whether a reclassification from voluntary to compulsory is required.
- **Criteria for decision making** – Stakeholders believe that the criteria for decisions are functionally disconnected, without an internally consistent rationale or a clear ranking of importance. Some of the questions, and the environmental impact of trade reclassification in particular, are unclear. The relationship between environmental sustainability and certification – either positively or negatively – has never been articulated.

The April 2014 panel decision from the Sprinkler and Fire Protection Installer, Trade Classification Review helps to elaborate some of the problems outlined above. The final panel decision from the review was not unanimous: two Chairs were in favour of compulsory certification, one was not. In the minority opinion submitted by Robert Bradford, he noted that the majority decision was based on an "intuitive conclusion" that if sprinklers save lives, then mandatory certification of installers must be necessary, even though there was no evidence linking reclassification with enhanced public safety, or that Ontarians had ever been put at risk by unqualified sprinkler fitters (Bradford 2014: 19).

As proof of minimal risk, OHBA submitted to the panel that home builders and general contractors had installed tens of thousands of sprinkler systems without any malfunctioning during a fire (Bradford:12).

OHBA also noted that the design, installation and maintenance of sprinkler systems are governed by numerous codes and enforcement mechanisms and it is the contractor who has the ultimate responsibility for using qualified workers to meet the codes and ensuring correct installation. In the City of Toronto, for instance, a building under construction must undergo three seperate inspections for fire safety systems, one of which must be approved by Toronto Fire Prevention Services.[12]

At the conclusion of the review, the panel could find no correlation between safe and proper installation and whether the installer had voluntary or compulsory trade status but two of three panel members made the judgment that the only certified workers are qualified workers (Bradford: 20).

Implicit in their decision was the belief that no cost is too high to protect human life and an assumption that compulsory certification ensures an abundance of caution. But this rationale is valid only if compulsory certification is a guarantee against future harms. It also presumes that certification is a more effective instrument than, for example, tightening of the Ontario Building Code, which could have a more direct effect on installation requirements. Moreover, with respect to costs, the panel limited its consideration of economic costs to the extra fees paid by journeypersons for mandatory designation (Bradford: 23) and not the increased costs of requiring all prospective sprinkler fitters to attend the United Association Sprinkler Fitters Local 853 Training Centre in Markham Ontario.

In addition, government ultimately must fund a portion of the training delivery agency (TDA) through "seat purchases".[13] This means that the government also has a direct financial interest in increasing the number of compulsory certifications, since demand for certification will significantly increase in a trade if it becomes mandatory to train through TDAs in order to work legally.

Bradford concluded that based on the seven criteria, the rationale for compulsory certification could not be met. Nevertheless the decision went ahead on the basis of "intuitive logic"(Bradford: 9). What is clear from the sprinkler case is that there is a bias in favour of compulsory certification, and if there "do not appear to be any obstacles to making the trade mandatory," then it should be done (Bradford: 20). The consequence of this

12 City of Toronto, *Building Inspections Website.*
13 MCTU, "Apprenticeship Training Delivery Agent (TDA) Approval Process," (July 2014).

approach is that regulation in Ontario will be progressively ratcheted upwards, creating an expanding web of cost, complexity and regulatory duplication.

Alternative Models of Risk Assessment: HPRAC

We do not need to look far to find superior models of risk assessment using public interest criteria. Ontario's Health Professions Regulatory Advisory Council (HPRAC) uses a two-part assessment to decide whether to recommend a health profession for regulation (HPRAC 2013). The primary criterion is whether the profession seeking regulation poses "a significant risk of harm to health and safety" (HPRAC: 10). HPRAC describes this criterion as a gating mechanism: the assessment is predicated on the applicant presenting a solid, evidence-based argument that there is risk of harm to the public. "If this standard is not met, the profession remains unregulated" (HPRAC: 72).

HPRAC further clarifies the definition of risk of harm as being directly linked to the practice of the profession and not just risks inherent in the area in which the profession operates (HPRAC: 11).

If an application meets the risk of harm threshold, it is assessed on the basis of secondary criteria. The purpose of the secondary criteria is to determine whether regulation is the most appropriate course of action and the best way to protect the public (HPRAC: 75). The secondary criteria focus on profession-specific factors and, during the review process, seek to identify other salient factors that need to be addressed to ascertain whether regulation is in the public interest (HPRAC: 76).

HPRAC imposes a high standard of evidence – both on its own information gathering and analysis and that of stakeholders. To help stakeholders better understand the criteria and participate effectively, HPRAC groups the types of evidence needed into three subject areas: research, knowledge/information and economics. Examples include "empirical evidence from randomized control trials and other trials; analytic studies, such as cohort or case control studies; time series analyses; anecdotal evidence; qualitative evidence; before and after studies; surveys; the results of consultation processes with networks/ groups; expert knowledge; grey literature; and financial sustainability studies"(HPRAC: 11).

Summary

The current trade classification process seems to rely on a "reverse onus." Those who oppose compulsory certification are required to provide robust empirical data as to why the trade should not be certified, rather than the other way around. The process is further complicated by a scope of practice model that creates fragmentation in an industry dependent on integration and efficiency.

In order to avoid the dangers of lost investment and employment inherent in an overly regulated economy, the Ontario Chamber of Commerce recommends that the bar for making a trade compulsory be set "very high, requiring substantially more than a plurality of affected parties" (Holmes and Hjartarson 2013: 3). The approach used by HPRAC reflects this level of caution, due diligence and an overarching ethos of certification if necessary, but not necessarily certification.

Throughout this report we have referred to the gaps in empirical analysis in the OCOT review process and limited attention to the real economic costs of Ontario's restrictive trades regulatory system. The next section provides an economic overview of the direct and indirect effects on Ontario's economy and competitiveness.

IV

The Cost of Compuslory Certification in Construction Trades for Ontario's Economy

While there has been no focused analysis on the effects of compulsory certification in Ontario, empirical evidence from the economic literature in comparable markets examining various occupational licensing schemes provides insight into some of the myths and realities.

Major Effects

The major effect of compulsory certification is that it restricts the number of workers in a given occupation by restricting the number of apprenticeships possible in that occupation, leading to increased wages for the workers. In turn, higher labour costs are passed on to the consumer, resulting in a higher price for the good or service. There are numerous studies documenting this phenomenon including: Rottenberg 1980; Perloff 1980; Carroll and Gaston 1983; Kleiner and Kurdle 2000; Adams et al. 2002; Kleiner 2000,

2006; and empirical analysis performed specifically in New Zealand's building industry by Lobo and Wilkinson 2006.

Cross-section analysis across a range of occupations finds that licensing increases wages by approximately 15 percent across a range of occupations (Bryson and Kleiner 2010).[14] (Note that this is on a continuing basis, not just in the period after licensing is imposed.)

For workers, the major cost of compulsory certification is lost wages, wage growth, and foregone opportunities as a result of time spent preparing for examinations. Some but not all of this may be recovered as a result of higher wages within the certified trade. Also, those who cannot pass the exam (or do not wish to write it) must leave the occupation altogether (Rottenberg 1980) or enter the underground cash economy.

> *As a company that continually invests in opportunities for young people, it is frustrating to watch the average age of our lead carpenters continually increase as opportunities are limited by regulations that directly affect the time frame for apprenticeship completion. Each year a young person remains in the ranks of general laborer is one less year they will be productive as a lead carpenter during their working career.*
>
> JAMIE ADAM, PIONEER CRAFTSMEN, KITCHENER

Compulsory testing and associated test anxiety creates barriers for workers with language limitations. It also prevents workers with social and intellectual disabilities who could otherwise do the job under supervision from making a productive workforce contribution. There is clear evidence that compulsory certification impedes exits out of the welfare system and creates barriers for marginal social groups (Dorsey 1980; Hazlett and Fearing 1998).

The more levels of government that are involved in the compulsory licensing process, the greater the increase in wages (Kleiner and Krueger 2009). In addition, there is very little lag time between certification and wage hikes, regardless of whether workers are grandfathered into the system or have to undergo additional training and licensing requirements (Perloff 1980).

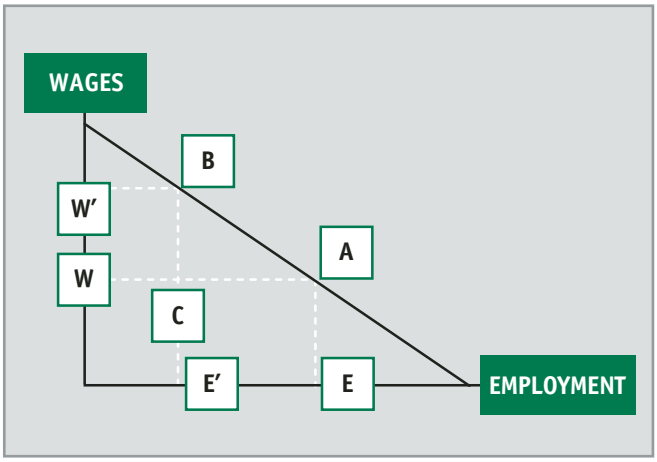
Compulsory certification provides occupational associations such as labour unions with greater control over the supply of workers through their ability to set or change the passing scores on the licensing exam (Maurizi 1974; Freeman and Kleiner 1990). Control over occupational access and wages also provides occupation associations with significant political influence over legislation affecting the industry (Wheelan 1998, Stigler 1971).

Another way to limit the supply of workers is through control of training centres. At present there are too few MTCU designated Training Delivery Agents (TDAs) in Ontario to keep up with demand. For example, in the case of tower crane operators (TCOs), over 50 percent of the active operators are within 10 years of retirement and a significant number of retirees (ages 65 to 69) are filling present demand (Emptage and Associates Inc. 2014). Despite other centres willing to provide training there is only one TDA serving the entire industry, run by Local 793 of the International Union of Operating Engineers in Oakville, Ontario. Since 2007, the centre has graduated fewer than 30 new tower crane operator journeypersons per year (Emptage: 5). Meanwhile, it is estimated that there will be a shortfall of between 213 and 548 journeyperson TCOs by 2020 (Emptage: 4).

Quantifying the Costs of Compulsory Certification

The welfare implications of restricted access to a certified trade are identical to those of other monopolies: **as wages go up, employment goes down and income gets reallocated from the consumer to the certified worker through a transfer of higher output prices into higher wages.**

Figure 4: Revenue Losses Due to Certification



14 Higher wages might also be affected by other factors such as improved quality of training programs that accompany the certification scheme or higher admission standards for training (Kleiner 2006, 2013, Kleiner and Vorotnikov 2012; Thorton and Timmons 2013).

The size of the loss can be calculated if you know the market size and the likely effects of certification on wage rates and labour demand. Consider the labour demand curve in Figure 4. Originally the equilibrium is at point A, with E workers employed at the equilibrium wage w. Certification would increase the wage from w to w′. The economic literature tells us that the magnitude of the increase would be about 12 to 20 percent. As a result of the wage increase, employment decreases to E′. The total wage bill changes from W*E at point A to W′*E′ at point B.

As we move from A to B, fewer and fewer workers produce less and generate less revenue. Ultimately, we end up with the triangle ABC as the loss in revenue associated with the wage increase.

Losses for Ontario

If Ontario were to proceed with mandatory certification for construction trades, we estimate an average deadweight loss of $75 million (see Table 3). This calculation is based on a wage increase of 20 percent and an elasticity of labour demand of 0.31, which is the preferred median based on estimates of conditions in Ontario as well as studies of similar markets. Responding to the rising costs, we also estimate that the Ontario construction workforce would shrink by 5 to 6 percent.

Table 3: Estimated Costs of Compulsory Certification in Ontario

Total	Contractors	Construction Trades	Helpers
$75 million	$19 million	$28 million	$28 million

The loss reported here is the product of the estimated change in wages and the estimated change in employment due to lower demand for higher priced labour arising from compulsory certification. Calculations exclude trades that are already certified such as electricians. The loss does not, however, include the considerable public investment in new training facilities that would be required to in order to accommodate new training requirements.

Source: Statistics Canada Labour Force Survey 2014 and authors' calculations.

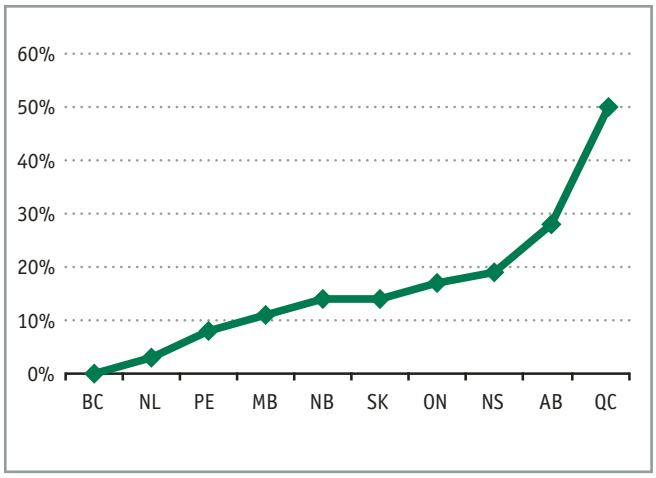
The shrinking outputs imposed by compulsory certification do not only affect trades being certified, but all trades in the construction industry. As costs go up, output goes down, and opportunities decrease for everyone, making Ontario's construction sector less productive and less competitive overall.

Ontario has a relatively high rate of compulsory certification (see Figure 5) and if current trends continue, this will create a drag on the competitiveness of the province's construction sector. This dynamic has been widely identified in other jurisdictions. In a comparison between states where occupations were licensed with those where the same occupations were unlicensed, the occupations in the unlicensed state exhibited a 20 percent faster growth rate (Kleiner 2006).

The drag effect losses are not limited to the construction sector alone and there will be spin-off effects on the province's future economic prospects: home ownership will become more expensive as will ICI and civil construction. Ontario will become less attractive to investors seeking modern infrastructure and affordable commercial and industrial buildings.

Recent research suggests that high housing costs have an acutely negative effect on a region's employment, productivity and output. Moretti and Hsieh estimate that output in the United States between 1964 and 2009 was 13 percent lower than it might have been because high housing prices encourage people to move away from cities with otherwise high productive potential. "In innovative industries, one new position might yield four to five new service sector jobs within a metropolitan area. But vertiginous house prices stunt this effect" (*Economist* 2014).

Figure 5: Percentage of Occupations with Compulsory Certification by Province, 2012



Source: CD Howe Institute 2013 from 2006 Census and Human Resources and Skills Development Canada.

Reduced Mobility and Supply

Smaller towns that already have difficulties finding service providers will be hit even harder as more trades become compartmentalized and centralized through regulation. Compulsory certification has been shown to limit mobility

of workers (Pashigian 1979; Kleiner et al. 1982a), across geographic regions, provinces, states or countries (Tenn 2001; Pagliero 2010) and also between different industries. Perloff (1980) found that occupational licensing was responsible for some of the largest wage increases for U.S. construction workers in history between 1967 and 1974 because licensing prevented mobility and thus wage equalization between construction and manufacturing.

Studies in other markets show that licensing tends to decrease the supply of services, and the consumer access to services (Kleiner and Krueger 2009; Kleiner and Gittleman 2013). In the example below, we show how the costs of a carpenter performing a typical kitchen renovation are already higher outside of the Greater Toronto Area (GTA) and how much more we could expect costs to increase as a result of compulsory certification.

Skilled Trades? Occupations? Understanding Nomenclature Differences

Differences in nomenclature between federal and provincial bodies leads to confusion about what is meant by a "skilled trade." The Government of Canada uses the National Occupation Classification (NOC) to determine such things as eligibility to immigrate to Canada under the Federal Skilled Trades Program. Meanwhile the Ontario College of Trades uses Trade Codes to classify the various skilled trades it regulates.

In Ontario, a General Carpenter is listed as Trade Code 403A. Under the federal NOC system, the code for Carpenter is 7271, one of several occupations in Major Group 72, Industrial, Electrical and Construction Trades that qualify as a "skilled trade" for immigration purposes. (Eligibility to immigrate also depends on an offer of full-time employment and a Certificate of Qualification from a provincial or territorial authority.)

Note that there is no correlation between an occupation being classed as "skilled" under the NOC system and whether a trade is voluntary or compulsory at the provincial level. Moreover, the job descriptions do not necessarily line up, even when the same or similar position is listed in both places. Statistics Canada also uses the NOC to organize its workforce data so, unless otherwise indicated, the economic analysis in this report refers to workers identified under the federal Carpenters Unit Group (NOC 7271) and Contractors and Supervisors of Carpentry Trades (NOC 7204) and not persons holding a Certificate of Eligibility under Ontario Trade Code 403A.

Compulsory certification restricts mobility by pushing workers towards urban centres and making it more difficult for workers to move between trades as demand rises and falls. Another mobility-related aspect of certification is the pressure it creates to send workers and consumers to the underground economy.

"In the renovation business, 11 or 12 different trades could be involved in improvements to a homeowner's bathroom! Compulsory certification of all the trades involved will drive costs through the roof and send more homeowners to hire fly-by-night renovators."

TED MELCHERS, MELCHERS CONSTRUCTION, KOMOKA, ONTARIO

Rise of the Underground Economy

Customers who can no longer afford the high cost of licensed service providers (or who cannot find local service providers) and workers who are unable to become certified look to the underground economy for alternatives. By hiring an illegal (unlicensed) renovator working outside of the legitimate regulatory and tax framework, consumers risk safety and quality and governments lose out on tax revenue and other benefits.

In a 2010 survey, 56 percent of Ontario homeowners admitted to paying cash for a home repair or renovation job, while 68 percent said they'd be less likely to pay cash if they could receive a tax credit (OHBA 2014: 34). Ontario's underground economy prior to the implementation of the HST represented an estimated 37 percent of the total output of residential renovation

Figure 6: Carpentry Costs of a Typical Kitchen Renovation

Source: National Household Survey 2011; industry and authors' calculations.

contractors in Ontario or approximately $5 billion. This generated a loss in GST revenue of nearly $300 million and more $1.6 billion in lost income tax. Following the imposition of the 13% HST, the increased tax burden on homeowners and renters reached more than $750, accelerating the shift to the underground economy.

The situation is even more serious in Quebec, which has more than twice as many compulsory construction trades as Ontario. David Descôteaux of l'Institut économique de Montréal (2010) links the rise of the underground economy and loss of productivity of the construction workforce to the expansion of compulsory certification in Quebec.[15]

The compartmentalization caused by compulsory certification of 26 construction trades is blamed for worksite delays, lost productivity, and highly rigid working conditions. In 2008 Quebec construction workers reported an average of 963 hours per year, well below the provincial average of 1600 hours. Descôteaux explains this gap as a result of predictable factors such as demand and seasonality but also on down-time caused by compartmentalization and the migration of workers to the underground economy.

Rather than forcing skilled trades to the underground economy through excessive regulation, we should be providing incentives such as the tax breaks offered by the Swedish government (Lu 2015), to encourage the use of legitimate service providers.[16] For example the success of the Canadian federal government's 2009 Home Renovation Tax Credit that pumped more than $4 billion into the economy and saved the average family $700 depended upon access to renovators working in the legitimate economy (CRA 2011).

15 Quebec's *Act R-20* regulates labour relations, vocational training and workforce management in the construction industry.
16 OHBA recommends a 5.4 percent Home Renovation Consumer Tax Rebate for all qualifying contractor renovations.

> *"When you increase barriers to enter the trades, you are feeding the underground economy. Workers can't get the training or the certification they need through proper channels so they end up working unlicensed, untrained and unsupervised. The government tries to reduce risk through regulation but ends up creating a situation that is even more dangerous for consumers."*
>
> MIKE MEMME, MOUNTAINVIEW HOMES, THOROLD ONTARIO

Centralization of Decision Making

Stakeholders are critical of a Toronto-centric bias in the governance of Ontario's building trades. OCOT stakeholder meetings tend to be concentrated in the GTA and trade board meetings often occur in union halls and union training centres.[17] This regional bias makes participation by stakeholders outside of the GTA very difficult.

What Compulsory Certification Does Not Do: Effects on Quality and Safety

A comprehensive survey of the economic literature found little evidence to support the notion that compulsory certification improves output quality (Carrol and Gaston 1983; Kleiner 2013).

There is some evidence that an official designation helps consumers to identify workers with a specific set of skills or experiences (Arrow 1971 and Kleiner 2001). But, where consumers have other mechanisms for determining the quality of service providers, the demand for licensed service providers goes down unless they are legally prevented from using unlicensed providers (Shapiro 1986). Note that in the construction industry there are two types of consumers of construction services, homeowners (usually in the renovation market) and construction companies. For consumers, information about legitimate service providers is available through RenoMark, a national program that ensures that renovators abide by provincial building codes, workplace insurance, and provide a warranty on all items.[18]

In Ontario, home builders are required to be licensed by the Tarion Warranty Corporation, which administers the Ontario New Home Warranty Act and sets out consumer service standards and warranty obligations for new home builders.

Related to output quality, our analysis found no evidence of improved safety for either workers or customers as a result of compulsory certification.[19] This finding is consistent with work commissioned by the Plumbing-Heating-Cooling Contractors' Association that was similarly unable to find existing data connecting higher ratio levels with better workplace health and safety outcomes. (OSTA 2013) In Ontario's electrical sector we find the results to be quite the reverse. Despite a long history of compulsory certification in electrical trades, the incidence of electrical-related fatalities and serious injuries in Ontario **more than doubled** between 2000 and 2013 (ESA 2013: 14).

Is compulsory certification the only way to go? British Columbia has adopted a policy of no compulsory certification for skilled trades and it maintains a no-fixed ratio policy. A centralized agency, BC's Industry Training Authority, is responsible for apprenticeships and skilled trades training. It focuses on increasing credentials and aligning training with current and future labour market needs.

In the next section, we examine Ontario's carpentry trade in order to understand the complex and varied nature of the scope of work undertaken by this trade and the problems that would be created if the trade were reclassified from voluntary to compulsory status.

IV

The Case of General Carpentry in Canada

What is a Carpenter?

The definition is far from straightforward. Regulators, unions, educators and even the workers themselves differ on the range of tasks that should fall under the rubric of carpentry. As informal practices and organizing principles

17 See, for example Minutes from Hoisting Engineer and Painter and Decorator Trade Board meetings: http://www.collegeoftrades.ca/wp-content/uploads/Minutes-Hoisting-Engineer-TB-January-23-2014.pdf and http://www.collegeoftrades.ca/wp-content/uploads/Minutes-Painter-and-Decorator-TB-January-16-2014.pdf

18 The RenoMark Code of Conduct is available through www.renomark.ca.

19 The absence of studies does not prove that there is no correlation but, given the extensive labour and industrial economics literature, it is surprising that a positive correlation between certification and health and safety would not be recorded and analyzed.

become institutionalized as regulations, the limits and compartmentalization of the construction trades and the inconsistencies in definitions could prove to be costly and contentious.

> *"From electricians to drywallers, everybody in the construction industry touches wood. If you have mandatory certification for carpenters and a narrow scope of practice, the system will collapse."*
>
> MIKE MEMME, MOUNTAINVIEW HOMES, THOROLD ONTARIO

The Ontario government's Ministry of Training, Colleges, and Universities (MTCU) says that "carpenters construct, erect, install, maintain and repair structures and components of structures made of wood, wood substitutes, lightweight steel and other materials. They are employed by construction companies, carpentry contractors, and maintenance departments of factories, plants and other establishments, or they may be self-employed."[20]

The Trade National Occupational Analysis defines a carpenter as someone who constructs, renovates and repairs residential, civil, ICI and industrial structures made of wood, steel, concrete and other materials.

Mohawk College's training for carpenters says it will prepare students to use hand and power tools, construction materials, wood and wood products; build awareness of workplace safety; employ advanced joinery and fastening systems; install building materials according to plans, specifications, and building codes in both residential and ICI construction; acquire specialized training in hand and power tools, construction materials, wood and wood products; conform to building codes and regulations; read blueprints; install doors, windows, and hardware, etc.[21]

The *Ontario College of Trades and Apprenticeship Act* (OCTAA) offers a very broad definition. According to OCTAA Ontario Regulation 275/11 s. 15, the scope of practice of a general carpenter includes the following:

1. Establishing building procedures.
2. Preparing a work site for building.
3. Laying out, constructing and installing form work.
4. Framing floors, walls, ceilings and roofs.
5. Installing interior and exterior finishing materials and hardware.
6. Constructing heavy framing using post and beam and timber construction.
7. Building stairs, newel posts, handrails and balustrades.
8. Laying out, constructing and installing door and window systems including hardware.
9. Performing renovations.

Many of these practices listed in the general scope of practice set out in Ontario Regulation 275/11 are duplicated in the SoPs for other trades contained within the same regulation. For example, window installation is included in the list for General Carpenter, Architechtural Glass and Metal Technician, and Drywall, Acoustic and Lathing Applicator.

Carpenters may work for a wide array of employers, including new home builders and renovation firms, construction firms, building owners, property managers and tenants, building developers and government departments. Some carpenters are union members and a significant number are self-employed (Red Seal Program 2009).

There are multiple routes to become a carpenter in Ontario, including apprenticeships and formal training in colleges and unions, but also less formal training under a mentor. Carpenters may even be self-taught and build a reputation from their work and personal relationships. Carpenters may pursue licensing in certain specialties, and skills from other voluntary trades. Because carpentry is a Red Seal trade, carpenters have the option of writing an exam to receive certification that will allow them to work in any province.

According to the 2011 National Household survey, nearly 45,000 Ontarians self-identify as carpenter but it is estimated that fewer than 10 percent of carpenters working in Ontario are licensed.[22] Should certification become compulsory, carpenters will have to limit their work to the SoP defined by OCTAA and those who practice the trade without proof of certification may be fined and will not be allowed to continue working.

Low levels of voluntary certification does not mean that the carpentry trade is unregulated. Regardless of what kind of carpenter is employed, work must be approved by building departments and inspectors to ensure that it conforms to the building code. In addition, Workplace Safety and Insurance Board coverage is mandatory, and Occupational Health and Safety apply to carpenters.

20 Ontario Ministry of Training, Colleges and Universities, "Carpenters (7271)." *Labour Market Information*.
21 Mohawk College, "General Carpenter," *What is an Apprenticeship?*
22 Based on interviews with Ontario home builders.

Network of Construction Industry Protections for Ontario Workers, Employers, and Consumers

Better Business Bureau
A non-profit organization that provides a reputational assessment and dispute resolution services for customers and accreditation for businesses that pledge to adhere to its code of business practices.

Canadian Standards Association
A standards association accredited by the Standards Council of Canada with standards in 57 areas including construction – publishes standards for safety and interoperability, provides training and advisory services.

Electrical Safety Authority
An independent authority acting on behalf of the Government of Ontario to administer the Ontario Electrical Safety Code; license Electrical Contractors and Master Electricians, electricity distribution system safety and electrical product safety.

Employment Standards Act
Ontario legislation enforced by Ontario's Ministry of Labour regulating employment in the province to set minimum standards, including wages, maximum work hours, and workplace health and safety.

Ministry of Labour
Legislates on employment standards, occupational health and safety, employment rights and responsibilities, and labour relations.

Ontario Association of Architects
Self-regulating body with a provincial mandate to govern Ontario's architectural professionals and students, ensuring all architects meet the education requirements, gain a minimum of two years practical experience, pass extensive examinations, and attend the OAA Admission Course, and participate in continuing education.

Ontario Building Code
Governs the construction, renovation, change of use, and demolition of buildings to ensure safe, healthy, and accessible building and develop and maintain a system for training and certifying building officials; updated every five years.

Ontario Building Officials Association
Works for municipalities across the province to promote the construction of safer and more sustainable and accessible buildings in Ontario by training and certifying building officials who apply and enforce Ontario's building codes.

Ontario Fire Code
Governs the standards of equipment, systems, buildings, structures, land and premises, as those standards relate to fire safety or the risk created by the presence of unsafe levels of carbon monoxide.

Ontario Labour Relations Board
Quasi-judicial arm of the Ontario Ministry of Labour mandated to mediate and adjudicate cases involving the Employment Standards Act, Occupational Health and Safety Act, and Labour Relations Act.

Ontario One Call
Central clearing house for excavators and utility providers to help Ontarians avoid damaging underground infrastructure such as gas, water, sewer, phone, and electrical lines and avoid legal liability for damage they cause through excavation.

Professional Engineers of Ontario
Self-regulating body with a provincial mandate from the *Professional Engineers Act* to govern Ontario's 73,000 professional engineers, and set standards for, certify, and regulate engineering practice in the province.

RenoMark[23]
Voluntary certification association for renovators, offering educational updates on building codes, municipal requirements, and health and safety regulations.

Tarion Warranty Corporation
A private corporation that protects the rights of new home buyers and regulates new home builders by administering and enforcing the *Ontario New Home Warranties Plan Act*, which outlines the warranty protection that new home purchasers are entitled to in Ontario.

Technical Standards and Safety Authority
A not-for-profit, self-funded regulator delivery public safety services on behalf of the government of Ontario in four key sectors: boilers and pressure vessels, and operating engineers; elevating devices, amusement devices and ski lifts; fuels; and, upholstered and stuffed articles.

23 RenoMark, *Why Hire a Member*.

Workplace Safety and Insurance Board
Administers compensation and no-fault insurance, access to industry-specific health and safety information, provides a loss of earnings and health coverage for workers.

Scope of Practice

The scope of practice lays out the areas of competence that general carpenters should have. If one wishes to become a certified carpenter in Ontario, he or she must demonstrate competency across 19 skill sets, including installing windows, cutting and welding steel, and performing landscape and site work, even though some of these skills fall under other trades as defined in the OCTAA regulations and Ontario Labour Relations Board (OLRB) scope of practice decisions based on past-practice (OCOT Training Standards).

The Role of Unions Within the System

Although all unions operate according to their collective agreements, unionized construction agreements are not uniform and are the result of the collective bargaining process between employers and unions. For instance, two agreements could offer similar services but with different wages and benefits packages in order to compete for new members and new work.

Hiring carpenters for a large project is often done through a collective agreement, in which case the tasks, as assigned by employers, must conform to the scope clause found in the collective agreements. There is a great deal of variation among agreements. They may differ according to union, geographic location, or job. It is important to note that the scope defined in a collective agreement and the scope of practice set out by OCOT for compulsory trades do not have to be and are seldom aligned.[24]

Jurisdictional disputes arise when at least one union challenges an employer's interpretation of the scope clause through a written complaint known as a grievance. When this occurs, labour relations practices encourage the parties to reach a settlement among themselves or through the assistance of the OLRB and its processes. Any solution reached is a labour relations solution and not affected by external guidelines, i.e. the OCOT scope of practice.

In the future, we can expect that more rigid enforcement of provincial scope of practice requirements or a higher prevalence of compulsory certification will trigger inevitable conflicts with established labour relations practices.

The Certification Process

If general carpentry became a compulsory certification trade, anyone who wished to practice the trade legally would need to hold a recognized certificate or other proof of certification or apprenticeship. Certification may involve specific forms of apprenticeship, written tests, class hours, and membership fees. In Ontario, someone who wishes to work in a compulsory or restricted trade must hold either a Certificate of Qualification issued by the MTCU or be registered as an apprentice with the OCOT.[25]

In order to work in a trade with compulsory certification, an applicant must fulfill a number of requirements. He or she must obtain a Registered Training Agreement from the MTCU, pay a membership fee for the OCOT, and obtain a Certificate of Qualification (CofQ) that entitles them to claim journeyperson status. To obtain a CofQ, the candidate must complete an apprenticeship and successfully pass a qualification exam. A candidate is permitted to write the exam once he or she has completed the requirements for an apprenticeship as outlined by the college (earning a Certificate of Apprenticeship) or have obtained a trade equivalency by completing a Trade Equivalency Assessment. Members who have a Trade Equivalency may be issued a Provisional Certificate of Qualification for up to 180 days that will allow them to practice their trade until they can complete the exam.

The Implications of Compulsory Certification Across Trades

The main implication of compulsory certification in any trade is a restriction in the supply of that trade, i.e. the number of workers available and the number of workers apprenticing, along with reduced competition, higher wages, and reduced incentive to innovate. Jurisdictional barriers that reduce competition create a vested interest for those who benefit from the system and they, in turn, will endeavour to keep barriers to entry high. This makes it politically difficult

24 Note that in some types of construction, such as residential and roads, composite crews may be permitted in which members can perform a variety of functions. In other types, such as industrial, commercial, and institutional (ICI), roles are more rigidly defined. The ICI sector is governed by specific legislation and regulations which both limits and grants jurisdictional access to construction unions.

25 Ontario College of Trades, *Member Application For Apprentice Applicants*.

to deregulate trades, even if the benefits of compulsory certification do not outweigh the costs.[26]

In addition to endangering the livelihood of those already in a trade, compulsory certification raises the cost of finding a job in the trades for the first time. Rather than simply being able to learn the skills needed to do the job to an employer's requirements, tradespeople must also complete the certification requirements set out by the OCOT. This reduces the opportunities for economically vulnerable workers without the means to undertake the certification process.

The provincial governing body setting a single standard for the quality of work and training will set that standard high, since lower standards are likely to be inappropriate for large and ICI projects. Higher standards will command a higher price, but not all jobs entail the same level of complexity. This means that Ontarians will not be able to determine what standards are appropriate and affordable for their projects.

Finally, when more trades are made compulsory, the number of additional jobs that any given tradesperson can legally do is reduced. In addition to increasing the number of workers required, enumerating the duties that a tradesperson can or cannot do reduces the ability of workers to experiment with new techniques that may improve the efficiency or quality of their work.

This may be especially true if all four trades currently under review for compulsory certification (general carpenters, drywall finisher and plasterers, floor covering installers, and construction millwrights) are made compulsory. By eliminating the chance for functional overlap between trades, the current OCOT process may trap Ontario's journeypersons in the past, and prevent innovation and advancement. Although the policy is aimed at raising the standard for all Ontario trades people, the unintended consequences of compulsory certification could lead to just the opposite.

The Case Against Compulsory Certification for General Carpentry

Compulsory certification together with the enforcement of the OCTAA scope of work will create complexity and generate significant costs. The OCTAA regulatory definition of carpenter is not only out of line with the scope of work of many self-employed carpenters, it does not conform to the jurisprudence set by countless awards issued through the Ontario Labour Relations Board (OLRB), either. Carpenters that have been practicing their craft for years or decades, even if they have been doing it safely, will be forced to divert their efforts away from their work and toward becoming certified. The MTCU Employment Ontario guide for general carpenters says that an apprenticeship for carpentry is 7,200 hours, or four years. Unless equivalency can be proven, this is not a small time commitment.

Once an apprenticeship is complete, trades people must visit one of 29 MTCU apprenticeship offices around the province to write their exam. These factors together will reduce the supply of carpenters legally able to do their work. This shortage will be felt even more strongly in less populated areas of the province, where there may not be enough journeypersons for an apprentice to train with.

An inability to find sufficient supervision under enforced apprenticeship ratios, too, will raise the time commitment of completing an apprenticeship, for those who do not give up, discouraged or unable to bear the cost. Other provinces have successfully raised their ratios, and so may become more attractive than Ontario for prospective carpenters.

While higher wages are desirable for certified workers, they may push more work into the cheaper underground cash economy. When workers are operating illegally, it becomes difficult to hold them legally responsible for bad, uninsured, and even unsafe work. This is especially worrisome in the case of economically vulnerable Ontarians, who still need carpentry work done, regardless of the government's plans for skilled trades. If the price of construction work increases, some families may simply be unable to afford the rates of certified journeypersons, and resort to 'under-the-table' labour or forego necessary renovations. Unless significant gains to health and safety results can be expected from mandatory certification, they will not outweigh the increased risk that Ontarians may face. And as mentioned, the evidence for those gains is lacking.

It is understood that increased costs may justify better health, safety and quality outcomes, but compulsory certification should not be compared against an unregulated carpentry market. The reality in Ontario is a market in which building codes and inspectors and health and safety regulations already ensure a consistent level of safety in major projects. Health and safety gains would have to be beyond what is achieved by existing regulation to count as a benefit, as well as countering anticipated losses in health and safety as a result of reduced competition (MTCU 2008).

26 For discussion of the pros and cons of compulsory certification anticipated by the government, see "Compulsory Certification: Pros and Cons."

Summary

Compulsory certification of carpenters is certain to raise the costs of construction work for Ontarians, but there are no obvious benefits given that Ontario already has a robust regime of quality and safety regulations. Compulsory certification would raise the price of work and the cost of becoming employed in the midst of a sluggish economy, and runs the risk of reducing the productivity of Ontario's building trades, driving workers and prospective customers to other provinces.

Quebec Model: Certification Everywhere

The construction industry in Quebec has embraced compulsory certification in every aspect of the construction process.[27] Quebec has 26 compulsory certified trades in construction which include roofers, painters, tile setters, carpenters, bricklayers and heavy equipment operators.

This model creates arbitrary skill-set distinctions that compartmentalize the trades across all construction sectors: residential, commercial, institutional and industrial. A home builder or general contractor that wants to install ceramic tiles in a kitchen or office complex will have to hire a "tile setter" tradesperson to get the job done. In the same building if they want carpets to be installed, the work can only be performed by a "resilient flooring layer" tradesperson. Neither tradesperson can perform the other task without violating Quebec's training legislation (Descôteaux 2010b).

The cumulative impact is a dramatic compartmentalization of trades, which negatively impacts the trades in two ways: more labour is needed to complete a project which challenges project management, impacting both timelines and costs, and it creates a significant barrier to entry as each trade has significant control over the supply of workers which labour uses to secure advantageous bargaining positions.

There are other, less obvious, concerns that arise. In piecemeal trade work there is less accountability for defective work performed because determining who is responsible is more difficult under a system with more independent parts. As the number of workers and subcontractors increases, the number of steps to job completion also increases. This extends timelines and also creates less accountability for the full project, since workers are only performing a small, specialized part before several other trades follow to complete the work.

A 2010 report by the Montreal Economic Institute estimated that the total impact of certification increases the cost of building by 10.5%. and the certification framework as a whole has a negative impact on Quebec's GDP of roughly 1.5% representing a loss of $2.4 billion and 52,000 jobs (Descôteaux 2010: 3). The Quebec model should act as a warning of the costs that compulsory certification could have in Ontario.

Most importantly, Quebec's system of across-the-board compulsory certification **creates fewer apprenticeship opportunities for workers**. According to the most recent National Apprenticeship Survey **the percentage of apprentices who have full-time jobs is significantly lower in Quebec than in any other jurisdiction** (p. 15). Compulsory certification also affects wages and income in Quebec compared to the rest of Canada. While apprentices in Quebec enjoy higher hourly wages than workers in many provinces, due to compartmentalization of trades, Quebec apprentices work fewer hours and have an annual income 16% lower than the rest of Canada (p. 42).

27 Exemptions are provided for home renovation.

A typical bathroom renovation can often be completed by one experienced renovator. One of the most important tasks completed on a daily basis by the renovator is keeping the homeowners up to date with progress and ensuring they understand the work being done on their home. If all the trades identified under the Ontario College of Trades were to become mandatory, there would be a never-ending parade of strangers in and out of a home to complete a simple renovation, the length of time it would take to complete would increase substantially, and costs to the homeowner would increase by a minimum of 25 percent.

JAMIE ADAM, PIONEER CRAFTSMEN, KITCHENER

VI

Summary of Conclusions and Recommendations

"The success of the College will depend on its ability to address the labour shortages in the trades, elevate the standards in the industry, protect consumers, and promote the attractiveness of careers in the skilled trades. In its current form, however, the College is not well positioned to deliver on many of the core elements of its mandate." (Holmes and Hjartarson 2013: 2)

OCOT's public interest agenda must be more clearly defined and its regulatory activities aligned to meet and uphold this agenda.

This includes identifying gaps and overlaps in Ontario's current regulatory network and expanding the mandate to include promotion of trades, education and skills development opportunities, and support for the province's economic goals.

There are systemic flaws in the classification review process.

Decisions are being made without sufficient empirical evidence and representation from affected parties. The criteria for decision making lacks coherence. The trend of regulation for its own sake must be replaced by rational risk assessment models and a minimalist approach to compulsory certification.

The compulsory certification system promotes compartmentalization and does not reflect the reality of a construction industry that is complex and highly integrated.

The certification process is biased toward increasing the number of compulsory trades at the cost of small businesses, rural communities, consumers and overall competitiveness. Cutting off access to trades training and restricting mobility between skilled trades only serves to feed the growth of the underground economy. Industry and government must work together to increase the incentives to utilize legitimate contractors.

Rather than attracting and retaining youth and new entrants to the workforce, the current system blocks their access and diverts them to other provinces.

The ratio system must be overhauled, new training centres authorized, and other barriers to access identified and eliminated.

The current system of skilled trades governance in the construction industry does not provide accountability and transparency to stakeholders.

Effective governance requires buy-in, information sharing, and confidence building. OCOT should utilize its research mandate more broadly and it must actively counter the perception of bias towards organized labour. It should also seek to relocate stakeholder activities outside of the GTA where possible.

Over-regulation imposes significant direct and indirect costs on Ontarians that far exceed any potential benefits.

Higher costs diminish Ontario's competitiveness compared to other provinces; reduce access to housing that is affordable; diminish Ontario's appeal as a site for domestic business expansion and foreign investment; and makes it more difficult to provide affordable infrastructure for Ontario's communities and businesses. Cost-benefit analyses of new regulations must consider the public interest in all its facets, including the effects on consumers, employers, entrepreneurship and overall competitiveness. OCOT needs to be repositioned so that it doesn't duplicate functions that are better served by other entities.

Annex 1:
OCOT Lists of Construction Trades

- Architectural Glass and Metal Technician
- Brick and Stone Mason
- Cement (Concrete) Finisher
- Concrete Pump Operator
- Construction Boilermaker
- Construction Craft Worker
- Construction Millwright
- Drywall Finisher and Plasterer
- Drywall, Acoustic and Lathing Applicator
- Electrician – Construction and Maintenance▲
- Electrician – Domestic and Rural▲
- Exterior Insulated Finish Systems Mechanic
- Floor Covering Installer
- General Carpenter
- Hazardous Materials Worker
- Heat and Frost Insulator
- Heavy Equipment Operator – Dozer
- Heavy Equipment Operator – Excavator
- Heavy Equipment Operator –Tractor Loader Backhoe
- Hoisting Engineer – Mobile Crane Operator 1▲
- Hoisting Engineer – Mobile Crane Operator 2▲
- Hoisting Engineer – Tower Crane Operator▲
- Ironworker – Generalist
- Ironworker – Structural and Ornamental
- Native Residential Construction Worker
- Painter and Decorator – Commercial and Residential
- Painter and Decorator – Industrial
- Plumber▲
- Powerline Technician
- Precast Concrete Erector
- Precast Concrete Finisher
- Refractory Mason
- Refrigeration and Air Conditioning Systems Mechanic▲
- Reinforcing Rodworker
- Residential (Low Rise) Sheet Metal Installer▲
- Residential Air Conditioning Systems Mechanic▲
- Restoration Mason
- Roofer
- Sheet Metal Worker▲
- Sprinkler and Fire Protection Installer
- Steamfitter
- Terrazzo, Tile and Marble Setter

▲ Indicates a designated compulsory trade

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