Do Labour Shortages Exist in Canada? Reconciling the Views of Employers and Economists

by Philip Cross

Contents

Executive summary

The question of whether Canada's economy suffers from labour shortages has been viewed quite differently by employers and economists. The business community almost universally identifies shortages as a problem, especially for skilled workers. That shortages so far have been less severe or widespread than just before the 2008 recession does not mean they are non-existent. Economists are more skeptical, recalling past warnings of shortages that did not materialize while noting that business forecasts of shortages could be motivated by the self-interest of lobbying for measures that boost labour supply and put a lid on wage costs. Moreover, the available data on vacancies and wages seem benign, at least at the national level.

This paper attempts to reconcile these two seemingly opposite views. First, it concludes that employers, drawing on their experience with shortages before the recession, have been more innovative in adopting strategies to increase labour supply. These include encouraging employees to delay retirement and work longer hours (nearly one-third of Albertans work over 50 hours a week). However, working incumbent employees more intensively is not sustainable in the long term, especially for older workers. Much concern about shortages is based on the looming retirement of the boomer generation, especially since new sources of labour supply take time to adapt. However, economists note that the track record of predicting shortages based on the need to replace retirees is poor: Europe today is an excellent example of an older society without a shortage of labour.

The next point is the existence of a record gap between unemployment for adults and youths. This distorts measures of available labour supply that economists study if employers do not regard youths as substitutes for older workers. The reasons for the high level of youth unemployment at a time of shortages in some sectors partly reflects the skills youths have acquired, especially their marked shift from community colleges to university education over the past decade. Youth unemployment also is high because their participation rate has stayed high, especially among teenagers and full-time students who employers are reluctant to hire. Meanwhile, training conducted by firms has

lagged, leaving the public sector increasingly responsible for human capital formation. Not surprisingly, labour market outcomes have deteriorated too.

Finally, national wages have not accelerated markedly due to lingering slow growth in central Canada. This has masked a clear upturn in wages in most Western provinces and in Newfoundland. Firms have also resorted to a wide range of non-wage benefits to induce people to join them, partly to avoid having to pay more for their incumbent employees.

Introduction

Are there labour shortages in Canada? The answer from the business community is an unequivocal yes. Every major business organization, including the Canadian Chamber of Commerce, the Canadian Council of Chief Executives, the Canadian Manufacturers and Exporters, and the Canadian Federation of Independent Businesses, identifies a shortage of labour as a problem and is often the number one challenge facing businesses, especially for skilled trades. The final assessment of the National Skills Summit was that there was a "very real skills gap" in Canada and that "despite recent suggestions the skills gap may be overstated, business leaders and senior executives . . . are keenly aware of the urgency around skills and training in Canada" (Association of Canadian Community Colleges, 2013).

Economists are more skeptical than employers about the extent of labour shortages in Canada. This reflects the difficulty in measuring labour shortages in conventional data sources such as job vacancies, as well as the lack of upward pressure on the overall wage bill.[4] More generally, economists are suspicious of forecasts of shortages based on demographic trends, which have a poor forecasting record (Freeman, 2006: 18). The underlying strength of demand is a better determinant of the evolution of the labour market than supply; Europe's population is aging faster than Canada's, but has a surplus of labour because of its weaker economic growth.

This paper examines more closely the question of whether specific types of labour shortages exist or are looming in Canada, with the goal of explaining and reconciling the views of business and economists. Most data point to nascent shortages in parts of Canada and in some industries. The Bank of Canada's survey of large firms found 22% reported labour shortages in mid-2014, up from 20% a year earlier and a low of 10% during the recession but below the highs of

4 The PBO provides a good example of the conventional economic view of national shortages, focusing on vacancy rates and wages. See "Labour Market Assessment 2014" (2014).

40% set just before the recession (2014). That these shortages are not as severe as in 2007 and early 2008 does not detract from their existence.

One reason shortages are less severe than before the recession is that employers have adopted several strategies to expand the total labour supply, drawing on their earlier experience with shortages. These include keeping employees in the labour force beyond the usual retirement age, extending their hours of work, and hiring them to do multiple jobs. The Temporary Foreign Workers program has helped alleviate shortages in specific locales and industries. Using all these tools to increase labour supply, employers have capped conventional measures of shortages and their wage bill. This is a tribute to the adaptability of employers faced with the reality of current and impending shortages in some parts of the country and for some skills across most of Canada.

However, employers know that many of these mechanisms cannot be sustained for long, which may explain why they are concerned about shortages now and in the near future. Some of the disconnect between how businesses and economists approach the question of shortages revolves around the time frame being addressed. Economists look for evidence of shortages in data, which inevitably are backward looking. Firms approach the question with an eye to the future, knowing that they will soon have to replace their oldest workers with new sources of labour.

The future supply of labour is worrisome for many employers. One of the most striking divides in today's labour market is the record-sized gap between unemployment for adults and youths.[5] For adults, unemployment is close to a record low, while it remains stubbornly high among youths. This dichotomy by age also helps explain the difference between how employers and economists assess the question of shortages. Employers want mature people who can step in and do a job immediately, apparently shunning some youths as lacking the commitment, the experience, or the skills they require. For all these reasons, employers do not regard some youths as the close substitute for adult employees implied by several statistics, such as the simple comparison of the number of unemployed to job vacancies. High unemployment among youths creates the statistical illusion that there is a large pool of labour available to work, raising questions among economists about the existence of shortages. However, this calculation is misleading if employers do not regard youths, especially teenagers, as a substitute for their most experienced and productive workers who are approaching retirement. If youths are not qualified, this increases the need for employers to encourage their older workers to stay in the labour force, often working very long hours.

One reason why many firms do not regard some of the current cohort of youths as substitutes for an aging labour force is the different skills acquired by today's youths. As the share of youths in community colleges declines and those

5 Adults are defined as people 25 years and over, while youths are between 16 and 24 years old.

in university increase, a mismatch may be created between the skills possessed by youths and the skills demanded by employers. Measured by unemployment or employment rates, high school graduates who subsequently acquire a certificate or diploma fare significantly better than university graduates. One implication is that Canada's education system has to do a better job of producing graduates with the skills employers want. It is important to note as well that these employment outcomes have not persisted long enough to change earnings; based on past earnings, it appears lucrative for students to pursue a university education, and students will respond to this incentive until relative earnings change.

Youths also require more realistic expectations about where new jobs are being created and entry level wage rates. A further complication is that almost half of full-time students are looking for work, but their class load obviously limits the time and energy they can devote to work. For employers, this rules out many full-time students as viable job candidates. One encouraging note for youths is that the retention rate for those who do find employment has increased.

Cutbacks to in-house training by firms occurred at the same time that Canada's education system expanded significantly, notably universities. The result, from a macro perspective, is a substitution of human capital formation conducted in our public sector for that done in our private sector.[6] From this perspective, it is not surprising the result has been negative for the functioning of Canada's labour markets. One solution is to have the private sector more involved in education and training. Some firms in the private education sector offer courses that last 8 to 12 weeks (not 2 to 4 years) that teach specific skills, and then provide students with a placement officer to help them find work upon finishing their studies.[7]

More in-house training would allow firms to develop the specific skills they need. Little is known about the reasons for the reluctance of firms to provide more training. One possible explanation is that there has been a shift from firm-specific skills to general skills, possibly a result of the shift in jobs from manufacturing (where knowledge of a particular process is not easily transferable to another firm) to natural resources and construction, where skills are more easily transferred.

The final puzzle is why wage increases have not acceleerated as incipient shortages threaten. Part of the answer is the weight of central Canada's weak labour markets in the national statistics, which hide a clear acceleration of wages in some provinces and industries. As well, employers face a dilemma; if they boost wages to attract new workers, they will have to raise wages for their incumbent labour force. This is especially true for one-industry

6 Although much of the training done inside firms is subsidized by the federal government through Labour Market Agreements with the provinces, the fact that the training is designed by firms makes it much different from training provided in public education institutions.

7 An example is courses offered by General Assembly in New York. See https:/generalassemb.ly/new-york-city.

towns, which often occurs in the resource sector. So there is an incentive for employers to use a variety of non-wage mechanisms to attract new workers, including advertising, recruiting campaigns, labour brokers, paying for moving expenses, and signing bonuses. Increasing their use of temporary help, subcontracting, and piecework also helps firms avoid the problem of having to raise wages for all employees to hire incremental amounts of labour.

The current state of the labour market

It is well known that employment in Canada was the least affected by the 2008–09 economic crisis and subsequently rebounded quicker than in the other major industrialized nations. The rebound was particularly brisk in Western Canada and Newfoundland, while central Canada and the Maritime provinces have lagged. At the same time, the labour force participation rate fell during the recovery, reflecting the impact of Canada's rapidly aging population (Statistics Canada, 2011). As a result of rising labour demand and a shrinking participation rate, the unemployment rate was unusually low after four years of recovery, at 7% compared with nearly 10% during the previous two recoveries (figure 1).

The unemployment rate is particularly low in Western Canada, especially Alberta (4.6% in 2013) and Saskatchewan (4.1%). While unemployment is not quite as low as during the worst of the labour shortages in 2007 and early 2008, the memory firms have of these difficulties is fresh enough to take pre-emptive actions to avoid repeating that experience. The next section details these efforts to increase labour supply.

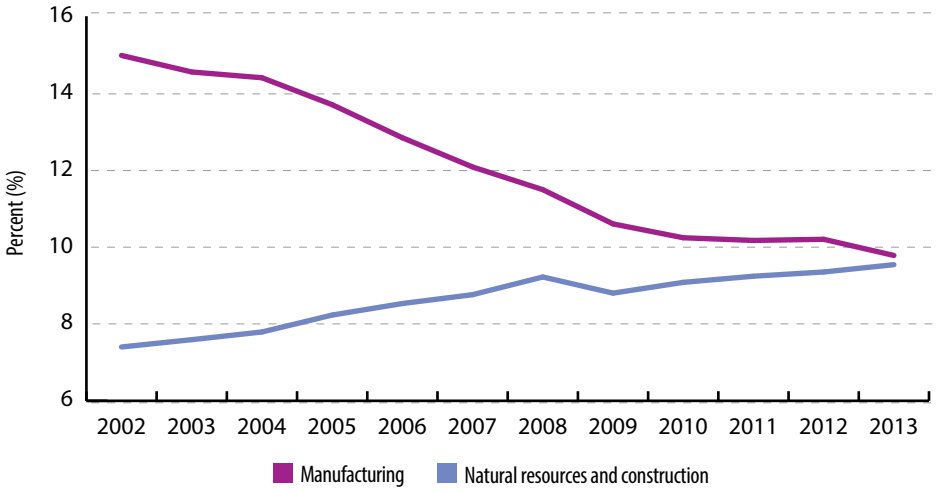
There have been important changes in the industrial distribution of jobs over the past decade. It is well known that manufacturing's share of jobs has receded, from 15% to 10%, driven by the emphasis of firms on higher productivity to assure their long-term survival and compounded by losses during the recession. Less well known is that employment in natural resources and construction have risen to equal the importance of manufacturing (figure 2). This shift in the location and the industry of employment is a major challenge for the efficient functioning of Canada's labour market.

Wage rates in Western Canada and Newfoundland have risen sharply relative to central Canada in response to changes in labour demand. Between 2009 and 2013, nominal average hourly earnings (including overtime) rose 20.9% in Newfoundland, 18.2% in Saskatchewan, and 14.1% in Alberta

Figure 1: Unemployment rate in recoveries

Source: Statistics Canada, Table 282-0087: LFS estimates by sex and age group.

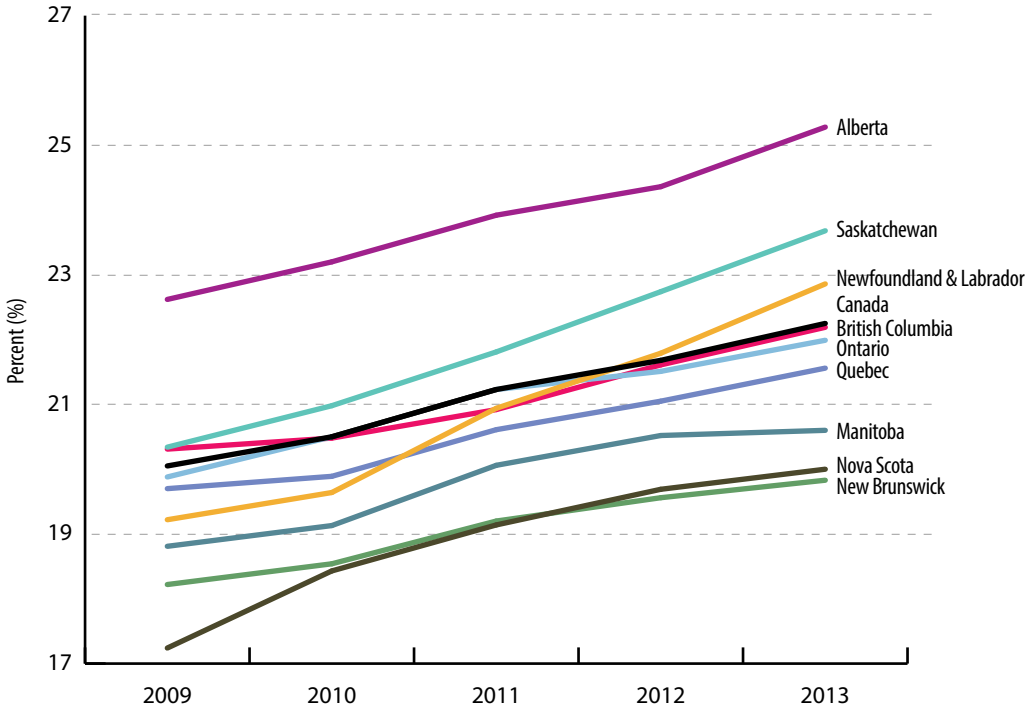
Figure 2: Industry shares of total employment



Source: Statistics Canada, Table 282-0088: LFS estimates employment by NAICS.

(Statistics Canada, 2014a). This is significantly more than increases of between 9% and 11% in the other provinces. Newfoundland's hike propelled its level of wages from sixth place among the provinces to third in just four years (figure 3). The growing gap between wages in Newfoundland, Saskatchewan, and Alberta and the rest of the country reflects how efforts to increase the supply of labour in these provinces have not been sufficient to stem the rising pressure on wages, a classic symptom of how the labour market signals shortages. Nationally, wage rates remain constrained by slow growth of central Canada.

Figure 3: Average hourly earnings by province, including overtime



Source: Statistics Canada, Table 281-0030: Average hourly earnings for employees paid by the hour (SEPH), Canada.

Efforts to increase labour supply

Employers have not sat back and just passively posted help wanted signs to fill their need for more labour. Firms have actively adopted strategies to increase their labour supply and alleviate shortages (Catt and Scudamore, 1997). They have expanded the labour supply by raising the intensity of use of the incumbent labour force, as well as expanding the use of labour from external sources. Increased intensity has been the most prominent tactic, notably encouraging older workers to stay in the labour force, extending the workweek of employees, and paying for more overtime. Expanding the use of external labour has focused on hiring multiple job holders (such as letting a new employee keep their old job) and importing workers from abroad. It is telling that these tactics have been used most extensively in Western Canada, especially Alberta, where nascent shortages have been most acute. The preferred solution for employers is retaining current employees by extending their careers and their hours of work, since that eliminates the search costs of finding and training new employees. Increasing immigration under the Temporary Foreign Workers program may soon fall out of favour because of the extra costs recently imposed. There is little data to support the notion of employers training their labour force as a solution to shortages.

With the number of people 65 years and over rising from 3.8 million in 2003 to 5.1 million in 2013, it was imperative that employers tap into this segment of the population as the quickest way to expand labour supply. The removal of many institutional barriers helped, including the end of mandatory retirement and incentives to delay receipt of Canada Pension Plan benefits. In all regions, the aging of our society has led to a mild increase in employment rates among people over 65 years, from 7.2% to 12.5% over the past decade. By far the largest increases were in Alberta and Saskatchewan, where the employment rate rose over 7 points to 18.8% and 18.5%, respectively. Last year, over one-third of all people aged between 65 and 69 years were employed in Alberta and Saskatchewan, compared with 26.3% in Ontario and 18.6% in Quebec. The regional gap was proportionately greater among people 70 years and over, with over one in 10 in Alberta and Saskatchewan employed versus

6.7% in Ontario and 4.7% in Quebec. Newfoundland has seen the fastest increase in employment of people 65 years and older, from a Canada-low of 2.9% in 2003 to 8.4% in 2013. The result has been a radical change in the face of Newfoundland's labour force. At the turn of this century, only one in a 100 Newfoundlanders over the age of 65 were still in the labour force; by 2013, that had risen to one in 10, including one in five in the 65 to 69 group (Statistics Canada, 2014b).

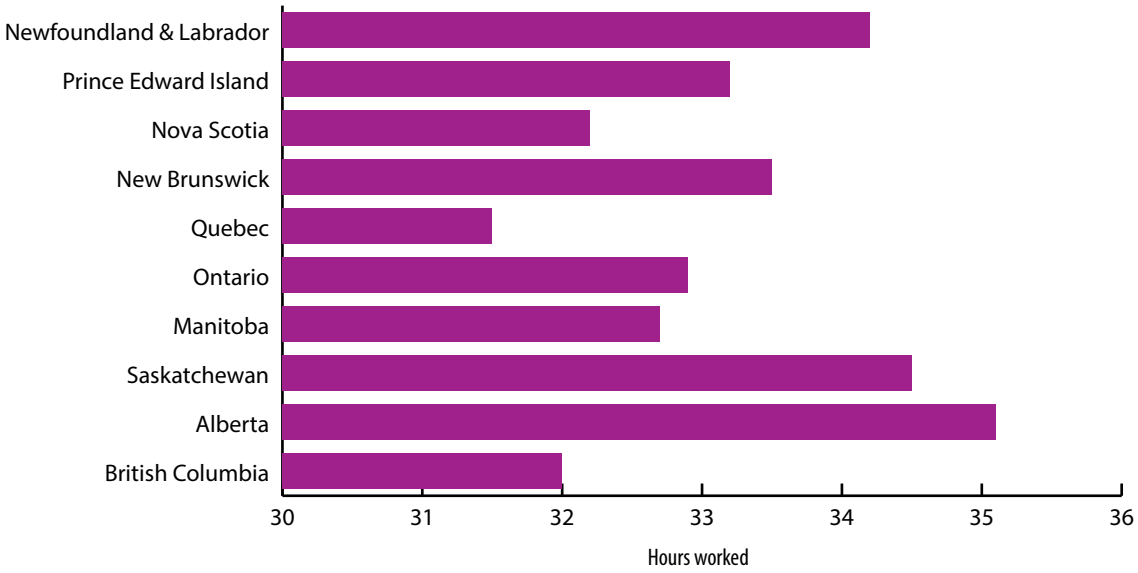
Employers in Alberta asked many of their employees to work long hours, a tactic that reduces the cost of searching for new employees. Between 2003 and 2013, the number of employees working 40 hours or more a week rose by 35.2% in Alberta, compared with 10.8% in the rest of Canada. This group working long hours comprised 52.0% of the 2.2 million workers in Alberta, compared with 42.5% in the rest of Canada. The gap is even more striking for the share of workers with exceptionally long workweeks of 50 hours or more; this group makes up 29% of all workers in Alberta, versus 12.4% in the rest of Canada. Nor does this just reflect the practice of long hours in remote resource sites, followed by lengthy spells of time off; the number of Albertans working more than a 40-hour workweek rose by nearly a third over the past decade, and at 588,000 people was above its previous peak set in 2008 (Statistics Canada, 2014c).

The trend to working long hours in Alberta was led by people 55 years and older. This group accounted for nearly half of the increase in people working exceptionally long workweeks of 50 hours or more. This may reflect that they are the most experienced and skilled employees many firms have; as well, this group may be better positioned to work longer hours, since their child-raising responsibilities are lower. However, there is a risk for employers asking their oldest employees to work longer, as it may push them to retire either to reduce the stress of working or because they will reach the pension savings they need more quickly from the extra income they earn from working longer.

Employers in Alberta and Saskatchewan have found it preferable to pay their employees to work more overtime than search for new workers. Over one in 10 workers in Alberta and Saskatchewan were paid overtime in 2013. The number of employees being paid to work overtime rose to a record 239,000 in Alberta last year, up 57% in the past decade. Saskatchewan showed a similar increase of 60%, to 56,000. Elsewhere in Canada, the number of people working paid overtime rose only 3.3% since 2003 to 1.0 million workers last year. Ontario pulled down the national average with a drop of 12%. Not surprisingly, these provincial rankings follow closely the percent of the population working long workweeks of 40 hours or more (Statistics Canada, 2014d).[8]

8 The share of the people working 40 hours or more a week ranges from 52.0% in Alberta, 48.1% in Saskatchewan and 45.5% in Newfoundland to 45.1% in Ontario and 37.0% in Quebec (Statistics Canada, 2014d).

Figure 4: Average actual hours worked by province, 2013



Source: Statistics Canada, Table 282-0018: LFS estimates by actual hours worked, main or all jobs, Canada.

Figure 4 summarizes the result of all these changes to the intensity of the workweek by province. The longest workweek in terms of actual hours worked is 35.1 hours in Alberta, followed by 34.5 hours in Saskatchewan (Statistics Canada, 2014c). Newfoundland has jumped into third place at 34.2 hours, up nearly a full hour over the past decade. Ontario's average workweek has fallen over the past decade to 32.9 hours. Quebec has the shortest workweek at 31.5 hours (Statistics Canada, 2014c).

Squeezing more hours out of workers is a short-term fix to labour shortages for some employers. However, they are likely to view it as an unsustainable solution, especially the very long hours worked by people over 55 years old and multiple job holders working more than 50 hours a week. Knowing employees cannot be asked to work long hours and delay retirement indefinitely may be one reason why employers say labour is in short supply, even as they have found temporary solutions to contain the problem.

This highlights that the time span being considered is an important dimension to the question of labour shortages. Labour shortages can be prospective as well as current. One reason for a prospective shortage of workers is related to the imminent retirement of the large boomer cohort. Another is the knowledge that new projects will increase labour demand, such as the large liquefied natural gas projects in BC, with the government acting to assure adequate labour as a necessary condition before work starts on these

mega-projects.[9] Similarly, mega-projects in Alberta's oil sands are scheduled to expand well into the next decade. This time dimension was acknowledged by an OECD report on Canada's skills mismatches, which found mismatches "in specific technical areas that in some cases will take time to remedy" (2014: 23)

Business organizations usually ask forward-looking questions about labour shortages. In a survey of its members, the Canadian Council of Chief Executives found that 10% rated a shortage of skilled workers as a big problem now, but "two-thirds of respondents expect shortages to have a medium or large impact on future major projects" (2014). The Canadian Chamber of Commerce was emphatic about both "current and expected shortages," citing problems recruiting workers in natural resources and information technology (IT) today and having to soon replace a wave of retirements in the construction industry (Potvin, 2013).[10] HRSDC provides some estimates of future labour shortages. Its 10-year ahead look at the labour market identified the occupations that represented 9.3% of employment in 2007 were at risk for shortages, mostly in health, natural sciences, human resource managers, natural resources, and construction trades (Policy Research Directorate, 2008).

Adding a forward-looking dimension helps reconcile the view of employers that shortages exist or are imminent with the statistics on the recent state of the labour market. Employers have to be looking to the future; they do not have the luxury of waiting until shortages appear in the statistics, especially given the long gestation time of training for skilled trades or experienced knowledge workers. Economists dismiss such forecasts as self-serving, citing past cries of wolf about labour shortages. More specifically, economists say there cannot be shortages; wages will rise to choke off labour demand and equalize it with labour supply.

Despite all the publicity it has garnered, the Temporary Foreign Worker (TFW) program is a small part of the inflow of foreign workers into Canada. The program began in 1973 for highly-skilled jobs as well as agricultural workers and caregivers. It was extended in 2002 to other types of low-skilled workers, provided firms submitted a Labour Market Opinion (LMO) that shortages existed and this was approved by the federal government; later the permits were extended from one to four years. Applications were expedited for Alberta and BC in 2007 due to acute shortages, and these two provinces accounted for nearly two-thirds of demand (Gross, 2014). There are costs for firms participating in this program, including a $275 application fee, $150 for a visa, advance payment of return airfare, and registration in the provincial worker's compensation regime.

9 In May 2014, the BC government announced a $175 million "skills for jobs" plan to encourage students to acquire the trade skills required by these projects. (See Hunter and Bradshaw (2014, May 1). B.C. shifts hundreds of millions to trades to back energy bet. *Globe and Mail).*

10 The Canadian Chamber of Commerce estimated that by 2016 Canada will have 1.5 million vacancies in skilled jobs.

The government recently announced a hike to these fees, a tightening of the critieria before issuing an LMO, and increased inspections of employers.

The number of workers allowed into Canada under the TFW rose from 101,000 in 2002 to 338,000 in 2012. The majority are intra-firm transfers or entry under free trade agreements, and do not require a Labour Market Opinion to be approved by government. Most workers can apply for permanent immigrant status after a few years in Canada. In 2012, just over 150,000 LMOs were approved, of which just over half were for low-skill jobs. Because the entrants are screened to have the specific skills required by employers, they should be a good match. However, by boosting labour supply and restraining possible wage increases that would signal a shortage, the program helps foster the impression that shortages in the labour market are not worsening.

A longer-term solution to shortages of skilled workers is for firms to train their own employees. Canada has always lagged in its investment in training, ranking 20 out of 26 OECD countries in hours of training (OECD, 2014: 28). Only 29% of Canadians participate in job-related education and training, compared with 44% in the US (Goldenberg, 2006: ii). Firms appear to have cut back their investment in training (Anson-Cartwright, 2013). The Conference Board of Canada found that spending on learning and development per employee fell 25% between 2006 and 2010 (23). The Canadian Chamber of Commerce says that firms spent less than 2% of their payrolls on training in 2005–06 (Pearson, 2013, Apr. 1). However, the data on training is more impressionistic than precise, since the most valuable training is on the job, not the classroom learning that surveys focus on.

Reasons given for the recalcitrance to spend on training include cost-cutting as global competition intensified, the problem of poaching by other firms, and a general reluctance of firms in Canada to invest in either human or physical capital. Part of the decline may also reflect the steep loss of manufacturing jobs, which require more training than other industries. This also may have led to a shift away from specific skills acquired in training for factory jobs that are not transferable outside the firm. Employment has grown in the construction and resource industries, where skills training is likely to be more easily transferred outside the firm if the employee leaves, reducing the incentive for firms to invest in training their employees. The Canada Jobs Grant is designed to boost training, granting up to $15,000 for in-house training.

Vacancy rates

Many analysts maintain that labour shortages are rare, citing Statistics Canada's new survey of vacancies (results have been published only since 2012). The results show vacant positions are the equivalent of only 1% of total employment. Statistics Canada uses a definition of vacancies that must satisfy three conditions: a position is vacant if a specific position exists, work could start within 30 days, and the employer is actively seeking employees from outside the organization to fill it (2014, June 17).

The definition of vacancies is tailored to capture the way large organizations operate by focusing on whether a specific position is open and if the employer is looking outside the organization to fill it. This is problematic for two reasons. Small firms do not always explicitly have an open position with a job description—and hence do not meet the Statistics Canada definition—as often the employer fills the duties (by themselves or the collaboration of several employees) until a suitable candidate is found, often by word of mouth. As well, firms faced with acute labour shortages may not bother looking outside their organizations to staff an empty position, but rely on internal recruitment to reduce costs (such as training).

Statistics Canada itself provides an excellent example of uniquely pursuing internal recruitment during a time of shortages. During the 2007 Census, it could find only 17,000 of the 27,000 enumerators needed, because of competitive labour markets in many urban areas and Alberta. Its human resource philosophy "gradually changed from trying to hire more people to more effectively using those already on the job" (Statistics Canada, 2008). These changes included extending the collection period, calling in enumerators from nearby areas and deploying its own staff (including Ottawa permanent staff) to various regions to do the work (Statistics Canada, 2007: 1). However, were firms using internal recruitment more extensively, we would expect to have seen more in-house training than has apparently been provided.

There are other sources of data about vacancies, which show a higher rate than Statistics Canada. The Canadian Federation of Independent Businesses (CFIB) produces a survey of vacancies, with a rate of 2.5% at the end of 2013 (Mallett, 2014). Even that might be understated, since the CFIB treats non-responses as zero vacancies. There are several differences between the CFIB survey and Statistics Canada's. The CFIB includes agriculture and excludes the public sector, the opposite of Statistics Canada. Shortages are chronic in agriculture, which is why they have long had their own TFW program.[11] Conversely, shortages are almost non-existent in the public sector, reflecting its very generous compensation packages.[12] Most importantly, the CFIB does not require that a specific position exists, only a need. This definition allows for passive job search, which is especially important for small firms, rather than the active search Statistics Canada requires, which is more likely to be used in large firms. The CFIB sample over-represents small firms, and its data show that vacancies rise as firm size shrinks.

The Conference Board also reports job vacancies, using online data from 79 job-posting websites collected by WANTED Technologies. The totals are comparable to the CFIB results, with a vacancy rate of about 2.5% in recent months, considerably higher than the Statistics Canada estimate but below their pre-recession peaks. The Conference Board covers the public sector, unlike the CFIB (PBO, 2014: 27).

The very short time series available for Statistics Canada's job vacancy data makes it impossible to judge the adequacy of this survey. With only three years of data, analysts cannot assess what constitutes a high or low rate. As Don Drummond concluded in his recent review of labour market data, "there is controversey over whether the numbers are reliable, given the much higher vacancy rate cited in the last two federal budgets" (2014: 11). More importantly, one cannot evaluate whether this survey produces good data, since there is no track record to evaluate. For example, there should be a preditable relationship between the vacancy rate and the unemployment rate. This relationship is captured in the Beveridge Curve, which shows the two move together in the UK and the US (as unemployment rises, vacancies fall).[13] If they did not, there are reasons to question the data. The limited data available shows the unemployment rate in Canada rises at the same time vacancies are increasing, which the CIBC attributes to "a disconnect between the types of workers desired and those that are available in the ranks of the unemployed" (quoted in McGugan, 2014, June 19).

11 As noted by Gross (2014: 20), neither agricultural or caregiver temporary foreign workers programs "has ever raised concerns about increasing unemployment among Canadian workers as it has always been clear that there are labour shortages in those occupations."

12 Many federal government departments only advertise open positions for less than a day outside of government, to contain the deluge of applications most of these openings still draw.

13 The Beveridge Curve is named after the economist William Beveridge, architect of the UK's post-war welfare state.

Employers increasingly differentiate between youths and adults

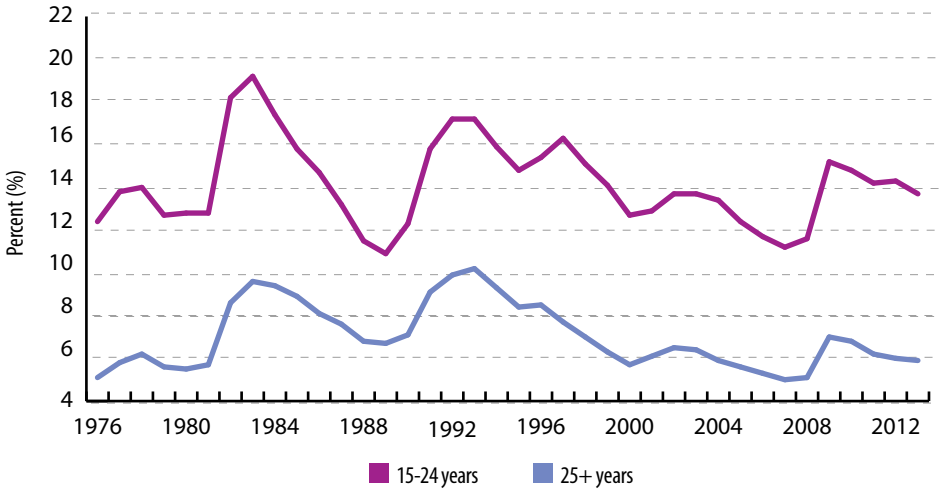
Youths in Canada today have more formal education than ever, yet their labour market outcomes have worsened. The adult unemployment rate in figure 5 has fallen below 6.0% in the fourth year of a sub-par recovery, compared with 8.1% in 1986 and 8.5% in 1996 (the fourth year of these recoveries). Meanwhile, the unemployment rate for youths of 13.7% is almost the same as it was in 1986 and in 1996.[14] Ontario has the largest gap between youth and adult unemployment, of 16.1% versus 6.1% in 2013 (Statistics Canada, 2014b).

The gap between the unemployment rate for youths and adults is unprecedented since the data began in 1976. The ratio of youth unemployment to adult unemployment was 2.4 in 2012 and 2.3 in 2013. This ratio normally declines to about 1.7 in recessions, as adult unemployment rises more than joblessness among youths (youths might be the first to lose jobs, but adults bear the brunt of recessions). However, this ratio hardly budged from 2.3 during the 2009 recession, as the adult unemployment rate rose to only 7.0% compared with 10% in the recessions in the early 1990s and early 1980s (Statistics Canada, 2014b).

The gap between youth and adult unemployment remains near a record because adult unemployment has fallen to near record lows while youth unemployment has stayed stubbornly high. One reason youth unemployment remains high is that youths have stayed in the labour force. This is especially marked for teenagers, whose participation rate remains near 50% in Canada. By comparison, the US teenage participation rate has fallen steadily since the late 1990s to 35% last year (see figure 6). Some of the higher participation rate in Canada may be because higher

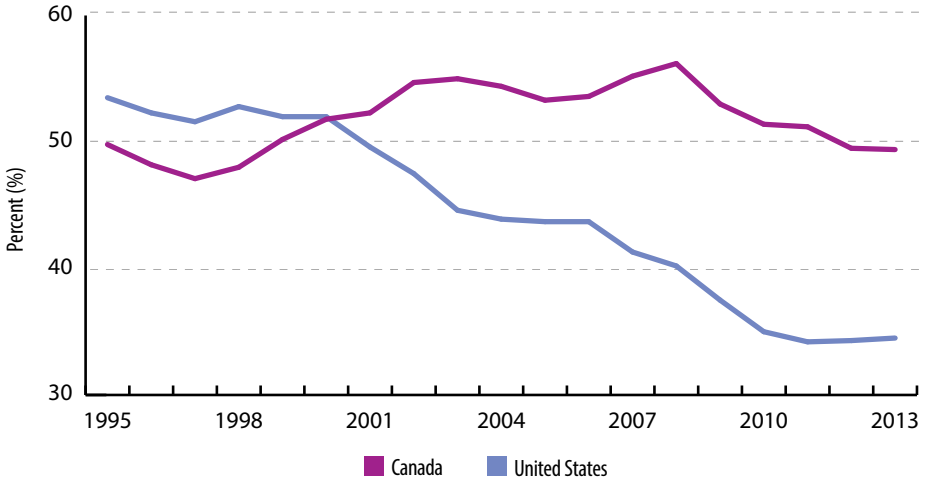
14 A similar divergence between youth and adult unemployment exists in the UK, where youth unemployment rate was 21.1% versus 5.5% for adults.

Figure 5: Unemployment rates by age, 1976–2012



Source: Statistics Canada, Table 282-0002: LFS by sex and detailed age group, Canada.

Figure 6: Participation rate for teenagers, 1995–2013



Source: Statistics Canada, Table 282-0002: LFS, by sex and detailed age group, Canada; and

minimum wage rates increase the incentive to look for a job. The actual gap is probably greater than shown in the graph, since unlike the US data, Canada includes 15 year olds and this group has a low participation rate.

One reason unemployment remains high among youths is their increased tendency to seek employment while being a full-time student (Statistics Canada, 2014e).[15] Of the 4.4 million Canadians between 15 and 24 years, 2.8 million (or 62.2%) are students, and the vast majority (93%) are full-time students. Nevertheless, nearly half of full-time students in this age

15 For full-time students age 15 to 24 years, the participation rate rose from 28.3% in 1976 to 42.2% in 2013.

group say they are in the labour force. However, they are having a difficult time finding a job, as their unemployment rate was 13.6% in 2013, essentially unchanged from the high set during the 2009 recession and well above the 8.0% rate in 1976 (Statistics Canada, 2014e).[16]

The trend for youths who are not students has been the opposite, with unemployment of 12.9%, one of its lowest ever and well below the peaks of 20% set in the 1980s and the 1990s. So employers are not adverse to hiring young people, but evidently are unwilling to hire those who are still students, especially those whose commitment to full-time studies obviously puts large constraints on the type of job and the hours of work they can accept. This is a major reason why an employer would not regard some youths as a substitute for adult employees.

Besides unemployment, other measures of today's labour market look quite different when separating youths from adults. For example, it is often cited that there were 6.2 unemployed people for every job vacancy in 2013 (Statistics Canada, 2014f). However, removing youths from this calculation reduces the ratio by one-third to 4.4 unemployed for every vacancy. For Alberta and Saskatchewan, removing youths lowers their ratio of unemployed per vacancy from 2.3 to 1.6 and 1.5, respectively (Statistics Canada, 2014f).

Employers clearly do not regard some of today's youths as viable replacements for their retiring labour force, even youths with academic credentials. As Cappelli (2013) noted, employers "are not now complaining about the lack of academic skills among job applicants. It is mainly other things that they see as important, in particular the lack of work experience" (10). Experience is defined as "the tacit knowledge about how to do a job that comes only from having done it before" (37).

High youth unemployment is not the fault of employers wanting to fill positions with experienced workers who can step in and immediately do the job. Nor is it a condemnation of youths themselves. It is revealing that unemployment among youths who are not students is near a record low. Some responsibility lies with youths themselves, including their choice of studies, looking for employment while studying full time, their willingness to re-locate, and expectations about wages for entry-level jobs. University of Wilfrid Laurier Professor Tammy Schirle, an expert on Canada's labour market, testified to the House of Commons Finance Committee, saying "I am concerned that the expectations of youth are often out of line with reality," as they expect to immediately land a secure, well-paying job upon graduation and think that other post-secondary studies are beneath them (2014, March 25). It is noteworthy that Pierre Brochu (2013) at the University of Ottawa finds that the retention rate of youths has increased over time, implying that youths who do get hired are increasingly satisfactory to employers. And of course recent women graduates have fared much better than young men.

16 Its record high was 16.0% set in 1997.

The gap between adults and youths persists in many industries

In industry after industry, record low unemployment rates for adults coexist with double-digit unemployment rates for youths.[17] This is especially true of natural resources and construction, but is also evident in transportation, information, and culture, and even education and public administration. Some of this reflects regional differences, especially the resource boom in Western Canada. However, the pervasiveness of this phenomenon suggests that many employers feel some youths lack the necessary skills or do not intend to replace the older workers. Polls of employers cite a lack of social and people skills more than technical skills.[18]

Meanwhile, the labour force in some industries is greying at a much faster rate than Canada's population. This reflects the difficulty in attracting young people to careers in industries such as natural resources. The resource sector has had the most difficulty in attracting youths to join its labour force. Since 1981, the share of youths in its labour force has fallen from 23.8% to 9.5%, while the share of people 55 years and over has doubled from 9.1% to 18.6% in 2013 (Statistics Canada, 2014g). Part of the problem is that unemployment for youths in this industry remains over 10% in Eastern Canada, while it is at record lows in most Western provinces, including 3.6% in Saskatchewan,

17 The unemployment rate for prime-aged adults by industry, with youth unemployment in brackets, were; transportation 3.6% (9.3%); information and culture 4.3% (10.7%); education 3.3% (9.3%); public administration 1.7% (9.3%). The most notable exception was accommodation and food, where youth unemployment was a record low of 7.6%, close to the 6.0% rate for prime-aged adults.

18 Cappelli (2013: 45) cites a Business Roundtable poll that found severe deficits about workplace attitudes and only small deficits for technical and knowledge skills.

3.5% in Alberta, and 7.2% in BC. So unemployed youths in Eastern Canada are spurning the opportunities offered in Western Canada, compounding their shortages.

Low unemployment among adults is not a harbinger of shortages if youth unemployment in an industry remains high. Freeman (2006) has demonstrated that the track record of using projected retirements to forecast replacement demand for younger workers is very poor. The limitations of replacement analysis of retiring workers is revealed by manufacturing in Canada, which is already facing near record low unemployment as its labour force ages rapidly. This will strike many as a surprise with the well-publicized downsizing of this industry over the past decade. However, these cuts have led to an even greater exodus of people from its labour force, which shrank from 2.2 million in 2007 to 1.8 million in 2013. The greying of the labour force in manufacturing is evident in an increase in those 55 years or older from around 200,000 for most of the 1990s to 351,000 in 2013. This raised their share to 19.2% of the labour force in manufacturing, the most of any industry in Canada except farming and health care.[19]

Manufacturing's labour force typically declines during recessions, with the exit of 190,000 people between 2007 and 2009 about equal to the average losses in the early 1980s and early 1990s. What is different is that another 150,000 people left the industry after the recovery began. As a result, the unemployment rate in manufacturing has fallen to 5.2%, near its record low of 4.7% at the peak of the ICT bubble in 2000. Among prime-aged people between 25 and 54 years, the unemployment rate in manufacturing was 4.5%. It is telling that youths in manufacturing still face double-digit unemployment, unlike those in the resource or construction industries in Western Canada. Discouraged by falling job prospects as well as the general aging of the population, the share of youths in the manufacturing labour force has fallen from a peak of nearly 25% in the early 1980s to 8% last year. The co-existence of an aging labour force and high youth unemployment suggests these older workers are not being replaced, often because they are in positions being made redundant by technology (Freeman, 2006: 17). If manufacturers do need more workers in the future, there is always a ready supply offshore.

19 Interestingly, while natural resource and construction jobs fell sharply during the recession, the labour force in these industries barely changed in 2009, unlike marked drops in previous recessions, and then quickly recovered.

What skills and education are needed?

Demand has clearly outstripped supply for some skills, but it is not clear whether the overall demand for skills is increasing. Certainly it is changing, with gains in resources and construction that need skilled trades, and more recently a slowdown in public sector hiring, traditionally a high source of demand for more educated workers. Accompanying these industrial shifts are changes in the geographic location of where skills are needed, from eastern to western Canada, from urban centres to more rural regions, and even from southern to northern Canada. Increasingly, an efficient labour market in Canada means having people with the right mix of skills in different places.

Meanwhile, the supply of skilled labour has struggled to match demand in some provinces and industries. There are several dimensions to this shortfall of supply. The rapid aging of the labour force has already begun to impact the supply of labour. The level and mix of skills coming from our educational system appears to be struggling to keep up with what the market wants. Firms are increasingly reluctant to supply in-house training of employees, and poor practices used by employers to screen job applicants may be cutting some off from good potential hires in their hunt for the so-called "purple squirrel" of an employee who meets almost exactly the criteria for the job.[20]

Skills used to be synonymous with university education. When the National Science Foundation in the US warned of a "looming shortage" of skills, it was referring to scientists and engineers. Indeed, the high-tech bubble

20 According to the Conference Board of Canada, firms in Canada spent $688 on direct learning per employee, versus $1,071 in the US (cited in Anson-Cartwright, 2013: 23). In the US, admittedly a different labour market than Canada, large firms like Starbucks and General Mills have doubled the duration of their interview process since 2010, according to Glassdoor.com, an Internet site on company human resource practices.

in the late 1990s led to a shortage of people trained to handle information technology. However, more recent evidence points to a surplus even in the so-called STEM (science, technology, and math) fields of study (Stephan, 2012). As a result, the premium attached to relative wages for university graduates has eroded slightly in recent years, partly as the resource sector bid up wages for non-university graduates (Policy Research Directorate, 2008: 40). Due to the decade-long boom in Canada's natural resource and construction industries, there has been unprecedented demand for people with the skills to work in trades such as construction and mining. While some of these jobs demand a university education, many require training at a community college or apprenticeship on the job.

Historically, Canadians acquired more post-secondary education outside of universities. Over 9 million Canadians have a post-secondary certificate or diploma, versus 6.5 million possessing a university degree (among those active in the labour force, it is 6.7 million versus 5.1 million) (Statistics Canada, 2014h). Most certificates or diplomas are awarded by community colleges, which offer degrees in a variety of practical trades ranging from construction to health care. However, since the resource and construction boom began in 2003, our labour force has shifted significantly towards people with more university education. Between 2003 and 2013, the labour force possessing a post-secondary diploma grew by 18.4%, versus a 47.4% increase for those with a university degree. The divergence was especially pronounced among the youngest cohort of the labour force. The comparable figures for post-secondary diplomas were 7.1% and 1.1%. As a result, the labour force with post-secondary diplomas is much older than the university-trained labour force. Nearly half of the former are over 45 years, compared with less than 40% of university degree holders (Statistics Canada, 2014h). Again, this raises the prospect of possible shortages, even if this does not appear in today's statistics.

Apprenticeships are an exception to the decline in acquiring skills outside of university. Apprenticeship training has increased markedly in recent years. The number of certificates awarded to apprentices in Canada hovered around 30,000 in 2004, before nearly doubling to 56,913 in 2012. The largest number of apprentices are plumbers, electricians, welders, and carpenters. With 444,672 Canadians registered in apprenticeship training, these programs can make a significant contribution to alleviating future shortages, especially in the construction industry (Statistics Canada, 2014i). There is some overlap between apprenticeship programs and community colleges, with many apprenticeships requiring a small amount of classroom instruction (Anson-Cartwright, 2013: 19). However, only about half of apprentices finish their training.

One advantage of apprentice training is that most credentials are recognized across the country, avoiding the problem of credentials acquired in one province not being accepted in another hampering mobility. Provincial borders significantly hinder inter-provincial migration. According to a study by the Bank of Canada, eliminating barriers to mobility among provinces would

raise migratory flows by 63% (Amirault et al., 2013: 25). This would help alleviate labour shortages in some areas, while reducing unemployment in others.

This shift to university degrees and away from post-secondary diplomas, especially among young people, occurred despite a narrowing of the relative benefits of a university education in terms of getting a job. The employment rate for youths who graduate from high school and then acquire a certificate or diploma is 77.2%, versus 71.8% for university graduates; their unemployment rates are 7.3% and 9.1% respectively. Having a graduate degree actually raises the unemployment rate to 9.4% (Statistics Canada, 2014j).[21] However, the relatively higher earnings for university graduates has not eroded significantly.

While unemployment remains low for university graduates, since 2007 other post-secondary graduates have fared better. This partly reflects the older labour force that possesses non-university degrees, which makes the declining number of youths with these skills more valuable. The more practical orientation of instruction in community colleges than in many university programs is reflected in their better employment outcomes since 2007.

The reason why youths are reluctant to pursue their studies at community colleges instead of universities is unclear. It could reflect that they are receiving poor information about labour market outcomes. They could also be making poor decisions because they are influenced by the mantra in our society that a university education is the ticket to better jobs and incomes.[22] Most importantly, earnings have traditionally been higher for university graduates, who "respond somewhat to the market signals of expected earnings in choosing fields of study" (Gunderson and Krashinsky, 2009: 4).

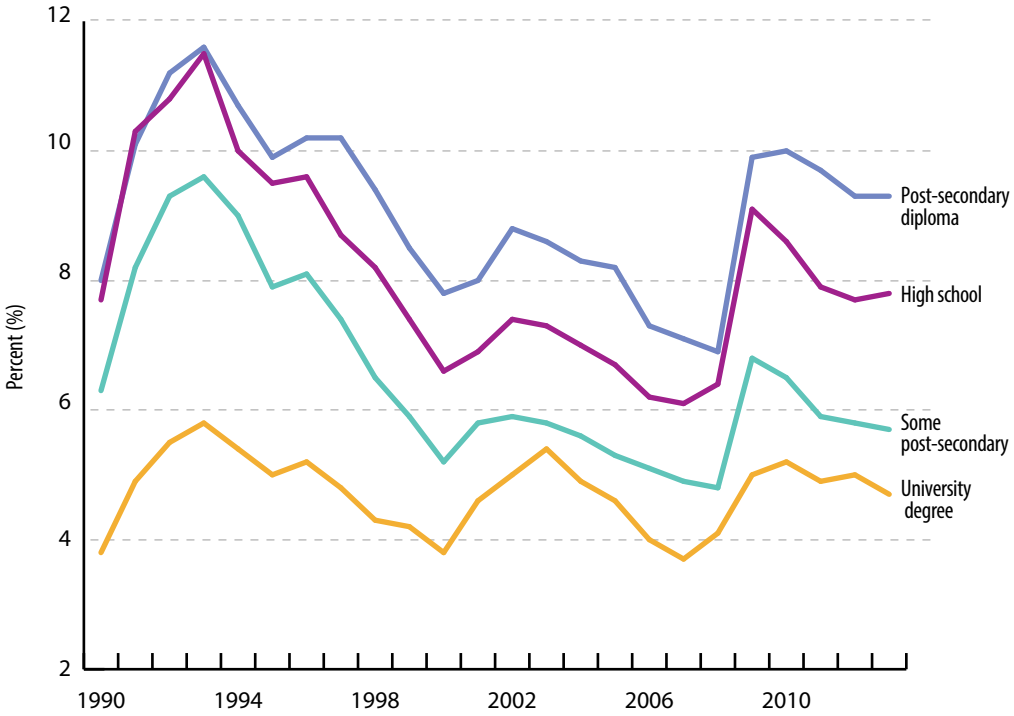
These results should not be interpreted as a call that all high school graduates should attempt to gain some post-secondary education. Some labour market outcomes for high school graduates are better than for people who drop out (or flunk, if that is possible anymore) from post-secondary studies. High school graduates have a higher employment rate (60.6 versus 59.9), a larger share of full-time than part-time jobs, and a markedly lower unemployment rate (7.8% versus 9.3%) than drop outs (figure 7). The lesson is that for some it is better to be a successful high school graduate than a failed post-secondary student.[23] The push in our society to give everyone a chance at post-secondary education may actually be harming some people. The decision to pursue post-secondary education delays earning an income, saddles the student with the expense of school, and may lower self-esteem and confidence or block individuals from considering what can be lucrative careers

21 Outcomes are not as good for post-secondary graduates without a high school degree.

22 For a critical review of this mantra, see Ken Coates and William Morrison (2011), *Campus Confidential*.

23 It is not just employment data that support this idea. The rates of low income from the *Survey of Labour and Income Dynmamics* are higher for people with some post-secondary education but no degree that high school graduates. See Statistics Canada (2014k).

Figure 7: Unemployment rates by education, 1990–2013



Source: Statistics Canada, Table 282-0004: LFS estimates by educational attainment, sex and age group, Canada.

in the resource or construction industries by focusing their attention exclusively on services industries. While some services are well-paying, such as professional, financial, or public services, others are not (especially those related to consumer spending on retail goods, recreation, and accommodation and food).

It is not clear if technology, especially the Internet and tools such as LinkedIn, is helping the labour market operate more efficiently. Employers who rely on software programs to screen out applicants in the search for employees who can step into the job and perform instantly may be reducing the supply.[24] The search for customized perfection of job candidates may also affect job hunters (notably youths), who narrow their search to high profile areas such as high-tech, finance, or public services rather than considering openings in resources or construction.

24 Peter Cappelli (2013), *Why Good People Can't Get Jobs: The Skills Gap and What Companies Can Do About It*, has a good discussion of the problem of software screening out too many candidates on pages 85–89.

Conclusion

The rapid shifts in the geographic location and the industry of employment over the past decade have strained the efficient functioning of Canada's labour market. Employers are coping with growing shortages of labour, especially in Alberta and Saskatchewan, through a variety of strategies to increase the supply of labour. Many of these involve working their existing labour force more intensively, a strategy that cannot be sustained for older workers. From this point of view, the recently announced shrinking of the Temporary Foreign Worker program is short-sighted, as it reduces one source of labour supply that could be extended indefinitely, as needed. Despite all these increases in labour supply, wage rates during the recovery have risen rapidly in Newfoundland, Alberta, and Saskatchewan.

Another long-term solution lies with Canada's youths. However, many employers are reluctant to regard some youths, especially full-time students, as a substitute for their older labour force, resulting in a record gap between adult and youth unemployment. The result is a rapidly-aging labour force in several industries, which raises the prospect for many employers of worsening shortages in the near term as retirements increase. Meanwhile, the large pool of unemployed youths reduces the impression of shortages in labour market statistics, but not in the assessment of employers. The emphasis on youths acquiring a university education while looking for employment makes them unsuitable to many employers. As a result, there is a record gap between youth and adult unemployment. More broadly, there needs to be a rebalancing of the public and private sector roles in human capital formation, with more private sector instruction and training.

A more mundane implication of the analysis in this paper is that Canada does not suffer from the need "to collect more and better data" to answer some of the questions related to whether shortages exist (Drummond,

2014: 16). Rather than looking for a simplistic answer in data on job vacancies, large tracts of information relevant to the debate about whether shortages exist are available in surveys of how intensely employers are using their existing workers and shunning many youths. Where there is a deficit of data is the amount employers are spending on training or the income earned by students graduating from various levels and fields of study.

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Acknowledgments

The authors are indebted to the reviewers for their comments, suggestions, and insights. Any remaining errors and omissions are the sole responsibility of the author. The views expressed in this study do not necessarily represent the views of the trustees, supporters, or other staff of the Fraser Institute.

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Date of issue

July 2014

Citation

Cross, Philip (2014). *Do Labour Shortages Exist in Canada? Reconciling the Views of Employers and Economists.* Fraser Institute. <http://www.fraserinstitute.org>.

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