

A HUMAN RESOURCES STUDY OF THE CONSTRUCTION INDUSTRY ON PRINCE EDWARD ISLAND

*Findings and Policy Considerations
Full Report*

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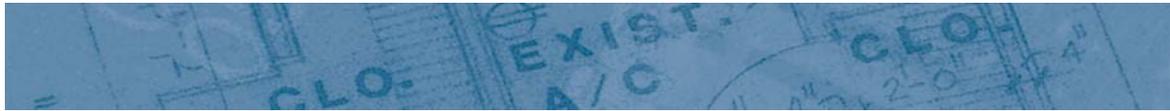
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PRAXIS Research &
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Introduction

1.0 Introduction

The “*Findings and Policy Considerations*” report focuses on the objectives of the study established in the Terms of Reference:

- ▲ To develop an overall profile of the PEI construction industry and its workforce.
- ▲ To analyze labour supply and demand in the PEI construction industry.
- ▲ To study skilled labour shortages and surpluses.
- ▲ To create a profile of training needs and availability by sub-sector.
- ▲ To document emerging trends affecting the industry and its workforce.

This report contains key findings related to each of these objectives. The evidence that supports each finding is presented along with policy considerations associated with these findings.

Background Research and Reports

2.0 Background Research and Reports

The study used a variety of research methods to collect the information required to support the findings. These are:

2.1 Survey of Employers

Key elements of the survey are:

- ▲ 356 surveys with employers in the construction industry were completed.
- ▲ 35% of all businesses in the construction industry were surveyed.
- ▲ The survey is accurate to +/-4.6%, 19 times out of 20.
- ▲ The survey was stratified by Human Resource Centre region.
- ▲ Results of the survey were weighted to ensure they match actual geographic distribution of businesses across the Island.

2.2 Surveys of Carpenters and Construction Electricians Who Drew EI

Key elements of the survey are:

- ▲ 100 surveys with carpenters who claimed EI in 2001 or 2002 were completed.
- ▲ The survey of carpenters is accurate to +/- 8.3%, 19 times out of 20.
- ▲ 100 surveys with construction electricians who claimed EI at some point between 1997 and 2002 were completed.
- ▲ The survey of construction electricians is accurate to +/- 7.3%, 19 times out of 20.

2.3 Focus Groups

A total of twelve focus group sessions were held in the three counties of the province. Separate focus groups were held with residential builders and contractors (four groups), builders and contractors involved in Institutional, Commercial and Industrial (ICI) building (two groups), non-unionized



tradesmen and workers (three groups), unionized tradesmen (one group), apprentices (one group) and Holland College instructors (one group). In total, 86 individuals participated in the focus group discussions.

2.4 Key Informant Interviews

Interviews were held with nineteen key informants representing the three levels of government, unions, contractors, building suppliers, industry associations and educational institutions.

2.5 Literature Review

A large number of reports were reviewed for this study. A bibliography is available as a separate report.

2.6 Secondary Data Analysis

Sources for the secondary data used in the report include:

- ▲ The Statistics Canada Business Register.
- ▲ CANSIM II, Statistics Canada.
- ▲ Canada Mortgage and Housing Corporation housing data and reports.
- ▲ 1991, 1996 and 2001 Census, Statistics Canada.
- ▲ Apprenticeship Branch, Continuing Education and Training, Department of Education.
- ▲ Holland College.
- ▲ The Labour Force Survey, Statistics Canada.
- ▲ The Survey of Employment, Payroll and Hours, Statistics Canada.
- ▲ Human Resources Development Canada.



2.7 Individual Reports

In addition to the “*Findings and Policy Considerations*” report, a number of reports were completed for this study including:

- ▲ Secondary Data Report.
- ▲ Emerging Trends Report.
- ▲ Employer Survey Report.
- ▲ Training and Apprenticeship Report.
- ▲ Demand and Supply Projections Report.
- ▲ Focus Group Report.
- ▲ The Economics of Labour Shortages.
- ▲ Bibliography.

Size and Scope of the Construction Industry

3.0 Size and Scope of the Construction Industry

3.1 Findings

The construction industry on Prince Edward Island comprises approximately 1,000 firms. Slightly under one-half of these firms were primarily involved in residential construction with about one-quarter primarily involved in non-residential construction and 15% in engineering construction. Approximately 15% of firms in the industry focused primarily on non-construction activities but also were involved in the construction industry.

Approximately 60% of the firms in the construction industry were located in the Charlottetown Human Resource Centre area, with 20% in Summerside, 12% in Montague/Souris and 8% in O'Leary.

3.2 Evidence

The employer survey completed by PRAXIS asked employers in the industry to estimate the percentage of total revenues received from the various sectors of the construction industry. The distribution of firms across the various sectors of the industry is presented in the following table.

Table 1
Distribution of Firms Surveyed by Industry¹

	Number	%
New Home Construction	84	24%
Home Renovation	56	16%
ICI	80	23%
Engineering Construction	54	15%
Non-Construction & Unclassified	54	15%
Ties	27	8%

Source: PRAXIS Survey Question Three

¹ Activity in which the firm received the most revenue. Firms that received equal revenue from one or more activity are listed as "Ties". In this group, the most common tie is between new home construction and home renovation.



More in-depth analysis of the survey data shows that 63% of firms specialized in one sector of the construction industry² while 37% received significant revenues from two or more sectors. A high proportion of firms in the engineering construction sector worked exclusively in that sector whereas firms in the other sectors mostly combined work in a number of sectors within their overall business operation. The most common combination was between new home construction and home renovation. A smaller number of firms combined new home construction, ICI, and/or home renovation in some other combination.

The Business Register produced by Statistics Canada indicates that the majority of firms (58%) were in the Trade Contracting sector of the construction industry. These firms are primarily sub-contractors who work in the various sectors of the construction industry and in other industries such as manufacturing. It is not possible to determine what proportion of the business activity of these firms occurs in the various industries and sectors of the construction industry. For this reason, the results of the employer survey, rather than those from the Business Register, were used to estimate the number of firms in each sector of the construction industry.

Evidence on the proportion of firms that worked in each sector of the construction industry came from Question Three of the employer survey. This evidence is presented in the following tables.

² Firms that had only one sector of the industry making up more than 25 % of their revenues.



Table 2
Common Combinations of Construction Activity
 (Activities which comprised 25% of revenues in 2002)

	Number	Percent
No Specialization³	4	1
Specialization⁴	225	63
New Home Construction	46	13
Home Renovation	35	10
ICI	55	15
Engineering Construction	47	13
Non-Construction	22	6
Unclassified Construction	20	6
Common Combinations of Specialization⁵	131	37
New Home Construction and Home Renovation	47	13
New Home Construction and ICI	15	4
Home Renovation and ICI	12	3
New Home Construction, Home Renovation and ICI	11	3
New Home Construction and Non-Construction Related Income	7	2
Other Combinations	35	10

³ Firms for which no one activity comprised 25% or more of revenue.

⁴ Firms which had only one category making up more than 25 % of their revenue.

⁵ Firms which had two or more categories each making up 25 % or more of their revenue.



Table 3
Degree of Specialization by Sector^{6 7}

	NHC – Business Revenues Earned		MUH - Business Revenues Earned		HR - Business Revenues Earned		ICI - Business Revenues Earned		EC- Business Revenues Earned		Non - Construction - Business Revenues Earned		Unclassified Construction - Business Revenues Earned	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Exclusively	26	4%	4	2%	36	6%	48	11%	103	53%	50	31%	40	49%
Mostly (50% to 99%)	251	40%	4	2%	144	24%	171	39%	39	20%	39	24%	28	35%
Significantly (25% to 49%)	146	23%	31	16%	181	30%	97	22%	10	5%	32	20%	9	11%
Less than 25%	200	32%	156	80%	244	40%	118	27%	41	21%	42	26%	4	5%
Total	623	100%	195	100%	605	100%	434	100%	193	100%	163	100%	81	100%

Source: PRAXIS Survey Question Three

⁶ This table is based on weighted results from the survey. The column on the left side of the table contains four categories representing levels of specialization. The “Exclusively” category relates to businesses that earned all of their business revenues in the industry sector listed in the columns at the top of the table. For example, the table shows that 4% of the firms that worked in new home construction (NHC) earned all of their business revenues in that sector.

The “Mostly” category shows the number and percentage of firms that earned most of their business revenues in the designated industry sector with “Mostly” being defined as between 50% and 99% of all revenues being earned in a designated sector. The next category shows the number and percentage of firms that earned a significant proportion of their revenues in the designated industry sector with “Significantly” being defined as between 25% and 49% of revenues.

The final category shows the number and percentage of firms that earned less than 25% of their revenues in the designated sector.

⁷ NHC=New Home Construction, MUH=Multiple Unit Housing, HR=Home Renovations, ICI=Institutional, Commercial and Industrial and EC=Engineering Construction.



The Statistics Canada Business Register shows that the majority of firms in the construction industry are in the Charlottetown Human Resource Centre (HRC) area (608) with smaller numbers in the Summerside HRC (211), the Montague/Souris HRC (126) and the O'Leary HRC (85).

Industry Structure and Characteristics

4.0 Industry Structure and Characteristics

4.1 Finding

The construction industry has a large number of small, owner-operated firms, although larger firms exist in some sectors. The industry is made up of well-established firms that have been in business for a long time. Firms in the industry work as both general contractors and sub-contractors.

4.2 Evidence

The PRAXIS survey showed that more than 90 percent of the firms surveyed were active in the construction industry for over five years while 60 percent of the firms were active in the industry for over 15 years.

New home construction firms were the youngest, with over half (57%) in business for less than 15 years. Firms in the O'Leary HRC area were in business for the longest period of time while those in the Summerside HRC were in business for the shortest period of time.

Approximately 81 percent of the firms surveyed had sales under \$1 million and about two-thirds (64%) had sales under \$500,000. Firms in the Charlottetown region (38%) were more likely to have sales of over \$500,000 than firms in other regions. Firms in the O'Leary region had the lowest proportion of small firms, with 11% having less than \$100,000 in revenue in 2002.

Firms in engineering construction and ICI were the largest in terms of revenue generated in 2002, with 31% in each category earning over \$1,000,000. On the other end of the scale, 35% of home renovation firms had sales of less than \$100,000 in 2002.

General contracting accounted for 58% (weighted average) of all of the work done by construction businesses. Approximately 70% of the businesses in the construction industry were sub-contractors for at least some aspect of their work. Eighteen percent of businesses were sub-contractors for all of their work. Electrical (35% of businesses) and plumbing (27% of businesses) work was most frequently sub-contracted.



Most firms (80%) in the construction industry were owned by owner-operators. Two-thirds of owner-operated firms were owned by a single individual. Firms whose main source of business revenue was new home construction or home renovation were more likely to be owner-operated, at 88% and 82% owner-operated respectively, than firms whose main source of revenue was ICI or engineering construction, at 70% and 72% respectively.

Profile of the Workforce

5.0 Profile of the Workforce

5.1 Findings

There were 5,000 workers in the construction industry in 2001. The residential construction sector employed almost one-half of these workers. Carpenters and labourers were the largest trades in the industry.

5.2 Evidence

There were approximately 11,000 trades workers on PEI in 2001. Trades workers comprise a wide range of occupations including those in construction trades (e.g. carpenters, plumbers, drywallers, painters), electrical trades, machinists, mechanics, heavy equipment operators, transportation equipment operators (e.g. truck drivers) and trades helpers and labourers. Many of these workers are employed outside the construction industry in industries such as manufacturing and transportation.

The distribution of employment by sector in the industry is presented in the following table:

Table 4
Distribution of Employment by Industry Sector

Industrial, Commercial, Institutional	25%
New Home Construction	24%
Home Renovation	21%
Engineering Construction	15%
Non-Construction	8%
Unclassified Construction	7%

Source: PRAXIS Construction Industry Survey, Question 11A



The PRAXIS survey of employers in the industry indicates that the top ten trades accounted for 83% of trades employment in the construction industry as illustrated by the following table.

Table 5
Top Ten Trades in the Construction Industry on PEI
as Percent of Total Employment

	% of Total
Trade Helpers/Labourers	24%
Carpentry-Related Trades ⁸	20%
Heavy Equipment Operators	8%
Electricians	7%
Truck Drivers	6%
Plumbers	5%
Welders	4%
Other Trades	4%
Trades Supervisors	3%
Painters	2%

Source: PRAXIS Construction Industry Survey, Question 11B

⁸ These trades include general carpenters, finish carpenters, framers, floor specialists, cabinetmakers, roofers, drywall installers, foundation installers/formers, eavestroughing installers, wall/ceiling finishers and siders.

The distribution of employees by occupation across the various sectors of the construction industry in presented in the following table.

Table 6
Distribution of Employees by Industry Based on Primary Activity

	Engineering Construction	Home Renovations	New Home Construction	Institutional Commercial Industrial
Trade Labourers	559	320	342	454
General Carpenters	102	180	446	257
Heavy Equipment Operators	364	82	64	35
Electricians	108	76	103	174
Truck Drivers	104	20	68	157
Plumbers	32	34	167	102
Welders	181	12	14	108
Trade Supervisors	30	17	39	83
Painters	0	40	68	50
Framers	0	12	29	48
Floor Specialists	0	46	15	24
Cabinet Makers	10	24	25	12
Finish Carpenters	8	10	40	6
Siders	0	39	15	0
Roofers	0	6	15	26
Drywall Installers	0	0	30	11
Foundation Installers	0	12	8	12
Eavestrough. Installers	0	4	12	0
Wall/Ceiling Finishers	0	0	15	0

Source: PRAXIS Survey, Question 11-B



Labour force survey data show that approximately 20% of the workforce in the construction industry on PEI was unionized in 2003 – down from 24% in 1997. Key Informant Interviews and focus groups indicate that there are several large contractors in the ICI sector that have a unionized workforce but most employers in the sector are not unionized. Focus groups and key informant interviews also indicate that unionization of the residential construction and road building sectors are minimal.

The 2004 Directory of Labour Organizations and Unions of PEI indicates that roughly 18% of the labour force in key trades was unionized as illustrated in the following table.

Table 7
Percentage Unionization for Key trades on PEI

	2001 Census Labour Force	Number Unionized	Union Name	% Unionized
H111 & H112 Plumbers & Pipefitters	230	97	United Assoc. of Journeymen and Apprentices - Plumbers and Pipefitters, Local 721	42%
H12 Carpenters and cabinetmakers	1,080	175 ⁹	United Brotherhood of Carpenters and Joiners of America, Local 1338	16%
H131 Bricklayers	45	46	International Union of Bricklayers, Local 1	102%
H144 Painters and decorators	235	15	International Brotherhood of Painters and Allied Trades, Local 1945	6%
H21 Electrical trades and telecommunications occupations	575	261	International Brotherhood of Electrical Workers, Local 1432	45%
H8 Trades helpers, construction and transportation labourers and related occupations	2,495	268	Labourers International Union of North America, Local 1077	11%
Sub-Total	4,660	862		18%

Source: 2001 Census and The 2004 Directory of Labour Organizations and Unions of PEI

⁹ Key informant interviews indicate that the number of unionized carpenters may be underestimated.

Segmentation of the Labour Force

6.0 Segmentation of the Labour Force

6.1 Findings

There are many levels of skills and experience in the labour market in the construction industry. Significant differences in skills and experience exist within occupational groups such as carpenters as well as between occupations such as carpenters and trades helpers and labourers.

Employers believe that there is a wide range of skills in all trades and that demand conditions for workers in the industry are highly dependent on the skills, experience and ability of workers to work independently. They indicated that skilled and experienced trades workers were highly-sought after by employers while unskilled workers were not in high demand.

The employer beliefs suggest that separate, skill-dependent labour markets may exist within the occupational groupings used in government data. If this were true, issues such as labour shortages would have been addressed for each separate labour market. The lack of data on individual, skill-dependent labour markets makes it impossible to resolve issues such as the existence and extent of labour shortages on these issues have to be addressed for each separate labour market.

6.2 Evidence

The National Occupational Classification system (NOC) groups all workers in a designated occupation into one category regardless of skill level. Data produced using the NOC system is based on information provided by workers themselves. Workers may classify themselves in a specific trade, such as carpentry, even though they may not have the skills, certifications and experience to perform the carpentry functions required by employers.

Evidence for segmentation of the labour force by skill level is based on information from employers provided in focus groups. Employers indicated that a lot of people in the industry do not have the skills and experience required to be productive on job sites. They stated that these workers have no formal training and limited skills.

Employers in the focus groups identified a separate group of employees who were highly skilled workers capable of performing specialized tasks with minimal supervision. They indicated that demand and



supply conditions were highly dependent on these attributes. Skilled workers were in high demand and short supply whereas unskilled workers were less in demand and more in supply.

PRAXIS completed a survey of carpenters who claimed EI at some point in 2001 or 2002 and of construction electricians who claimed EI at some point between 1997 and 2002. The survey provided some information on segmentation in these trades based on a number of factors including certification status, industry sector and unionization. It showed that 17% of the carpenters interviewed classified themselves as registered apprentices, 27% classified themselves as licensed journey people and 56% classified themselves as unlicensed workers. For construction electricians, 31% of survey respondents classified themselves as registered apprentices, 55% as licensed journey people and 14% as unlicensed workers.

The average wage for a certified journey person was \$14.64 per hour, roughly 6% higher than the average of \$13.83 per hour for uncertified workers. The wage differential between certified and unlicensed construction electricians was 26%. In interpreting this differential it must be noted that construction electrician is a mandatory trade and unlicensed trades people likely are helpers who classify themselves as construction electricians.

The survey of EI claimants showed that unlicensed carpenters were over-represented in the EI survey. These findings indicate that certified carpenters enjoyed only a minimal wage premium compared to uncertified carpenters but were less likely to claim EI.

The PRAXIS EI survey also showed that a significant proportion of EI claims made by carpenters who responded to the survey were for labourer-related jobs. These findings suggest that a significant proportion of EI Claimants worked in carpentry jobs that were at the low end of the scale in terms of carpentry skills. A smaller, but significant, proportion of EI claims made by construction electricians who responded to the survey were for labourer-related jobs. It seems likely that many these claims would have been made by the 14% of survey respondents who classified themselves as construction electricians but were not certified in the trade.



The labour market for carpenters did appear to be segmented based on unionization as the survey showed that unionized carpenters earned approximately 16% more on average than their non-union counterparts. The wage gap between unionized and non-unionized construction electricians was 33% – double that for carpenters.

Differences in wages between non-residential and residential building sectors of the industry were not significant for carpenters but an 11% wage differential occurred between construction electricians working in non-residential building construction and those working in residential construction.

Wage differentials by skill level and education attainment existed for construction electricians but could not be detected in the PRAXIS survey of carpenters who claimed EI. The level of supervision appears to be a factor that segments the trades labour market as both construction electricians and carpenters who were not supervised in 2002 earned a significant wage premium over those who were supervised for all or part of the year.

The Underground Economy

7.0 The Underground Economy

7.1 Findings

Aside from shortages of skilled workers, price competition from the underground economy is the single biggest problem faced by employers in the construction industry. Tradespeople and firms operating illegally in the underground economy do not pay taxes and therefore have a competitive advantage over legitimate operators. As a result, the profits of legitimate operators in the construction industry are reduced. Low profits, in turn, reduce wages that can be paid and make it difficult to attract and retain workers in the construction industry. Resolution of this problem is a prerequisite to resolving the recruitment and labour supply problems of the industry.

7.2 Evidence

The PRAXIS survey showed that a significant proportion (32%) of employers in the construction industry felt that price competition from the underground economy was a serious problem¹⁰ for their businesses. Aside from shortages of entry-level and experienced workers, no other problem received a rating that was close to that of price competition from the underground economy.

Employers in the new home construction sector of the industry, followed by employers in the institutional, commercial and industrial (ICI) sector expressed most concern about the impact of the underground economy on their businesses with 39% and 35% of employers respectively giving this problem a high rating.¹¹ Employers in engineering construction were less concerned with price competition from the underground economy with 17% giving a high rating to this problem.

Employers in all focus groups identified the underground economy as a critical issue in terms of their capacity to grow their businesses and charge for labour at a level where they could afford to pay higher wages and benefits. Focus groups found that the underground economy reduced the construction industry's capacity to establish a "*floor or threshold*" upon which "*bona fide*" construction businesses can grow and develop.

¹⁰ Employers who rated price competition from the underground economy as 4 or 5 on a scale of 1 to 5.

¹¹ A rating of 4 or 5 on a scale of 1 to 5.



Employers in focus groups felt that residential building, particularly the home renovations sector, was most affected by the underground economy. In their view, there are large numbers of people in the underground economy, many of whom are drawing EI, who are “*working for cash*” at a lower rate. These lower rates undercut local contractors who do not participate in the underground economy and reduce the wages that can be offered by legitimate contractors.

Focus group participants indicated that tradesmen could sometimes earn more in the underground economy than they would working in jobs “*above the table*”. As a result, they were reluctant to accept full-time positions in the industry. This reality made it difficult to maintain a year-round workforce.

Employers in the rural parts of the Island were particularly vocal about this issue in the focus groups.¹² They saw the underground economy as a “*brick wall*” for their efforts to grow and develop as small businesses.

Some employers in focus groups indicated that they experience difficulties recruiting workers but, due to the underground economy, they have little ability to increase wages to attract qualified new employees.

Many of the workers and apprentices who participated in the focus groups also felt that participation in the underground economy was a widespread practice that contributed to the low wage structure in the construction industry. They felt that the low wage structure, in turn, was a major impediment to the recruitment and retention of both skilled tradesmen and new entrants.

No quantitative estimates of the size and significance of the underground economy in the construction industry on PEI are available. For this reason, it was necessary to look elsewhere for evidence.

There is no best or commonly accepted method of measuring the underground economy. Giles and Tedds¹³ concluded that there has been general agreement that the underground economy accounted for between 9 and 25 % of measured GDP in most developed western countries in the 1990s. Giles and Tedds noted that there is a consensus that the underground economy has been growing as a proportion

¹² The ratings in the employer survey found that employers in Charlottetown were most concerned about the underground economy.

¹³ Giles, David E.A. and Tedds, Lindsay M., *Taxes and the Canadian Underground Economy*, Canadian Tax Paper 106, Canadian Tax Foundation (2002) Page 66.



of GDP in almost every country that has been studied over the past two or three decades. They note the rapid increase in self-employment has contributed to this growth.

A recent estimate of the size of the underground economy in residential construction in Ontario was provided in a report published by the Ontario Construction Secretariat.¹⁴ This study estimated that the underground economy accounted for 28% of the value of the residential construction industry in Ontario.

The Pulse Survey produced by the Canadian Home Builders Association surveys employers in the residential construction industry on a semi-annual basis. The winter 2003/2004 version surveyed 328 new home builders and renovators across Canada. It showed that the underground economy was the most critical problem faced by home renovations companies and the second most critical problem for new home builders.¹⁵ The Pulse Survey found that twice the proportion of renovators as new home builders rated the underground economy as a critical problem and that cash deals were most common for small repair jobs and small renovations of less than \$5,000. The percentage of employers who identified the underground economy as a problem was almost twice as high in Atlantic Canada as in Canada as a whole.

¹⁴ The Underground Economy in Ontario's Construction Industry: Estimates of its Size and the Revenue Losses to Government and the WSIB. Ontario Construction Secretariat, November 1998; and Updated Estimates, August 2001.

¹⁵ Only insurance rates were a greater problem.

Wages and Incomes

8.0 Wages and Incomes

8.1 Findings

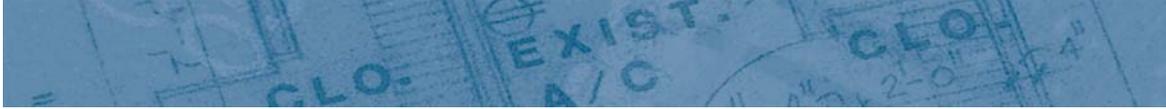
Wage rates are critical to attracting skilled employees and play a key role in recruitment. Occupations with high wages and incomes attract skilled workers and provide a pay-off for investments in training.

Wage rate changes are a primary mechanism to eliminate labour shortages. Employers experiencing shortages increase wages to attract workers. More workers offer their services in response to the higher wages resulting in an increase in the supply of labour. Higher wages also increase the costs for employers, thereby reducing their demand for workers. The increase in labour supply, combined with the decrease in demand, reduces temporary labour shortages that may exist. Wage and labour supply rigidities reduce the effectiveness of wages in resolving labour shortages.

Section seven showed that the wages offered by employers in the residential construction industry may be relatively low because of the underground economy. Relatively low wages and incomes may increase the difficulties experienced in attracting and retaining skilled labour. The seasonality of employment in the industry amplifies the impact of low wages on workers' incomes.

Low wages, and a profits squeeze attributable to the underground economy, may limit the ability of employers to increase wages to attract new employees. Employers trying to hire additional workers may be unable to raise wages as much as employers in competing industries. They may report shortages but be able to raise wages enough to attract qualified applicants.

Employers in the residential construction sector have relatively little power to raise wages and are unable to find qualified workers at the going wage. Intense competition in the industry, exacerbated by competition from illegal underground operators, makes it impossible for firms to increase wages in response to problems recruiting workers.



8.2 Evidence

Wages may be relatively low in the construction industry, especially the residential construction sector of the industry, for two reasons:

1. Easy entry into the industry and its occupations, and
2. The underground economy.

There are no licence or certification requirements for many businesses and trades in the construction industry, especially the residential sector of the industry. Most businesses in the industry are relatively small and capital requirements are modest. This implies that many firms and individuals are attracted into the industry when wages or profits increase. This supply response offsets the upward movement of wages and profits stemming from increases in demand. Consequently, wages and profits will tend to be lower than in other industries or occupations with more barriers to entry.

The ICI and heavy engineering sectors of the construction industry may have significant barriers to entry for workers and companies due to the importance of unionization and the existence of larger companies in these sectors. These sectors also may be less affected by the underground economy, although a significant proportion of employers in the ICI sector indicated that price competition from the underground economy was a serious problem for their business.

Employers who participated in focus groups felt that the underground economy was the primary reason why the wage structure in the construction industry is chronically low. They also identified a range of “*multi-layered*” factors and issues including:

1. There has been historically a low value placed on construction labour.
2. The labour environment is non-unionized in some sectors of the construction industry.
3. There are only a few trades that require certification (plumbing and electrical). Anyone can enter the non-compulsory trades.
4. There is no provision that builders and general contractors be licensed resulting in easy entry into the industry.
5. There is little cohesion in the industry and competition is fierce.



Low wages for apprentices were identified as an issue both by apprentices and employers who participated in focus groups. Employers indicated that they try to provide their apprentices with an adequate wage, but because the overall wage structure for journeymen is low, apprentice wages are low as well. Focus group participants also pointed out that low wages were a major disincentive to enticing young people into trades apprenticeship – particularly because many other occupations with better pay scales are available to young people.

The PRAXIS survey of employers shows that 34% of employers who experienced difficulties filling positions in 2002 raised wages in response to these difficulties. Firms in ICI, new home construction and engineering construction were the most likely to increase wages while those in renovations were the least likely.

The PRAXIS survey of EI claimants estimated that the average wage for a carpenter was \$13.79 per hour in 2002 while the average for construction electricians was \$16.49 per hour. Wages for survey respondents in the non-residential building sector were slightly higher (roughly 7% for carpenters and 11% for construction electricians) than wages for respondents in the residential sector.

The *Survey of Employment Payroll and Hours* (SEPH) conducted by Statistics Canada shows that the average hourly wage in the building construction industry¹⁶ was \$15.76 per hour in 2002. By comparison, the average hourly wage in manufacturing was \$13.58 per hour and that in Accommodations and Food Services was \$9.14 per hour. Inflation-adjusted¹⁷ hourly wages in the building construction industry decreased by 6% from 1991 to 2002. Over the same time period, inflation-adjusted hourly wages in the manufacturing industry increased by 9% while those in the accommodation and food services industry rose by 20%.¹⁸

¹⁶ Wage rates were available only for the building construction industry and not for the construction industry as a whole or for the engineering sector of the industry. Building construction includes both residential and non-residential building construction and is therefore not a direct indicator of wages in either of these sectors.

¹⁷ Hourly wages were divided by the All Items, CPI, produced by Statistics Canada.

¹⁸ It also is interesting to compare wages on PEI to those in other provinces. SEPH data show that wages in the building construction industry on PEI in 1991 were 2% higher than those in the building construction industry in Newfoundland and Labrador, 3% higher than those in the building construction industry in Nova Scotia and 5% below those in the building construction industry in Alberta. In 2002, wages in the building construction industry on PEI remained 2% higher than those in the building construction industry in Newfoundland and Labrador but fell 6% below those in the building construction industry in Nova Scotia and 25% below those in the building construction industry in Alberta.



Wages in the building construction industry are higher than in comparative industries but real wages have been falling in an absolute sense and in relation to other industries on PEI.

The 2001 Census provides data on annual employment income by occupation in the year 2000. These data refer to specific occupations but include income from all jobs held by individuals classified in designated occupations. They show that the average annual employment income for all participants in the labour force on PEI was \$22,303 in 2000. By comparison, the average income for construction trades was \$21,846. Annual incomes varied significantly by trade ranging from \$13,000 to \$14,000 for trades helpers and labourers and painters, to \$21,393 for carpenters and cabinetmakers, and \$28,000 to \$29,000 for plumbers and construction electricians.

The focus groups found that chronically low wages in the industry are seen as a major problem for the recruitment and retention of younger people. Focus group participants argued strongly that wages were low and that this acted as a disincentive for anyone looking at careers in the industry. Many employers acknowledged that, with the number of career occupations available to young people today, a career in the construction trades would be a “*hard sell*”.

Employment Insurance

9.0 Employment Insurance

9.1 Findings

The negative impact of the underground economy on wages may be magnified if abuse of Employment Insurance (EI) is as widespread as claimed by participants in both employer and worker focus groups. It must be pointed out that no hard evidence exists on the incidence and significance of abuse of the EI system and more research is required on this issue.

Focus groups also identified other negative impacts of the EI system and development programs designed to provide enough weeks of employment for workers to qualify for EI. Specific problems are:

1. EI may exacerbate seasonality in the construction industry if workers quit after working a fixed number of weeks and draw EI. This effect would be magnified if significant numbers of workers participate in the underground economy while drawing EI.
2. Development programs designed to provide employment to qualify workers for EI “*compete for workers*”. Such competition is counter-productive in the tight labour conditions that characterize the construction industry in the early years of the new millennium.
3. The emphasis on training individuals drawing EI limits funds available to support the training of existing workers who already are employed.

9.2 Evidence

Participants in both employer and worker focus groups provided evidence that a significant number of workers draw EI and participate in the underground economy.

Employers in all focus groups identified the EI system, and the province’s Employment Development Program, as two major factors that compete directly with their need for skilled workers and labourers. They felt that the seasonal work – EI cycle remains firmly entrenched, particularly in the rural parts of the Island.

Many employers indicated that some of their workers simply leave their jobs once they accumulate the required weeks to be EI eligible. As noted by one employer:



“I have five or six good workers that have been with me for years and I couldn’t get by without them. But they tell me ‘straight up’ that ‘we’re here from April until November – then we’re gone’. I have no choice but to go along with their demands if I want them back next year. One year we worked all winter building two barns. Once we finished they said ‘never again’”

In several instances, employers in the focus groups, particularly those employing highway road crews, stated that they see the provincial Employment Development Program as a direct competitor for labour. These jobs often pay higher wages for labourers. They provide enough weeks for workers to qualify for EI and hence these workers stay with that cycle.

The use of EI to offset trades training costs at Holland College may be one reason why some prospective tradespeople enter programs at a relatively old age. The EI mechanism is helpful to those who can access it, but the possibility of providing similar funding to high school graduates should be assessed. This could reduce the number of young people who may be interested in the trades in high school, but drift into other jobs or into unemployment after high school and never pursue the interest in the trades.

A strong theme emerging from all employer focus groups was the negative business impacts that resulted from government income support and employment development programs. In the view of many employers, EI and other employment creation programs are becoming much more of a “*disruptive*” factor given the increasingly tight labour supply situation in the industry.

10.0 Seasonality

10.1 Findings

Construction on PEI is a highly seasonal industry. Worker behaviour patterns may exacerbate the inherent, weather-induced seasonality of the industry. Seasonality negatively affects wages, profits and recruitment in the industry. It also significantly increases unemployment rates for construction trades compared to unemployment rates experienced in other occupations.

10.2 Evidence

The Survey of Employment, Payroll and Hours produced by Statistics Canada shows that from 1991 to 2002 average monthly employment in the PEI construction industry in the third quarter was 77% higher than in the first quarter. Seasonality decreased over the period. Employment in the third quarter was 97% higher than in the first quarter from 1991 to 1996 and 65% from 1997 to 2003.¹⁹

The Labour Force Survey (LFS) shows that the number of workers in trades, transport and equipment operators and related occupations between 1987 and 2001 was 40% higher in the peak month of July than in February or March.²⁰ Peak summer employment in the construction trades was 1.8 times the number of jobs in the winter months while employment of labourers and helpers in peak months was 2.4 times as high as in the lowest months. The LFS data shows that the average monthly unemployment rate from 2001 to 2003 for construction trades on PEI was 3.8% during the peak summer months (June to September) and 11.8% during the off season from October to May. These data indicate that seasonality has a dramatic affect on the average annual unemployment rates for construction trades recorded in the LFS.

The 2001 Census shows that about 40% of workers in the trades worked full-time and year-round. The rest either had seasonal employment or worked part-time.

Other indicators of seasonality are found in the PRAXIS employer survey. It shows that seasonal job openings accounted for the majority of job openings for most trades including carpenters where 70% of

¹⁹ A separate analysis for the building construction sector shows seasonal patterns that are similar to those for the construction industry as a whole.

²⁰ Some of the workers in these occupations work outside the construction industry.



the openings were seasonal and electricians and sheet metal workers with 67% seasonal openings. There were a number of trades where 100% of the openings were seasonal including: concrete pouring and finishing, refrigeration installers, crane operators, heavy equipment operators and truck drivers. Trades where all or most openings were year-round included: flooring specialists, welders, painters, plumbers, excavators and trades supervisors.

Respondents to the PRAXIS employer survey were asked to estimate the number of job openings that were difficult to fill in each trade in 2002. The responses to this question indicate that the majority of these job openings were seasonal. The overall vacancy rate for all trades was 1% of trades employment for job openings that were year-round and 2% of trades employment for seasonal job openings.

The PRAXIS survey of EI claimants showed that carpentry respondents worked the majority of their careers as seasonal workers. Approximately 74% of the years worked by carpentry respondents as of December 31, 2002 were on a seasonal basis compared to 26% on a full-year basis. Seasonal employment also accounted for a significant proportion of the work of construction electricians. Approximately 42% of years worked by construction electricians as of December 31, 2002 were worked on a seasonal basis (40 weeks per year or fewer) and 58% were on a full-time basis (more than 40 weeks per year).

Focus groups found that the seasonal nature of the industry, and the availability of EI, have created a pattern of alternating employment and EI use among workers. Some focus group participants felt that seasonality in the industry resulted from worker behaviour rather than a lack of opportunities to work in the winter. Employers pointed out that changes in technology and building practices allow contractors to work year-round but they are constrained in their ability to do this by a lack of employees willing to work in the winter.

The focus groups documented the negative affect of seasonality on the career perceptions of young people. Focus group participants indicated that the seasonal nature of the work conflicted with the desire of younger people for careers that offer year-round work.

Frictional Unemployment

11.0 Frictional Unemployment

11.1 Findings

Frictional unemployment occurs because people looking for work take time to find employment and employers take time to fill vacant positions. It is associated with the normal turnover of the labour force and exists even when the economy is operating at full employment.

Job vacancies and unemployment co-exist with frictional unemployment. Jobs exist for unemployed workers but they are temporarily unfilled. In this situation, high levels of job vacancies may not be symptomatic of labour shortages. Rather than reflecting shortages, high levels of both vacancies and unemployment may reflect the degree of expansion and contraction in the workforce and the inability of employers and prospective employees to find each other.

Wages are stable with frictional unemployment. Upward pressures stemming from job vacancies are offset by downward pressures due to unemployment.

Job matching problems increase the level of frictional unemployment. These problems occur when workers seeking employment and employers seeking workers cannot find each other because of a lack of labour market information or inefficient recruitment and job search practices. Employers in the construction industry recruit primarily by word of mouth. This practice may inhibit job matching and contribute to frictional unemployment in the industry.

Unemployment and vacancy rates for the PEI labour force as a whole were higher than for the Canadian labour force as a whole. These data provide some evidence that frictional unemployment may be relatively high in the PEI labour force. The existence of a greater degree of frictional unemployment in trades compared to all occupations on PEI is less clear, however.

Benjamin, Gunderson, and Riddell, 2002 summarized the conditions that lead to job matching problems and high levels of frictional unemployment as follows:

“... the magnitude and frequency of seasonal, cyclical and other economic disturbances, the job search behaviour of employers and workers and the efficiency of the matching process, the use of layoffs to respond to changes in demand, the amount of



labour force turnover, the age-sex composition of the labour force, and labour market policies such as minimum wages and unemployment insurance.”²¹

The evidence section of this report shows that many of the indicators and predictors of frictional unemployment exist in the construction industry on PEI. It suggests that frictional unemployment in the industry is significant.

11.2 Evidence

High vacancy and unemployment rates are indicators of frictional unemployment. However, interpretation of data on unemployment and vacancy rates is complex. In particular, they can be symptomatic of structural²² as well as frictional unemployment.

A 2000 study by Lars Osberg and Lin Zhengxi²³ presents a number of estimates of Canadian vacancy rates made by various authors and agencies in Canada. These estimates indicate that vacancy rates are significantly higher in the PEI labour force than for the overall labour force in Canada.²⁴

Vacancy rates²⁵ in trades occupations on PEI, over the period 1996-2001, were calculated from data on unfilled job orders at the HRDC Job Bank and vacancies posted in four newspapers on PEI. These rates were compared to vacancy rates for all occupations on PEI. The average annual vacancy rate for trades occupations from 1996 to 2002 was 20% less than that for all occupations on PEI.

The average annual unemployment rate for trades occupations from 1996 to 2002 was 18.9% - 38% greater than the rate of 13.7% for all occupations on PEI. The average annual unemployment rate for all occupations in Canada was 8.1% over this period – approximately 41% below that for all occupations on PEI.

²¹ Labour Market Economics, Fifth Edition, Dwayne Benjamin, Morley Gunderson, W. Craig Riddell, 2002, p. 579.

²² Structural unemployment is discussed in the next section of this report.

²³ Lars Osberg and Lin Zhengxi, “How Much of Canada’s Unemployment is Structural”, *Canadian Public Policy*, Vol. XXVI Supplement, 2000, p. 12.

²⁴ Complex data and methodological issues are associated with vacancy rate estimates. This problem limits the comparability of the vacancy rate estimates.

²⁵ The vacancy rate is the total of unfilled job orders and positions advertised in newspapers divided by the Census labour force.



Both unemployment and vacancy rates are lower in Canada than on PEI pointing to a higher level of frictional unemployment in the Island labour force than that for Canada as a whole. Unemployment rates as a proportion of vacancy rates on PEI were 64% higher for trades compared to all occupations from 1996 to 2001.²⁶ This ratio is not conclusive on the existence of frictional unemployment but could be a signal of structural and/or demand deficient unemployment. These issues are examined below.

A number of features of the labour market in the construction industry point to a high degree of frictional unemployment. These are seasonality, turnover and the recruitment practices of employers.

Seasonal variations in the level of construction activity and employment contribute to the degree frictional unemployment in the construction industry because they result in high levels of lay-offs and re-hiring, with workers experiencing periods of unemployment between jobs.

Focus groups with employers indicate that the labour market behaviour of trades workers may contribute to the degree of seasonality in the industry. Employers felt that some trades workers quit their jobs in the winter months preferring to draw EI. Some of these workers may supplement their EI by working in the underground economy. In this way, abuse of the EI system may contribute directly to frictional unemployment.

The PRAXIS employer survey showed that about 45% of the people who left businesses in 2002 quit and 37% were laid off. Smaller proportions retired (9%) and left because of injury and illness (7%). For those who quit, 86% did so for better pay with the remaining 14% quitting because they wanted non-seasonal jobs. Employer responses indicate that the desire to earn higher wages was much more important than seasonality in explaining why workers quit.

The fact that almost as many workers were laid off as voluntarily quit may be an indicator of the lack of security of employment in the industry.

Labour Force Survey data show that the average job tenure of employees in all occupations on PEI as of 2002 was 97 months. The average for construction trades workers was 71.1 months. The PRAXIS survey of EI carpentry claimants shows that, on average, survey respondents worked for 3.2 employers in the

²⁶ The proportion was approximately the same for trades and all occupations in 1996. This was the peak year of construction for the Confederation Bridge.



five years leading up to 2002. This implies that, on average, respondents worked 19 months per employer. The survey data indicate that the average job tenure of survey respondents was significantly less than for construction trades workers and all workers in Nova Scotia in 2002.

The PRAXIS survey of EI carpentry claimants also shows that roughly two-thirds (65%) of the Census labour force of carpenters claimed EI in 2001. Roughly 60% of EI Claimants made a claim in any given year between 1997 and 2002. More than one-half of the Claimants had five or more claims over the six year period 1997-2002. These findings indicate that EI use is a regular practice for many carpenters on PEI. The EI data for carpenters also indicate that the level of carpentry-related claims increased over the 1997-2002 period. The apparent growing dependence on EI over the 1997-2002 period occurred despite the fact that the construction industry experienced significant economic growth over this period.

A similar situation exists for construction electricians. About one-half of the construction electrician workforce claimed EI each year from 1997 to 2002. On average EI claimants made a claim every second year over this period. The data indicate that many construction electricians on PEI experienced on-going disruptions in employment and persistent periods of unemployment. The EI claimant data and the Census data also indicate that there was no appreciable change in this situation over the 1997-2002 period.

Frictional unemployment is exacerbated by inadequate recruitment practices of employers and job search practices of workers. The *Employer Survey* convincingly shows that employers recruit by word of mouth. It shows that about two-thirds of employers used word of mouth to recruit workers. Fewer than 25% of employers used other methods.

The focus groups confirm that most employers continue to recruit by word of mouth although a number indicated that they recently tried newspaper advertisement with little positive results. Some employers noted that they did not use the HRDC Job Bank because it was rarely helpful and involved way too much paperwork. The employers recognized that word of mouth recruitment is not adequate anymore due to rapid changes in the socio-economic environment but they were sceptical about some of the current alternatives.



About one-third of the businesses in the PRAXIS employer survey increased time searching for skilled people in response to difficulties finding skilled tradespeople. This finding may indicate that employers took a relatively passive approach to labour recruitment.

It is possible that the lack of a proactive approach to recruiting can be attributed to the small size of businesses and the fact that 80% of the construction businesses on PEI were owned by owner-operators in 2003. Owner-operators do not have extensive training in human resources and may be too busy meeting the technical demands of jobs to focus on recruitment and other human resource functions.

The informal and passive recruitment practices that are used by employers may limit the efficiency of job matching and recruitment. In so doing they may contribute to frictional unemployment in the industry.

Structural Unemployment

12.0 Structural Unemployment

12.1 Findings

Structural unemployment arises when the skills or location of the unemployed are not matched with the characteristics of the job vacancies. Unemployed workers and job vacancies are considered to be in different labour markets, either by virtue of geography, or because they do not coincide in terms of qualifications and characteristics.

Structural unemployment is caused by imperfections and lags in the labour market. A slow or incomplete reaction of worker supply to wage signals caused, for example, by training or travel costs, is one example. Rigidities and lags in the training system could also contribute to structural unemployment, as could programs such as EI that affect workers labour market behaviour and choices.

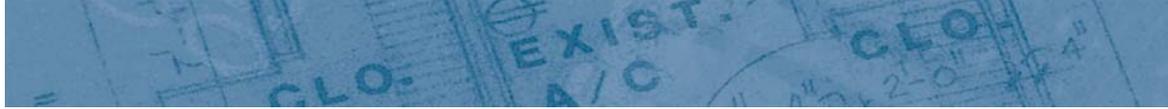
A significant degree of structural unemployment exists among unskilled trades workers in the construction industry. Evidence suggests that, while unskilled workers are structurally unemployed, the needs of employers for skilled workers are not being met. Furthermore, evidence indicates that rigidities and inefficiencies related to training contribute to the production of too few skilled workers.

12.2 Evidence

Data on vacancies and unemployment rates, as well as that from the PRAXIS employer survey and the employer focus groups, all provide evidence of the existence of significant levels of structural unemployment in the construction industry on PEI.

The discussion of frictional unemployment in Section 11 of this report showed that the ratio of unemployment rates to vacancy rates for trades occupations on PEI was significantly higher over the 1996-2001 period than that for the PEI labour force as a whole. Despite strong growth in the construction industry in the late 1990s, and over the 2000-2002 period, unemployment rates for the trades ranged from 17% to 22% - about 50% higher than for PEI labour force as a whole. These data provide evidence that structural unemployment is relatively high for these occupations.

Section 6.2 of this report showed that unlicensed carpenters were over-represented in the EI survey and that certified carpenters were less likely to claim EI compared to uncertified carpenters. It also showed



that a significant proportion of EI claims made by both carpenters and construction electricians who responded to the survey were for labourer-related jobs. This suggests that a significant proportion of EI Claimants who classified themselves as carpenters and construction electricians were at the low end of the scale in terms of skills.

12.2.1 Impacts of Structural Unemployment

Structural unemployment has three types negative consequences:

1. Labour productivity and quality are reduced resulting in higher costs and lower quality for consumers.
2. The profitability and growth of businesses in the construction industry are reduced.
3. Unskilled workers miss out on career opportunities in the construction industry.

Growth in the Residential Construction Industry

13.0 Growth in the Residential Construction Industry

13.1 Findings

Demand for construction services has increased significantly in recent years and projections point to a continuation of strong demand.

13.2 Evidence

Several economic indicators provide evidence for increasing demand for construction services in recent years:

- ▲ Statistics Canada data indicate that real Gross Domestic Product (GDP) in the construction industry on PEI grew at twice the rate as GDP for the entire economy between 1998 and 2002.
- ▲ The real value of investments²⁷ grew at an annual rate of 11% for residential building construction and 24% for non-residential building construction between 1998-2002.
- ▲ The PRAXIS employer survey indicates that over three times as many construction businesses grew as contracted in 2001 and 2002. It also showed that 2.5 times as many construction firms increased as decreased sub-contracting in the two years leading to 2002.
- ▲ The Statistics Canada Business Register indicates that number of establishments in the construction industry on PEI grew from 624 in 1991 to 1,050 in 2001. The rate of growth from 1995-2001 was 8.1%.

The level of construction activity over the next five years was projected in this study. The projections indicate that activity will remain high from 2003 to 2005 and then taper off somewhat by 2007.

²⁷ Adjusted for inflation.

Recruitment and Changes in the Supply of Labour

14.0 Recruitment and Changes in the Supply of Labour

14.1 Findings

There has been a significant decrease in the supply of new entrants into the construction labour force over the last ten years. As a result, the number of people under 35 in the trades labour force declined by 35% from 1991 to 2001.

The overall PEI labour force experienced a smaller decline (14%) in the number of people under 35 from 1991 to 2001 than did the trades labour force. This reality implies that forces other demographic changes caused some of the decline in recruitment into the industry. A number of forces have contributed to the decline including changes in career preferences, public attitudes towards the trades, exposure to and experience with trades in high school, and increases in admission requirements for trades training. It was demonstrated in previous sections of this report that trades jobs are highly seasonal and wages have not kept pace with those in other industries. These problems also contributed to recruitment problems in the construction industry.

PRAXIS has projected that the trades labour force will decline by about 7% from 2001 to 2011 solely due to demographic forces. The projections indicate that labour force 45 years of age and over will increase as the current labour force ages and the number of retirements will outnumber the number of young people entering trades occupations. The labour force under 45 years old is projected to decrease by approximately one-third by 2011, largely due to the decrease in the number of new entrants that occurred in the 1990s.

The projections indicate that the labour supply problems of the industry will increase over the next ten years.

14.2 Evidence

The size of the total trades workforce on PEI was virtually unchanged between 1991-2001. The age profile of the trades workforce changed dramatically, however. As was demonstrated in the findings section, the trades workforce under 35 years old dropped by 35% from 1991 to 2001. In total, there were approximately 1,700 fewer trades workers under 35 in 2001 compared to 1991. The youngest age group, 15-24 year olds, dropped by 37% compared to a decline of only 4% in the PEI labour force as a whole.

It is interesting to note that the changes in the PEI labour force closely reflect those for Canada as a whole. The total Canadian labour force under 35 declined by 11% from 1991 to 2001 while the trades labour force under 35 dropped by 28%. The trades workforce in Canada aged 15-24 declined by 17% - significantly less than the 37% decline experienced on PEI.

The age profile for some trades implies that serious supply problems may arise in the future. The following table that shows that the number of young people in key trades declined dramatically between 1991 and 2001.

Table 8
Number of Trades Workers Under 25 Years Old on PEI, 1991 - 2001

	1991	2001	% Change
Carpenters < 25	160	75	-53%
Electricians < 25	85	45	-47%
Plumbers < 25	25	0	-100%
Labourers < 25	695	420	-40%

Source: 1991 and 2001 Census, Statistics Canada

14.3 Reasons for the Decrease in Labour Supply

Statistics Canada Census data show that the education level of 20-24 year olds on PEI rose dramatically between 1986 and 2001. In 1986, 1,200 people on PEI aged 20-24 had less than a grade nine. This number dropped to 80 in 2001. The proportion of people in the 20-24 age group who attended university rose from 24% in 1986 to 36% in 2001.

Conversely the proportion of 20-24 year olds with trade certificate declined from 3% (335) in 1986 to 1.2% in 2001 (105). These data show that participation in trades training has declined. Another indicator of a decline in participation in the trades is that the percentage of 25-29 year olds with a trades certificate was one-half that of the PEI population as a whole.

These data support findings from focus groups, key informant interviews and the literature review that indicate that education levels have increased dramatically and that there has been a shift in career preferences away from the trades towards more “white collar”, professional occupations. Focus group



participants felt that the value and importance of the trades as a respectable occupation has declined. Instead the construction trades are viewed as difficult, dangerous and low paying jobs.

Other studies of the construction labour market²⁸ indicate that the negative attitudes of youth towards construction trades are causing serious recruitment problems across Canada. Focus group participants also indicated that working conditions in the industry might be unappealing to young people who do not have experience with outdoor work.

Projections done for this study indicate that the trades labour force will decline from 10,550 in 2001 to 9,800 in 2011. Construction trades will experience a similar decline. The trades labour force less than 45 years old is projected to decline by 33% between 2001 and 2011.

A key finding of the focus groups held with employers in the construction industry on PEI is that there is a strong concern regarding an emerging “*succession gap*” in the industry. Employers expressed concern that as existing employers/contractors age and retire, there does not appear to be a new generation of “*business inclined*” trades workers coming forth. Most employers also felt that the situation will get worse before it gets better.

²⁸ See, for example, Morley Gunderson, “Skill Shortages in the Residential Construction Industry”, January, 2001.

Labour Shortages

15.0 Labour Shortages

15.1 Findings

Employers in the residential construction industry experience significant recruitment problems. These problems stem from three aspects of the labour market in the industry:

- ▲ Frictional unemployment and job matching problems.
- ▲ Low wages that inhibit the recruitment efforts of employers.
- ▲ The co-existence of large numbers of unskilled (structurally) unemployed workers and recruitment problems for vacant positions for skilled trades workers.

Strong demand conditions in the construction industry in recent years, combined with low recruitment of young people into the trades, have magnified the recruitment and labour supply problems of employers.

Section 11 of this report showed that the ratio of unemployment to vacancy rates was 64% higher for trades compared to the PEI labour force as a whole from 1996 to 2001. Section 7 showed that real²⁹ hourly wages in the building construction industry declined between 1991 and 2002 while those in other industries increased. These data provide evidence that, despite the existence of recruitment problems, labour shortages in the construction industry are less of an issue than they are in other sectors of the economy.

The employer survey also does not provide evidence of labour shortages in the trades. While this is so, labour market conditions between 1996 and 2001 moved towards a greater degree of shortages for trades occupations, as well as for the PEI labour force as a whole. The following exhibit shows that the ratio of unemployment rates to vacancy rates declined steadily from 1997 to 2001 signifying a tightening of the labour market for trades and for the overall labour force on PEI.

²⁹ Adjusted for inflation.

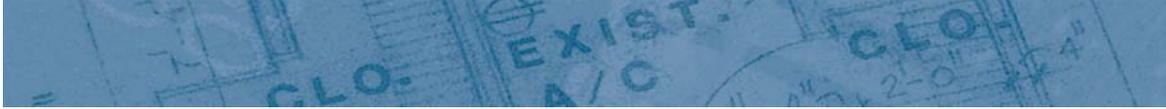
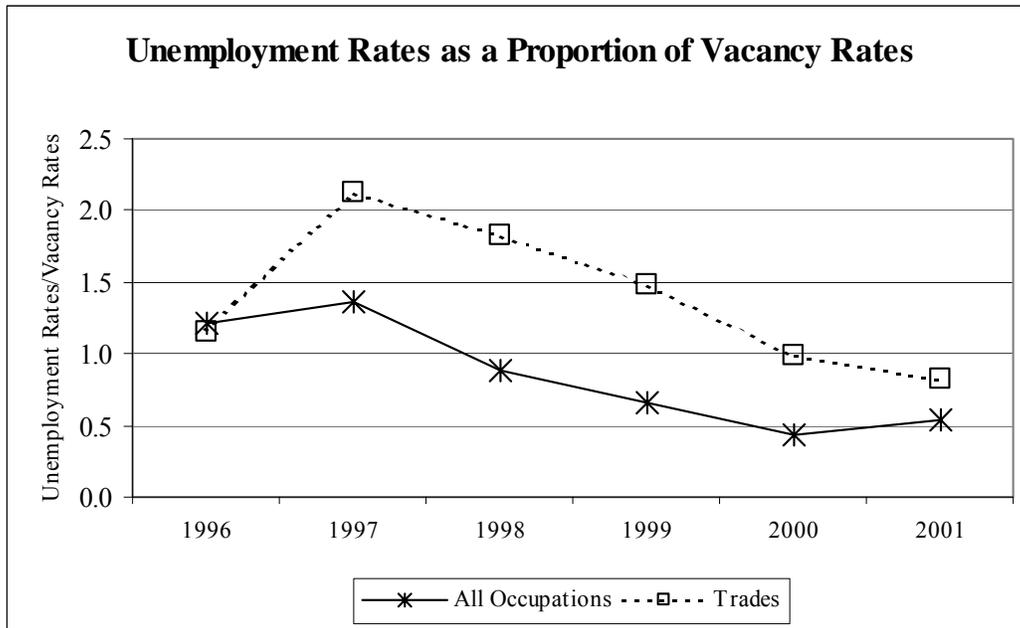


Figure 1



Projections of continued strong demand and decreasing labour supply indicate that the labour market tightening illustrated in the above exhibit may accelerate in upcoming years.

15.2 Evidence

Employer focus groups indicate that low wages have caused recruitment problems in the residential sector of the construction industry. There was consensus among all six employer focus groups that there was a major problem regarding the availability and recruitment of both entry-level and skilled tradesworkers. Specific trades that were mentioned by most groups included plumbers, carpenters (especially higher end skill levels), electricians, bricklayers and cement finishers. In addition, many employers noted that finding good, experienced site managers and supervisors is a growing problem. Several employers noted that the only way to get a good site manager or supervisor was to “steal him from someone else ... your competition”.

Employers who participated in the focus groups generally believed that it would become harder to get qualified tradesmen in five years time. A participant in one group felt that in five years time “we will be taking them in from Europe”. Focus group participants felt that changing demographics will be the



biggest factor influencing labour supply. They felt that there are not enough younger people working toward their certification to fill the pending gap resulting from retirements. They also felt that the shortage of skilled tradesmen is a North America/world problem and all jurisdictions will be scrambling to get qualified tradesmen at the same time. Given lower wage levels on PEI, global competition will amplify the challenges faced by the industry.

Employers in focus groups believed that the environment within which the industry operates makes it impossible to attract new blood and energy. Many employers also saw the strongly entrenched behaviours of the industry as a major challenge.

The PRAXIS survey shows that shortages of experienced trades workers (44% of respondents) and entry-level workers (36% of respondents) were the most serious problems³⁰ faced by employers in the two years leading up to 2002. Price competition from the underground economy was the third most serious problem identified by 32% of respondents. No other factor was identified by more than 20% of the respondents as serious.

Firms primarily in the new home construction and ICI businesses tended to rate worker shortage issues higher than firms in other areas of the construction business. Forty-seven percent of respondents in new home construction, for example, rated shortages of both entry-level and experienced trades workers as being serious, compared to a 36% and 44% average for all construction firms. Ratings for firms in the ICI sector were slightly below those of firms in new home construction.

Firms in the home renovations and engineering construction sectors were less concerned with the issue of labour shortages. For example, 20% of firms in the home renovations sector rated shortages of entry-level workers as a serious problem while 34% rated shortages of experienced workers as a serious problem.

The PRAXIS employer survey showed that the availability of skilled labour rated ahead of the availability of financial capital but behind general economic conditions as an important factor influencing business growth. Forty-six percent of respondents who answered this question felt that the availability of skilled labour was an important factor influencing the growth of their business. This compares to 30%

³⁰ A rating of 4 or 5 on a scale of 1 to 5.



of respondents who thought availability of financial capital was an important factor influencing their growth, and 59% who thought that general economic conditions were an important factor.

Respondents to the PRAXIS survey were asked to estimate the number of job openings that were difficult to fill in each trade in 2002. A vacancy rate in each trade was calculated by dividing the total number of difficult-to-fill job openings for the trade by the total number of employees for the trade.

Approximately 29% of the firms surveyed indicated that they had at least one job opening that was difficult to fill. The overall trades vacancy rate was 1% for year-round jobs and 2% for seasonal jobs.

About 10% of home renovation firms reported vacancies compared to 42% of the firms in the ICI sector as illustrated in the following table.

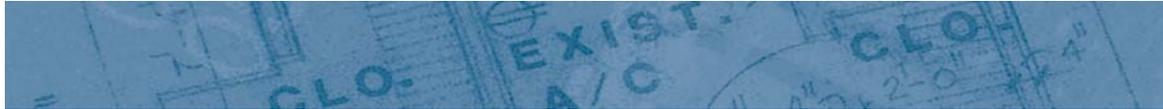
Main Area of Activity	&
New Home Construction	34%
Home Renovation	10%
ICI	42%
Engineering Construction	22%
Other	28%

Source: PRAXIS Employer Survey

It is interesting to note that large firms had significantly higher vacancy rates than small firms.

The highest year-round vacancy rates were experienced for flooring specialists with a year-round vacancy rate of 8%, followed by welders at 7% and painters at 4%. Carpenters and sheet metal and plate workers had year-round vacancy rates of 3%, and plumbers and excavators had vacancy rates of 2%.

In terms of seasonal openings, the concrete pouring and finishing trade was the most difficult to fill, with a vacancy rate of 24%. Carpenters were the next most difficult group with a seasonal vacancy rate of 7%. Sheet metal and plate workers, refrigeration installers, and crane operators had seasonal vacancy



rates of 6%. Vacancy rates for seam fillers may also be relatively high although this does not show up in the employer survey; the survey asked about drywallers, a term unfamiliar to most respondents.

Employers did not report having any vacancies for siders, cabinetmakers, crane operators, flooring specialists, bricklayers, heating and air conditioning installers, and surveyors.

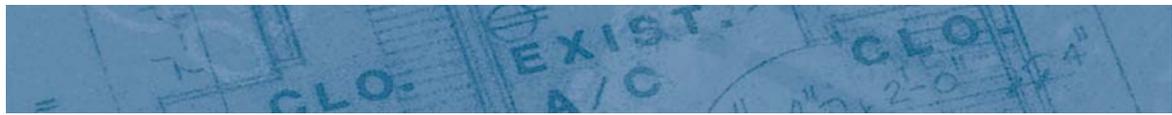
Strategic planning by employers may contribute to the relatively low proportion of employers who recorded vacancies. Employers experiencing strong demand for their services would know from previous experience that it is difficult or impossible to recruit qualified trades people to meet these business opportunities. Rather than attempting to do so, they may reduce the amount of work undertaken, to provide more overtime or to sub-contract more work.

The employer survey supports this possibility. It shows that 66% of employers who experienced difficulties filling positions limited the amount of work taken on, while 74% provided more overtime and 45% sub-contracted work. These actions would reduce or eliminate the need to hire more workers and could result in employers reporting relatively few vacancies in the survey.

The survey also shows that 42% of employers hired less qualified people when faced with job openings that are difficult to fill. This reaction also reduces the number of reported vacancies. The lack of vacancies in this situation masks employer concerns about the availability tradespeople with the skills and experience that are needed.

The PRAXIS survey asked respondents to rate the degree of difficulty finding tradespeople and sub-contractors in the trades in 2002. Respondents overwhelmingly indicated that they had little difficulty finding skilled tradespeople and sub-contractors in the trades. Results indicate that employers had the most difficulty finding plumbers but, even in this case, only nine percent of firms said they had difficulty. For the other trades examined, between three and seven percent of employers reported difficulties finding tradespeople or subcontractors.

The PRAXIS survey asked about difficulties in finding both tradespeople and sub-contractors. As a result, the responses reflect the availability of sub-contractors as well as workers. To examine difficulties in finding workers only, the responses of firms who said that they did not use sub-contractors in 2002



were isolated and tabulated separately. Presumably the responses of these firms relate only to difficulties finding workers, as opposed to subcontractors.

Only 85 firms said they did not use a sub-contractor, so the sample size is relatively small and estimates may contain a significant degree of error. The estimates indicate that the group reported even less difficulty in finding tradespeople or sub-contractors. Only four percent of this group reported difficulties finding plumbers, residential electricians and general carpenters, while two percent found it difficult to find the other trades identified in the survey (industrial electricians, finish carpenters, and framers).

Question thirteen of the PRAXIS employer survey asked respondents to rate factors that made positions difficult to fill. The responses show that a lack of specific skills and experience were the top rated factors. About 42% and 38% of businesses respectively identified these factors as important or very important in making it difficult to fill vacant positions. A lack of graduates was rated as important or very important by 39% of businesses. The negative image of the industry among prospective workers, the seasonal nature of available work and low wages in the industry were identified as important by a smaller proportion of businesses.

Specific rigidities that could limit the supply of skilled labour are:

1. Employers may not be willing to train workers for jobs that are vacant because they cannot be guaranteed that the workers will stay with their company. If the training received by workers can be used in other jobs, employers will not be able to recoup investments in training. Focus groups indicated that employers are reluctant to invest in apprentices because apprentices tend to search out an employer offering a higher wage once they get their "*ticket*".

The employer survey showed that one-half of the employers surveyed were willing to invest in training. This percentage ranged from a high of 57% in ICI and engineering construction to a low of 39% in home renovations.

Focus groups point out the importance placed on training by many employers in the industry. They provide evidence that many employers invest in training despite problems in getting a pay-off from their investment.

The PRAXIS survey indicated that 37% of employers in the construction industry increased training for existing workers in response to difficulties finding skilled tradespeople. Firms in engineering



construction and ICI were the most likely to increase training while those in home renovations were the least likely.

Employers in the focus groups indicated that their difficulties in filling job vacancies result primarily from a lack of people with the specific skills and experience needed to be productive on jobsites. They also reported difficulties finding workers who can work on their own and manage a project independently. These groups are not available in enough numbers to meet the needs of employers. However, employers indicated that unskilled workers are available in relatively large numbers. Employers confirmed that there are large numbers of individuals in the construction labour market who do not have the skills and experience required to meet employers' requirements.

2. Focus groups indicate that apprentices are not getting the degree of on-the-job mentorship they need because journeymen are "*too pushed*" simply trying to keep up with the job demands and deadlines.
3. Government programs do not support training for existing workers; most government training funds are directed towards workers receiving Employment Insurance benefits. Focus group participants noted that there are no formal structured programs or mechanisms to ensure that existing workers receive ongoing training.
4. The length of time required to become certified in the trades may reduce the number of young people who enter and complete apprenticeship programs. The seasonal nature of employment means it can take over six years for an apprentice to become certified. Significant numbers of potential tradespeople drop out of the apprenticeship program because of their inability to find the steady employment required to complete their program. This problem reduces the production of skilled trades workers and contributes directly to structural unemployment.

Conditions in the job market may change dramatically by the time an extra supply of workers is produced by the apprenticeship program in response to wage increases resulting from a shortage situation. A downturn in demand in this interim period could result in a situation where there is a surplus of workers by the time labour supply increases. In this case, the increase in supply could exacerbate the labour surplus and drive down wages. This situation makes it very difficult to match supply and demand and could result in on-going labour market instability with shortages and surpluses alternating over time.



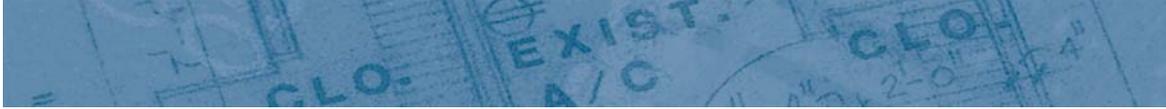
Generally speaking, builders/contractors and apprentices who participated in focus groups did not feel that the length of time required to move from an apprentice to journeyman was a major problem. They believed that apprentices usually complete the program in four to five years and that it takes that long for apprentices to be exposed to and become familiar with the scope of skills and work tasks that are part of a journeyman's experience.

5. Employers who participated in focus groups felt that many young people come into trades training without any prior exposure to and experience with the trades. They felt that this contributes to high drop out rates from apprenticeship training.
6. Many employers in the focus groups felt that the cost of trades training is a disincentive to undertaking and completing trades training. Unless students can access EI, they most likely have to get student loans. When they finish school, their wage levels are constrained by low apprenticeship wages. Training costs may make it impossible for some individuals who wish to enter the trades to access training programs that are available.

Focus groups indicate that the need to travel or move to take training is costly and acts as a barrier to entry into trades training. Holland College has located its core training sites in various parts of the province, including carpentry in Charlottetown, electrical in Summerside and plumbing, heating and welding in Georgetown. Participants in employer focus groups expressed concern over both the regional accessibility and costs of available training programs.

For some students living in the extremities of the Island, distance and the cost of traveling can be a particular issue. For some trades, such as sheet metal, students and apprentices have to go to New Brunswick for training. Apprentices participating in focus groups felt particularly strongly that there should be more financial assistance to pay for travel and accommodation expenses for students who must travel and/or live elsewhere while in training.

7. Admission requirements for trades training courses may pose a barrier that limits the number of individuals that receive trades training and certifications. This issue is discussed in more detail in the Training section of this report.



15.3 Demand and Supply Outlook

Previous sections of this report showed that construction activity is projected to remain at high levels up to 2007 and that labour supply will decline. These projections indicate that shortages will become more of an issue in the future. They may be especially serious for trades such as plumbers where a relatively large number of workers are near retirement. This reality implies that immediate action to address the issues discussed above is required to prevent serious human resource problems in the future.

The Impact of Labour Shortages

16.0 The Impact of Labour Shortages

16.1 Findings

Labour shortages affect the economy in four ways:

- ▲ Reduced business and economic activity.
- ▲ Higher costs.
- ▲ Lower quality.
- ▲ Less support to younger apprentices.

Employers in focus groups indicated that their inability to recruit skilled tradespeople limited the capacity of employers to pursue new work and to provide the appropriate level of mentorship and support to younger apprentices.

16.2 Evidence

Employers in all focus groups felt the lack of skilled tradesmen is having a direct impact on their capacity to grow and develop as a business. Builder/contractors describe themselves as being “*more selective*” in what they do. They do not pursue opportunities as “*aggressively*” as they might otherwise if they were confident that labour supply was available. Many openly acknowledge that they do not bid on work that they would have a few years ago simply because do not have the manpower to do the work.

When considering new work opportunities, many employers find themselves asking, “... *Who would I be able to get to look after this job?*” In many instances there is no one beyond their existing crew and the work is not pursued. One contractor noted that there is strong demand for contract work, and pent up demand for speculative building, but he cannot pursue these opportunities due to a lack of skilled labour. In his own words:

“If I had more qualified carpenters I could do three times as much work, and employ three times as many workers”.



Focus groups indicate that, because of skill shortages, builder/contractors end up pushing their existing crews too hard, and need to work long hours to meet customer timelines. In other instances, employers tend to hire workers who they know are not qualified, and then they (or their site supervisors) spend more time supervising their work. Builders/contractors agreed that this is a real problem on several levels. With fewer and fewer experienced tradesmen around, site supervisors are often working with crews who have limited experience. Supervision responsibilities are getting heavier and supervisors are beginning to feel the stress. This view was confirmed in the worker focus groups. The older and more experienced tradesmen described the difficulty of working with unqualified labour, and the additional responsibility and the resulting stress that they often feel. In the words of one focus group participant:

“Those who are prepared to take more responsibility get ‘pushed hard’ – after while they just give up and get out”.

Another significant impact that was identified in all focus groups was a concern labour shortages were making it increasingly difficult to maintain the overall quality level of workmanship. In some participants’ minds it is already going down. All focus groups commented on this in some way, and it suggests that both employers and workers alike are recognizing that they are doing things that are not up to the same building standards as in earlier times.

Many employers who participated in the focus groups indicated that, because of the general lack of skilled tradesmen and site/project supervisors, many journeymen are fully committed to meeting the project deadlines and have very little time to properly mentor and support apprentices. They view this as a serious gap that it is growing. It is useful to note that the recently developed Holland College training program for bricklayers did provide for a “*job coach*” to come on-site one day a week to assist the apprentice bricklayers who were working. This person provided “*coaching*” to apprentices with two different companies, and it was one employer’s view that this was a very helpful to both the apprentices involved and the journeyman who had responsibility for mentoring.

The PRAXIS Employer Survey showed that businesses responded to difficulties finding skilled trades as follows:

- ▲ Forty-seven percent increased the amount of overtime. Firms in engineering construction and ICI increased overtime the most while those in renovations increased overtime the least.



- ▲ Forty-six percent hired less qualified people. Firms in ICI, new home construction and engineering construction were the most likely to hire less qualified people while those in renovations were the least.
- ▲ Forty-three percent reduced the amount of work taken on. Firms in new home construction and ICI were the most likely to reduce the amount of work taken on while those in renovations were the least likely to reduce work.
- ▲ Thirty-seven percent increased training for existing workers. Firms in engineering construction and ICI were the most likely to increase training while those in renovations were the least likely.
- ▲ Thirty-five percent of firms in the construction industry increased time spent searching for skilled people. Firms in engineering construction and ICI were the most likely to increase time spent searching for skilled people while those in renovations were the least likely.
- ▲ Thirty-four percent of firms in the construction industry increased wages. Firms in ICI, new home construction and engineering construction were the most likely to increase wages while those in renovations were the least likely.

These responses provide evidence that many individual businesses experience reduced revenues as a result of shortages and that costs increased in a variety of ways. The high percentage that hired less qualified people also indicates that shortages may translate into quality concerns for consumers. It is interesting to note that large firms and firms involved in ICI and engineering construction were more likely to say they took active measures to recruit workers when faced with shortages.

17.0 Training

Trades training is critically important in producing certified tradespeople that meet the requirements of industry. A mismatch between the skills and knowledge of graduates and the needs of industry can contribute to structural unemployment and skills shortages. Inadequate training also can reduce productivity, quality and impose training and other costs on employers. Because of the importance of training, a number of findings are presented on this subject.

17.1 Institutional Efforts and Initiatives

17.1.1 Finding

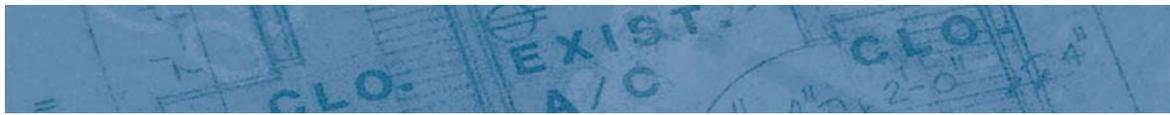
Educational institutions on PEI, notably Holland College and the Apprenticeship program, have taken a proactive and innovative approach to fulfilling their mandates. While important training-related issues exist in the construction industry, educational institutions have demonstrated a willingness to provide the highest quality service possible.

17.1.2 Evidence

17.1.2.1 Holland College

Holland College assumed the primary responsibility for trades programming as a result of a major reorganization of vocational training in the Province in the late 1970's and early 1980's. Over the past two decades, trades programming has evolved in response to labour market demand and provincial and economic development priorities and requirements. Research and interviews conducted for this study show that Holland College has pursued its responsibilities for trades training in an innovative and vigorous way. The following examples demonstrate the commitment of Holland College to trades training:

- ▲ The development of new models, such as the West Prince Carpentry program, for delivering trades training in smaller communities.
- ▲ The use of labour market research, and consultations with industry through advisory committees, to determine the number of people to be trained in each trade.

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- ▲ Plans to enhance the accessibility of trades programs through Prior Learning Assessment and Recognition (PLAR).
 - ▲ Marketing, advertising and promotion programs to maximize awareness of trades careers and training opportunities.
 - ▲ The adoption of ISO 9001 certification – an internationally recognized quality monitoring program. Under ISO 9001 the College must complete follow-up surveys of graduates, develop and review critical performance indicators on an annual basis, conduct internal audits and undertake continuous quality improvement.

17.1.2.2 Apprenticeship

The Apprenticeship and Trades Qualifications Act (1968) is the legislative authority that underpins the structure and delivery of apprenticeship training within PEI. The Act is administered through the provincial Department of Education (Continuing Education and Training). Its activities are executed through a provincial apprenticeship board.

In PEI, there are some 45 trades that are currently designated under the Apprenticeship and Trades Qualifications Act. Three of these trades: automotive mechanic, construction electrician and plumber have compulsory certification.

The apprenticeship board has taken a number of proactive steps to improve training and communications with industry in recent years including:

- ▲ Initiation of formal apprenticeship training for bricklayers in conjunction with HRDC and Holland College. This program resulted in a training program being offered to 11 students beginning September, 2003.
- ▲ Development of a *Block Release Training Program* for construction craft labourers in conjunction with Holland College and the Construction Labourers Union.
- ▲ Initiation of specific industry agreements as a method of increasing the number of certified tradesmen. An agreement was recently implemented with the PEI Carpenter's Union that has resulted in approximately 100 carpenters entering the apprenticeship program.



- ▲ The introduction of the *Accelerated Secondary Apprenticeship Program* (ASAP). This program allows career-minded students to get a head start in the post-secondary *Apprenticeship Training Program* while still in high school. As of 2003, eleven out of twelve Island high schools participated in the program with 35 youth apprentices involved in a range of construction related trades including: electrical, welding, plumbing, metal fabrication and construction labourer.

Generally speaking, many employers who participated in focus groups felt that there have been improvements to the apprenticeship program in recent years. They felt that greater efforts are being made to more directly engage employers and potential apprentices, stronger follow up and support measures are in place to track apprentices as they move through the program and steps have been taken to expedite the EI application/approval process for apprentices in *Block Release*.



17.2 Apprenticeship Completion and Employment Rates Limit the Supply of Certified Trades Workers

17.2.1 Finding

The supply of certified trades workers is limited by a number of factors including a lack of information and experience with the trades in high schools, negative attitudes of youth towards the trades and training costs. It appears, however, that the greatest constraint on supply may be proportion of apprentices who complete their programs and the proportion of Holland College graduates who find direct employment in their trade.

17.2.2 Evidence

17.2.2.1 Applicants, Enrolments and Graduates from Holland College

Data on the number of graduates from Holland College in key construction-related trades³¹ indicate that there has been some decline in the supply of graduates in recent years. The total number of graduates in key construction-related trades dropped from 96 in 1995 to 73 in 2002. The number of graduates in plumbing dropped from 15 in 1995 to 7 in 2002 while those in electrical construction decreased slightly and those in carpentry increased slightly.

Data on enrolments in key construction-related trades indicate, however, that the 1995-2002 decline will likely be reversed in upcoming years and the number of graduates will increase due to a jump in total enrolments from a total of 87 in key construction-related trades in 2000-2001 to 160 in 2003-2004. This represents an 84% increase in only three years.

Data on the number of applicants compared to the number of seats available show that there were twice as many applicants as seats in 2002-2003 in key construction-related trades. Plumbing programs had four times as many applicants as seats while carpentry had three times as many. These data indicate that the demand for programs significantly exceeded their availability in 2002-2003. It is important to

³¹ These trades are: electrical (construction), electro-mechanical, HVAC, machinist, automotive technology, carpentry, plumbing and welding.



point out in interpreting these data that applicants often apply to, and qualify for, more than one program.

Enrolment interest continued to grow in some programs (carpentry, electrical, HVAC) in 2003-2004 and the College increased the number of seats in some of the programs areas. Holland College data and discussions with key informants indicate that the number of applicants to many of the construction trades programs has been increasing in recent years.

Telephone surveys with trades program graduates completed by Holland College indicate that roughly 50% of graduates from 1995 to 2001 were employed directly in their trade in the first full week of May following graduation. This finding indicates that the increase in the supply of certified trades workers may be significantly less than the number of graduates. Further research is required on the reasons why only 50% of graduates were directly employed in their trade and whether those who were not directly employed were permanently lost as trades journeymen.

17.2.2.2 Apprenticeship Registrations, Completions and Withdrawals

A March 2002 study – “Opportunities for Promoting Apprenticeship: Labour Market Analysis” – completed for PEI Provincial Apprenticeship Board³² projected the need for additional apprentices on an annual basis between 2002 and 2008. It established registration targets based on the number of new employees needed to support the estimated annual growth in the industry and to replace workers leaving the industry because of retirements and/or attrition.

The targets set in the March 2002 study were somewhat higher than the number of apprenticeship registrations in 2001 for carpenters, bricklayers, electricians and sheet metal trades. The target for plumbers was more than twice the number of registrations in 2001 while the targets for refrigeration and air conditioning and welders were less than registrations in 2001. For the trades as a whole, the authors of the March 2002 report indicate that the annual targets represent a 15% increase over registrations in 2001.

³² Enterprise Management Consultants, Prism Economics and Analysis, AMEC and Advantage Communications, “Opportunities for Promoting Apprenticeship: Labour Market Analysis”, March, 2002.



The targets represent differing proportions of the overall labour force by trade. For example, they represent 11% of the estimated labour force for the electrical trade (2001 Census), 5% for plumbers and 2% for carpenters.

The March 2002 study also presented data on apprenticeship activity in all trades over the 1990-2001 period. In interpreting these apprenticeship data, it is important to note that Craig Norton, Manager Apprentice Training for the Province of Prince Edward Island, indicates that the data on apprenticeship contains gaps and inaccuracies and should be interpreted with caution.

The data show that almost as many trades apprentices withdrew from the apprenticeship program between 1990 and 2001 as completed it. There were 488 trades apprentices who completed the program over the eleven-year period 1990-2001 compared to 442 who withdrew from the program. The report also presented data on seven important construction trades: carpenter, bricklayer, electrician, plumber, refrigeration & AC, sheet metal and welder over the 1990-2001 period. It shows that there were 255 completions and 223 withdrawals from the apprenticeship program in these trades from 1990 to 2001. The overall percentage of withdrawals to completions for these trades was 87% - slightly less than the 91% rate for all apprenticeable trades.

Data for individual trades programs of importance to the construction industry are presented in the table below.

Carpentry	80%
Const. Electrician	75%
Plumbing	65%
Refrigeration & AC	167%
Sheet Metal	133%
Welding	87%

Data on apprenticeship enrolments and completions in key trades provided by Statistics Canada show that completions as a percentage of enrolments are low in Canada as a whole. The percentage of



completions to enrolments in Canada averaged 11% for plumbers, 10% for electricians and 6% for carpenters over the 1991-2001 period. This rate declined for all three trades from 1991 to 2001.

To provide perspective on these numbers, if all of the apprentices completed a five-year program, the completion rate would be 20% annually assuming constant intake into the program. A completion rate of 10% would mean that an equal number of apprentices withdrew as completed the program.

Completion to enrolment rates for plumbers on PEI could not be calculated from the Statistics Canada data due to confidentiality restrictions. The rates for electricians and carpenters were 12% and 14% respectively.³³ The rates for electricians show no apparent trend over the 1991-2001 period while those for carpenters rose significantly in the mid - to late - 1990s but dropped off in 2000 and 2001.

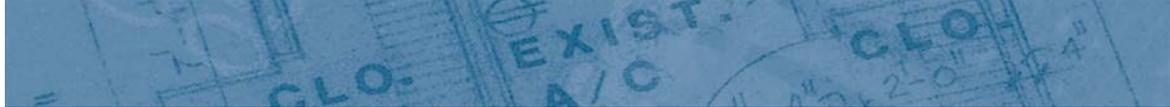
Completion rates on PEI were higher than those achieved in Canada as a whole for electricians and dramatically higher for carpenters. Nonetheless, the rates indicate that a significant proportion of apprentices on PEI do not complete programs in which they enrol. Data on enrolments, withdrawals and completions indicates that attrition from the apprenticeship program may undermine efforts to reach the targets for producing certified tradespeople specified in the March 2002. This is an especially serious problem for plumbers and electricians where certification is mandatory to practice these trades.

17.2.2.3 The Impact of Training Costs

Workers may wish to enter an occupation with rising wages by moving or acquiring the required training but may not have the financial resources to support their plans. This constraint could inhibit the inflow of workers into trades occupations despite the attraction of high wages. Training costs include direct costs such as tuition, meals, accommodation and books and costs associated with lost wages during training and apprenticeship.

Trades training is expensive in terms of direct costs such as tuition and lost wages while training. The cost is higher when individuals must temporarily re-locate to take training. The 2003-2004 Holland College calendar shows that annual tuition fees range from \$3,150 per year to \$4,915 per year. Other

³³ Completion to enrolment rates over the 1990-2001 period on PEI calculated from data in the March, 2002 report were similar to those calculated from the Statistics Canada data. They were 12% for carpenters, 11% for construction electricians and 10% for plumbers.



costs such as books and equipment may add another \$1,000 per year. These training costs can be offset for individuals in pre-apprenticeship courses and Block Release who are eligible for EI.

It was demonstrated in a previous section of this report that many employers in the focus groups felt that the costs of trades training were a disincentive to choosing a trades career, especially for students who are not EI eligible. Such students most likely have to get student loans. Their ability to pay off these loans when they finish their training is constrained by low apprenticeship wages. Participants in employer, worker and apprentice focus groups felt that this reality resulted in a disincentive for young people to choose a trades career.

Focus groups and key informant interviews indicate that the use of EI to offset trades training costs at Holland College is one reason why some prospective tradespeople enter programs at a relatively old age. This could reduce the number of young people who may be interested in the trades in high school but drift into other jobs or into unemployment after high school and never pursue the interest in the trades.

17.2.2.4 The Impact of Admission Requirements

Admission requirements for trades programs at Holland College usually include Grade 12 and sometimes Grade 11 Math, English and Physics. These requirements may act as a significant barrier for prospective tradespeople. It is acknowledged that the highly technical nature of the trades explains the admission requirements and that Holland College has made significant efforts to assist students in meeting the requirements. Nonetheless, admission requirements may pose a barrier to some individuals who otherwise would be well-suited to a trades career.

17.3 Causes of Apprenticeship Non-Completion

17.3.1 Finding

A number of factors contribute to the non-completion of apprenticeship programs, including the following:

- ▲ The need for extended on-the-job training in apprenticeship in the face of fluctuating employment due seasonality in the construction industry.



- ▲ A lack of experience with and knowledge of their chosen trade by entrants into institutional training.
- ▲ Training costs including the cost of foregone wages due to relatively low wages for apprentices.
- ▲ The lack of compulsory certification in most trades.
- ▲ The lack of a wage premium for certified trades workers for trades that do not have compulsory certification.

17.3.2 Evidence

An annual activity report initiated by the Provincial Apprenticeship Program in 2001 shows that just under one-quarter (23%) of the non-completions from the apprenticeship program in 2000/01 and 2001/02 occurred because individuals were no longer employed in the trade with 21% occurring because individuals moved. Just under one-fifth (17%) of cancellations occurred because individuals were not interested in the training they were receiving. Approximately 12% of cancellations resulted from individuals working in or taking training in another trade.

The conflict between the need for extended on-the-job training and the limited availability of employment due to seasonality and cyclical fluctuations in the construction industry is widely documented in labour market literature.³⁴ The fact that apprenticeship is an “all-or-nothing” process adds to this conflict. Despite the logic behind the conflict, focus group discussions did not point to the duration of apprenticeship training as a constraint on program completion.

The lack of experience with and knowledge of their chosen trade by entrants into institutional training was dealt with earlier in this report as was the impact of training costs on completion rates.

The impact of the lack of compulsory certification in most trades on completion rates was noted in the focus groups as a significant factor inhibiting completion rates. Both employers and apprentices felt that, in some trades such as carpentry, there is no real incentive for the apprentice to follow through with the apprenticeship program. Focus group participants pointed out that anyone can call themselves

³⁴ See, for example, Morley Gunderson, “Skill Shortages In The Residential Construction Industry”, Report to the Canada Mortgage and Housing Corporation, January, 2001.



a carpenter, and eventually an apprentice may begin to wonder whether it makes any sense to work hard, train and become certified. As noted by one apprentice,

“You go to school and meet all the requirements of apprenticeship and after all that employers don’t even have to hire you to get the work done, unlike plumbers and electricians, they can hire someone who just has a box of tools in his truck.”

The PRAXIS survey of EI carpentry claimants showed that certified carpenters enjoyed only a minimal wage premium compared to uncertified carpenters in 2002. The lack of a significant wage premium would provide little incentive for unlicensed carpenters to become certified. A significant wage premium existed for certified construction electricians compared to their unlicensed counterparts. Since the construction electrician trade has compulsory certification, unlicensed trades people likely are helpers who classify themselves as construction electricians.

The data on withdrawals and completions provides some evidence that compulsory certification may influence completions rates. Withdrawal rates for construction electricians and plumbers were somewhat lower than those for carpenters but significantly lower than those for other non-compulsory trades such as refrigeration & air conditioning and sheet metal.

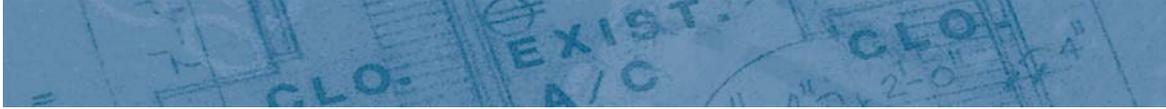
17.4 Quality and Adequacy of Institutional Training

17.4.1 Finding

Data from the employer survey indicates that employers were reasonably satisfied with the training provided in institutions and with the graduates of these institutions. Focus groups with employers, workers and apprentices recorded consistent opinions that were critical of some aspects of the training system. In particular, participants in focus groups felt that there was a lack of “*job readiness*” among training graduates. They felt that the lack of job readiness could be attributed to two problems with the training system:

- ▲ Inadequate integration of classroom training and work on job-sites.
- ▲ A lack of exposure to trades in high schools.

These problems are discussed in more detail elsewhere in this section.



17.4.2 Evidence

About two-thirds of employers in the PRAXIS survey gave high or very high ratings³⁵ to the training system for the relevance of training and the competence of instructors.

Although a minority of businesses who responded to the survey hired graduates of Holland College in the five years prior to the survey, those that did seemed to be reasonably satisfied with the suitability of the graduates that they hired. The survey indicates that two-thirds of employers rated training graduates as highly³⁶ suitable in terms of their willingness and ability to learn. Just over one-half of employers rated graduates highly in terms of their attitude and work ethic. The skills (tool & equipment and trades skills) were rated as highly suitable by between 40% and 45% of businesses that answered this question. The work planning skills (19%) and business knowledge (12%) of graduates were rated as highly suitable by a relatively small proportion of businesses.

Overall, the ratings of employers on the training system and graduates of the training system provide support for the quality of training at Holland College and for the suitability of graduates. This being said, the employers ratings also pointed to specific areas, notably work planning skills and business knowledge, where graduates were not suitable.

The findings of the employer survey were contradicted by the focus group discussions. Participants in these discussions noted that, while there have been recent efforts to improve and strengthen the focus on trades in high schools, Holland College and apprenticeship, there are significant gaps that need to be addressed.

The focus group discussions indicate that some employers believe that the skills and work ethic of many new entrants coming out of construction trades training do not meet the needs and expectations of employers. Some employers stated that the capacities and “*job readiness*” of new entrants coming out of the construction trades programs are not meeting the needs and expectations of employers. Employers participating in the focus groups indicated that current trades school graduates do not quickly or easily “*fit in*” to the actual construction environment and “... *seem to be unprepared for*

³⁵ A rating of 4 or 5 on a scale of 1 to 5.

³⁶ A rating of 4 or 5 on a scale of 1 to 5.



the actual work environment and work demands". This perception also emerged from a focus group with apprentices.

Employers in the focus groups were not sure whether the lack of preparedness of new entrants reflects a training issue, a screening/selection issue when the students are being considered for training programs, or an attitudinal/motivation problem on the part of students. Their bias is that it may be a screening issue; their belief is that it is difficult for any young person to know their aptitude for a particular construction trade without any prior exposure to that trade.

17.5 Many Employers do not Look to the Training System as a Source of Labour Supply

17.5.1 Finding

The employer survey and focus group findings indicate that many employers in the industry do not look to the training system as a source of labour supply. Training and skill acquisition are provided by employers on the job.

17.5.2 Evidence

The employer survey shows that most employers in the industry did not hire community college graduates in the last five years and that a minority of employees in many trades were certified. A relatively low proportion of employers rated Grade XII completion, post secondary trades training and trade certification as highly important in influencing hiring decisions. By contrast, positive attitudes and aptitudes were rated highly by the vast majority of employers. Focus groups indicate that employers often hire new entrants based on their attitudes and provide training for these individuals on-the-job.

Twenty-three percent of employers surveyed by PRAXIS had hired graduates of post-secondary training programs in the past five years.

Positive attitudes had the greatest influence on employers' hiring decisions for entry-level positions with 94% of respondents rating this factor as important or very important.³⁷ The aptitudes of applicants were

³⁷ Important or very important are defined as receiving a rating of 4 or 5 on a scale of 1 to 5.



rated as important or very important by 83% of respondents and were the second highest rated factor that influenced hiring decisions.

Training and certifications among the lowest rated factors that influenced employers' hiring decisions with 37% and 34% of employers respectively rating these factors as important or very important. It is interesting to note that technical skills were relatively unimportant in influencing hiring decisions with 39% of employers rating these skills as important or very important.

The PRAXIS employer survey showed that most workers in trades with compulsory certification such as electricians, plumbers and mechanics were certified. For trades without compulsory certification, certification rates were much lower. For example, 50% of general carpenters, 39% of finish carpenters, 37% of framers, 36% of welders, 24% of sheet metal workers and 19% of heavy equipment operators were certified. These data indicate that a significant proportion of the construction trades workforce either did not take, or did not complete, institutional trades training. All or most of the training of these employees would have been provided by employers.

In fact, on-the-job training was the most frequently mentioned type of training received by workers with 37% of businesses providing this training for their workforce. Consultations with employers indicate that the incidence of on-the-job training may have been underestimated in the survey. In responding to these questions employers may have only included formal on-the-job training and not training provided in the normal course of completing a job.

Aside from on-the-job training, training by suppliers (27%), apprenticeship (26%) and training by manufacturers (24%) was most commonly received by workers in the two years prior to the survey. Community college training had been taken by workers at about 16% of the businesses.

Employers who participated in the focus groups indicated that, when recruiting new entrants, most builders/contractors said that they tend to try to “*grow their own*”, that is, find someone such as a young labourer who seems to have the interest, aptitude and motivation, and encourage him toward skills development and training. They indicated that they do this as a solution of last resort and expressed a great deal of frustration with the current approach to the recruitment, screening and training of construction tradesmen.



The very high percentages of employers who rated attitude and aptitude as the most important factors in hiring for entry-level positions is consistent with findings from the focus group discussions that many employers like to select a young person based on their attitudes as expressed in their initial contact and interviews or based on previous knowledge of the young person through family or other contacts. They feel that if the young person is solid and serious they can be taught the skills and knowledge they need on-the-job.



17.6 Young People are not Getting Enough Information on Trades in High School

17.6.1 Finding

Focus group participants felt that young people were not provided with adequate information or hands-on experience in the trades at the high school level and that this has had a negative impact on trades recruitment and training. They identified three impacts of this problem:

- ▲ Fewer young people choose trades careers.
- ▲ Young people often choose trades programs at Holland College without adequate information and experience to support their choice. As a result, some of these individuals drop out of the programs once they realize the nature of the work and skills required to complete the work.
- ▲ Some graduates of Holland College were not “*job ready*” because of a lack of on-the-job experience at the College combined with the lack of hands-on experience prior to beginning their College program.

17.6.2 Evidence

Focus groups indicate that young people in high school have very few opportunities to become exposed to “*hands on*” skills and the trades. Focus group participants noted that the secondary school system withdrew trades training from their curriculum in the mid-1980’s. They felt that the message sent to young people by this policy was that university was the way to go.

Some people in the focus groups felt that a lack of trades exposure is one reason why there is the high drop out rate among those who enter trades training. They felt that young people need some level of concerted early exposure to the trades so that they can make an informed decision about their occupational choice rather than the “*hit or miss*” approach they felt resulted from the existing system.

The closure of the integrated (academic and trades training) provincial vocational schools (Provincial Vocational Institute and Summerside Vocational) in the mid 1980’s was viewed as a major mistake in all focus groups (employer, worker, apprenticeship). In the view of focus group participants, it signalled a de-valuing of trades and trades training within the province. The only real option for young people



with an aptitude for “*hands on*” work was removed from them, and it gave the message to both young people and their parents that trades were “*not the way to go*”.

Some participants in the focus groups went as far as to say that a whole generation of Island young people who may have had an aptitude and interest in the trades has been missed. They believe that some new model or approach to give young people early exposure to the trades and “*hands on*” work must be re-integrated into Island high schools. One employer describes his view of the situation in this way:

“While we are still considered a rural province, the current generation of kids are no different in terms of their day-to-day experiences than kids growing up in Toronto. At one time on PEI you learned your mechanical and hands on skills by working on the farm or fishing and so on. Most kids don’t get that opportunity anymore. We need to create more opportunities to expose them to this at an earlier age.”

Interviews with key informants and document reviews indicate that, while there have been no formal trades certificate programs in Island high schools for the past 12-15 years, there always has been some level of trades exposure for students. There are a number of trades-related introductory programs available in most Island high schools although only two relate directly to the construction sector – carpentry and welding.

In 2000, the Dept of Education/School Boards introduced a program called the Career Exploration Program into the Island high schools. This program consists of a series of courses based on the knowledge and skills drawn from specific occupations including woodworking fundamentals, construction technology, construction woodworking and metal working fundamentals. Unfortunately, only about 5% of students get into the Career Explorations Courses in any given high school.

A wide variety of innovative initiatives that provide some trades exposure have been undertaken in Island high schools in recent years, including:

- ▲ The Youth Internship Program (YIP) that allows Grade 11 and 12 students to gain exposure to aerospace trades at Slemmon Park. Students receive on-the-job training as part of this program.



- ▲ An Employability Skills Program was begun as a pilot program at Bluefield High School in 2003. The program is aimed at Grade XII students. The focus is on the employability skills areas – communications, problem-solving and team work.
- ▲ All high schools have the computerized career exploration program called *Choices*.
- ▲ There are generic Career Days held each year in most Island high schools and people representing various construction-related trades are often invited to present information and talk with students.
- ▲ A “Take Your Kids to Work Day” allows large numbers of students in grades 9 and 10 to gain exposure to careers and occupations, including the trades.
- ▲ The Accelerated Secondary Apprenticeship Program is now in all Island high school, and more and more students are participating.
- ▲ The Career Transitions Program being piloted at Bluefield High School has shown early signs of helping participating students to successfully make the transition to post secondary training.
- ▲ The PEI Career Promotion Marketing Strategy was to be launched in September 2003. The strategy has a specific focus on health occupations and the trades. One of the initial project goals is to establish a series of partnerships that will serve to integrate career planning and health/trades career promotion with other relevant initiatives and activities.
- ▲ Skills Canada PEI has a mission is to encourage youth to consider skilled trades as a first choice career option.

Career guidance counselling was traditionally associated with the duties of guidance counsellors in high schools but this is not the case anymore. The education system recently dropped the reference to “guidance” from the work title of this position. The work title of the position previously known as the Guidance Counsellor is now called the School Counsellor. The primary role of this position is to deal with the personal and social needs and issues presented by students rather than to provide career counselling. The lack of career exploration and counselling for secondary students was acknowledged by educational experts interviewed for this study as a large gap at most Island high schools.



17.7 Integration of Institutional Training and the Workplace

17.7.1 Finding

Employers feel that there should be a closer integration of institutional training and the workplace. In a practical sense, this would mean more time spent on job-sites by individuals enrolled in pre-apprenticeship training courses. The pay-off from closer integration would be an improvement in the job-readiness of graduates.

17.7.2 Evidence

Some participants in employer focus group were critical of the integration of classroom training and on-the-job skills and realities. They stressed the need to improve this integration through models such as co-op programs. Many apprentices in the focus groups believe they would have benefited from more on-the-job work opportunities while in training, and would have been better prepared for actual jobs in the construction industry. Focus group participants indicated that there appears to be not enough balance of theory and “*shop*” or on-the-job training for students.

The employer survey supports the focus group findings on the importance of integrating classroom and on-the-job training. Closer linkages of institutional training with on-the-job experience were one of the highest priority changes to the training system recommended by employers.



17.8 Industry Priorities and Recommendations for Change to the Training System

17.8.1 Finding

More industry input into the training system, and more linkages of training with on-the-job experience, are the highest priority changes to the training system suggested by employers.

17.8.2 Evidence

Respondents to the PRAXIS employer survey provided clear direction on their priorities for changing the training system. Employers rated more industry input, and more linkages of training with on-the-job experience, as the highest priority changes required in the training system. About two-thirds of the employers rated these changes as a high or very high priority.³⁸

The use of short training modules, updating curricula and more industry experience for trainers also were frequently mentioned as priorities. Some respondents identified new programs that should be introduced including: well drilling, landscaping and flooring installation.

The PRAXIS employer survey identified the most frequently mentioned training priorities of employers willing to invest in training. Health and safety skills topped the list with 43% of employers mentioning these skills as high or very high priorities. About one-third rated trades skills, both in terms of upgrading skills (36%) and providing specialized trades skills (35%) as high or very high priorities. Business management skills were identified as a priority by 35% of employers. Other skills rated as high priorities include tools and equipment skills (25%), knowledge of the building code (20%) and construction (18%) and customer relations skills (15%).

Employers in focus groups indicated that more direct and frequent communication is required between the apprenticeship officers and the employers/journeymen working directly with apprentices. It is not always clear to employers what is being covered in the training program, and it also may not be clear to the program instructors what apprentices are actually doing on the job. Employers felt that in order to

³⁸ A high or very high priority rating is one that receives a rating of 4 or 5 on a scale of 1 to 5.



ensure that there is a relevant link between training and the work environment, more communication was needed.

Many builders and contractors who participated in the focus groups felt that a more formal relationship between industry and educational institutions was required to address some of the issues identified above. This relationship must go beyond industry providing feedback on program curricula and begin to look at ways to address some of the more fundamental training related issues in the industry.

17.9 Training of Existing Workers is Inadequate

17.9.1 Finding

Training for existing workers that are employed in the construction industry is inadequate. Employers provide on-the-job training but this training is limited by a number of factors including time and resource constraints faced by construction businesses and turnover of the workforce. Government support for the training of employed workers also is limited due to the fact that training funds are focused on EI recipients.

17.9.2 Evidence

Employers are reluctant to invest in training for employees because some of these employees will leave their company and the pay-off from such training will be lost. In fact, approximately one-half of the employers in the PRAXIS survey said they were willing to invest in training for their workforce.

The percentage of employees who took various types of training in the two years leading up to 2002 was calculated from the employer survey. An average for all firms weighted by the number of employees was calculated, giving an estimate of the percentage of workers in the industry that took various types of training. About 16% of employees received some kind of on-the-job training as shown in the table below. It was noted above that the incidence of on-the-job training by employers may have been underestimated in the employer survey.



Table 11
Training Taken in 2001 and 2002

Training	Estimated % of Employees
On-the-Job Training	16%
Supplier Training	10%
Manufacturer Training	8%
Formalized Apprenticeship	5%
Industry Training	5%
Community College Training	3%
Classroom/On the Job Training	3%
Computer Based Training	3%
Correspondence Courses	1%
Internet Based Training	1%

Source: PRAXIS Employer Survey, Question 21

The above table indicates that half or less of the workforce received any type of training in 2001 and 2002.³⁹

Both employers and workers who participated in focus groups acknowledged that training for existing workers continues to be a major gap in the current system. There is no formal training structure or process through which training can be provided to existing workers. Apart from periodic training sessions (half day, week-end sessions, etc.) offered by suppliers regarding a new product or technology, some short-term opportunities offered by employers, or workers taking training on their own, there is not much training available to existing workers. Focus group participants felt that the whole area of training available for existing workers continues to be a major gap within the industry.

The lack of institutionally supported training means that many employers in the industry provide their own training for existing workers by necessity. Some employers in focus groups felt strongly about the importance of providing training to their employees. As noted by one employer,

³⁹ The table appears to show that 55% of employees took some type of training. However, some employees would have taken several types of training. This implies that the actual proportion of the workforce that received some type of training would be less than 55%.



“If you don’t do this you won’t stay in business for very long”,

and by another,

“If you don’t spend some money on getting your workers trained on new developments you will end up spending the money anyway by having to fix mistakes, or by re-doing something the way the customer expected it to be done in the first place”.

17.10 Barriers to Apprenticeship Identified by the Canadian Apprenticeship Forum

A “*Status of the Research Report*” has been produced for the Accessibility and Removal of Barriers Project sponsored by the Canadian Apprenticeship Forum (CAF).⁴⁰ A Consultation Report for this project is due for release in early 2004. The following quotation from the status report shows that preliminary findings of the CAF project support those in this *Findings and Policy Considerations* report produced by PRAXIS.

“The findings demonstrate that the perceptions of barriers to apprenticeship are well known and persistent. And while the research doesn’t uncover significant new barriers, it clarifies the perception that similar barriers are experienced in different ways by different groups. The preliminary report demonstrates that there appears to be remarkable consensus on the perceptions of what these barriers are. From one stakeholder group to another, the perceptions of barriers are far more shared than unique. These commonly perceived barriers can be grouped into nine categories, each reflecting a particular aspect of supply or demand conditions for apprenticeship: Negative attitudes to apprenticeship and a poor image of the trade; a lack of information and awareness of apprenticeship; difficulties with unwelcoming workplaces or training environments; the costs of apprenticeship to individuals, employers, and unions; concerns over the impacts of economic factors on work and apprenticeship continuation; concerns around the lack of resources to support apprenticeship; concerns about apprentices’ basic and essential skills; shortcomings of workplace-based and technical training; and issues regarding regulations around apprenticeship.”

⁴⁰ See: <http://caf-fca.org/english/accessibility.asp>.

Policy Considerations – Introduction and Overview

18.0 Policy Considerations – Introduction and Overview

Policy considerations associated with the findings and evidence are discussed in this section of the study. Specific policy recommendations are not made for two reasons. First, in many cases, the evidence presented in the report is not sufficient to support specific policy recommendations. Further research and analysis by experts in training institutions, governments, and in the construction industry itself, are required to develop specific policy recommendations.

The second reason for not making specific policy recommendations is that consultations and negotiations between training institutions, governments and in the construction industry are required to identify policies that fit the circumstances and institutional structures that exist on PEI. For example, this report suggests that consideration be given to reintroducing trades training into high schools. A great deal of discussion and analysis of this consideration is required to determine if this policy change would, in fact, be realistic and beneficial. The policy considerations presented in this report should be used by industry and governments to develop policy options and recommendations that can be finalized through broad industry-sponsored consultations.

Follow-up research and analysis should include benefit-cost analysis. The costs and benefits of alternative policy options must be quantified and compared to determine the most cost-effective ways to improve the human resource situation in the construction industry. For example, the costs and benefits of increasing the number of seats allocated to trades training should be compared with those that would result from other policy alternatives such as improving apprenticeship completion rates. Furthermore, the benefits and costs associated with training must be compared to those that would result from spending on other government programs to ensure that the pay-off from all public investments is maximized.

The policy considerations included in this report are designed to address four problems that undermine the efficiency of the industry and the labour market in the construction industry.

These are:

- ▲ low profits, wages and incomes.
- ▲ frictional unemployment.



- ▲ structural unemployment and problems recruiting highly skilled trades workers.
- ▲ under-investment in training for existing workers.

The policy considerations put forward in this report are organized according to these headings.

Implementation of policies designed to improve labour market efficiency requires the development of industry capacities to plan, implement, coordinate and monitor labour market initiatives. For this reason, consideration should be given to the creation of a sector council or sector councils in the construction industry as a first priority. The workplan for the sector council(s) could be built around the policy considerations presented in this report.

A minimum target for human resource policies could be to maintain the trades labour force at 2001 levels. This would offset a 7% decline in the trades labour force by 2011 projected by PRAXIS. A more positive target would be to increase the labour force by 10% by 2011.

Policies Focused on Low Profits, Wages and Incomes

19.0 Policies Focused on Low Profits, Wages and Incomes

19.1 The Underground Economy

The underground economy is one the greatest problems faced by employers in the construction industry – particularly the residential sector of the industry. The underground economy reduces the profits of businesses and limits their ability to offer competitive wages. This reduces the ability of the firms in the industry to attract skilled workers. Resolution of this problem is a prerequisite to resolving the recruitment and labour supply problems of the construction industry.

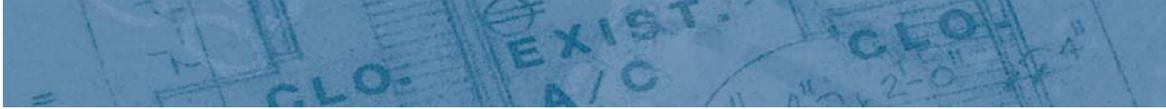
While the importance of dealing with the underground economy is obvious, the mechanisms to do so are not. Options could include: improved enforcement of taxation instruments, changes to building inspection requirements, changes to mortgage or insurance provisions by banks and insurance companies, mandatory occupational certification and mandatory licensing of construction contractors. Further research and consultations are required to determine which of these options, or combination of options, would be most realistic and effective.

19.2 The EI System

Section 9 of this report showed that the negative impact of the underground economy on profits and wages in the construction industry may be magnified by abuse of EI. It also demonstrated that the EI system had other negative human resource impacts including:

- ▲ increasing the degree of seasonality in the construction industry.
- ▲ increasing the competition for workers (resulting from development programs designed to provide employment to qualify workers for EI).
- ▲ limiting public funds available to support training of existing workers (resulting from the focus on supporting EI recipients).

The negative human resource impacts of the EI warrant a more thorough review of the impacts of this program and the development of policy actions that could mitigate these impacts.



19.3 Compulsory Licensing and Certification of Firms and Trades

Compulsory licensing and certification were seen by focus group participants as policies that could bring up the overall standards of construction and renovation and reduce underground economy activity. Mandatory certification of the trades also could improve completion rates in the apprenticeship program and recruitment into the trades.

Compulsory licensing of contractors and certification of carpenters are supported by a majority of employers in the construction industry. Nonetheless, significant opposition to these changes could arise and they could have some negative impacts on the availability skilled trades workers and contractors. For these reasons, further research and consultations within the construction industry, and between the industry, education institutions and governments, are required before these policies are implemented.

Policies Focused on Frictional Unemployment

20.0 Policies Focused on Frictional Unemployment

20.1 Labour Market Information

Frictional unemployment is exacerbated by inadequate labour market information available to both employers and workers. Improvements in the amount and quality of information could reduce frictional unemployment and contribute to increased production and efficiency in the construction industry. Two factors must be incorporated into any program to improve labour market information. First, it must build on government programs and initiatives already underway. Second, the information must be easily accessible and fit with the actual search processes of workers and employers.

20.2 Job Matching

Improvements in the recruitment practices of employers and the search practices of workers is another method of reducing frictional unemployment. This report demonstrates that employers use informal, word-of-mouth, recruitment practices that may limit their ability to identify and recruit workers. It also demonstrates that many employers do not utilize more formal recruitment systems. It is critically important that any programs to improve labour market information be industry-driven and controlled to ensure that they are realistic and accessible to employers and workers. They also must be integrated with programs to improve labour market information as discussed above.

Policies Focused on Structural Unemployment and Recruitment Problems

21.0 Policies Focused on Structural Unemployment and Recruitment Problems

A series of policy considerations are proposed to address the dual issues of structural unemployment and recruitment problems faced by employers in the construction industry. The overall objective of these policies is to reduce structural unemployment while, at the same time, mitigating the recruitment difficulties faced by employers in the industry. It bears repeating that policies to address structural unemployment and recruitment problems will be more effective if the underground economy, problems with the EI system and licensing and certification issues are resolved.

21.1 Target Groups

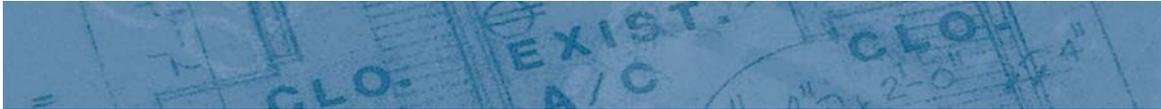
Training and recruitment policies should target trades helpers and labourers and high school graduates with no post-secondary education. There are two reasons for this:

- ▲ These groups suffer from high levels of structural unemployment. Targeted trades training and recruitment programs could improve employment and productivity for these groups. At the same time, these programs would help resolve the recruitment problems of employers in the construction industry.
- ▲ There are large numbers of young people in both groups. For example, Census data show that about one-third of high school graduates aged 20-29 in 2001 had no post-secondary education. Approximately 3,000 people aged 20-24 attended high school but did not have a post-secondary education. About one-half of these individuals had graduated from high school.

About one-quarter of the trades workforce (roughly 1,200 workers) in the construction industry was trades helpers/labourers in 2001.

21.2 Industry's Role in Training

This report advocates a formal and decisive role for employers and workers in the construction industry in the development and implementation of training policies and programs. Training policies should be developed out of the priorities and recommendations of workers and employers as documented in this report. The five most highly-rated changes to the training system suggested by employers in the PRAXIS survey were:



- ▲ More input from industry into training programs.
- ▲ Match training with on-the-job skill requirements.
- ▲ More on-the-job experience in training programs.
- ▲ Use of short training modules.
- ▲ Updating curriculum.

The injection of new resources into the training system should be contingent upon the incorporation of these key industry recommendations.

While builder and contractors in the focus groups felt that the working relationship between industry and the education and training system has been improving, they felt that industry and educational institutions need to work more effectively together to address some of the existing gaps or “*disconnects*”. They pointed to the following areas where improvements were needed:

- ▲ A better match (in terms of aptitude and interest) between the student and the actual trade he/she is applying for.
- ▲ More flexible or adaptable delivery modules (train in a cycle that better responds to industry cycles).
- ▲ More frequent periods of on-the-job training opportunities and more relevant placements. Employers suggested that a prearranged understanding be established between the college, students and employers for work placements. Some employers felt that unless an explicit understanding is developed and monitored students can end up being “*just gofers*”.
- ▲ Some level of mentorship or job coaching should be available to the apprentice on an ongoing basis.

Employers in the focus groups expressed a strong interest in the expanded provision of locally delivered short courses focused on specific skills. There also was a clear call in the focus groups for a new apprenticeship model geared specifically to conditions and needs of the residential construction industry.



21.3 Earlier Exposure of Young People

Consideration should be given to increasing the exposure and familiarity of young people with the trades. One option in this regard is to re-introduce trades training into high schools. A popular recommendation in focus groups was to go back to the Provincial Vocational Institute (PVI) model. In this model trades training was included in the high school curriculum beginning at the grade ten level. Students would spend one half day in class with regular academics and the other half in "*shop*". High school students could graduate with both a grade twelve certificate and a trades certificate and then enter the apprenticeship program.

Some focus group participants felt that the PVI model would provide the required early exposure to the trades. They felt that the "*hands on*" experience with technical trades skills might stimulate a student's interest to pursue a trade. They felt that a big problem with the current system is that very few high school students get any exposure to "*hands on*" technical trades skills. For this reason, students never really know what their aptitude and/or interest in a trades occupation might be.

A second option to increase the exposure and familiarity of young people with the trades is to provide more information and career counselling in high schools. Many focus group participants felt that addressing the current gaps at the secondary school level was the first step required to put a long-term solution in place. Key elements of this solution were the introduction of "*hands on*" courses, placement of students through work co-op programs and an attitude change among administrators and teachers.

Young people with a high school education have lots of career options. Some may also have an aversion to the physical work inherent in the construction industry. In this context, recruitment of young people into the industry is a major challenge. The situation demands that any barriers and constraints on recruitment into training programs for trades occupations must be minimized.

21.4 Review of Admissions Policies and Practices

Admission requirements for trades programs at Holland College may act as a significant barrier for prospective tradespeople. Consultations should occur on additional ways to reduce the barriers imposed by admission requirements. Additional steps that could be taken by Holland College to address this issue should be reviewed in light of the importance of minimizing barriers to trades training.



Other options that may be evaluated to improve the accessibility of trades training to high school students include:

- ▲ Tailoring high school programming specifically to support trades requirements for literacy, math, science and business management.
- ▲ Improving systems to assist people to meet the academic requirements before or during taking the Holland College course.

21.5 Labour Market Forecasting

The extended duration of apprenticeship implies that it takes a number of years to produce certified tradespeople in response to increases in the demand for specific trades. This reality makes it difficult to match training to the demands of the labour market.

It can take years to develop new training programs and facilities, plus the time required for workers to actually complete training and/or apprenticeships. Needs identified today will require years to fulfill, so the process requires accurate forecasts of economic activity and labour demands years down the road. Neither governments nor individuals have the ability to make accurate forecasts of long-term labour demand, and are therefore likely to err in planning for training. More accurate forecasts, as well as a better understanding of current market conditions, may help improve the response to labour market imbalances.

A creative approach to training (e.g. shorter, module-based training) could reduce the duration of training and therefore the need for complex forecasting of labour demand and supply.

21.6 Review of Apprenticeship Completion Rates and Holland College Employment Rates

A review of apprenticeship completion rates should be completed along with an analysis of the direct employment of graduates of trades training at Holland College. This review should examine the reasons why a significant proportion of apprentices do not complete their programs and why a significant proportion of graduates do not find direct employment in their trade. The review should identify actions that could be taken to address these problems.



Training and apprenticeship models used in other provinces and jurisdictions should be reviewed to identify innovative approaches that reduce apprenticeship dropout rates and maximize the employment of graduates of trades training.

21.7 Assistance with Training Costs

Mechanisms to improve the financial assistance available to young people taking pre-apprenticeship training and to apprentices should be identified and implemented. Special consideration should be given to individuals who must relocate to take the training. Consideration also should be given to mechanisms to support apprenticeship wages.

Policies Focused on Training for Existing Workers

22.0 Policies Focused on Training for Existing Workers

The training of existing workers is an important policy issue that could contribute to a resolution of skills shortages in the construction industry. As noted above, employers may under-invest in training for existing workers and government support for such training is minimal due to the focus on training for EI recipients.

The PRAXIS employer survey and focus groups show that on-the-job training by employers is the most effective and prevalent form of training for existing workers in the industry. Despite this reality, there is virtually no government assistance available to support this type of training. Devising programs to support on-the-job training provided by employers should receive the highest possible priority. The form of the assistance should be determined by industry and industry also should have significant input and control of the delivery system to provide this training.

The Sector Council Option

23.0 The Sector Council Option

23.1 The Role of Industry

Industry input into all aspects of training is critical to success in improving the current system. Industry should have a decisive, rather than advisory, role in the development and implementation of new policies to improve the training system. Many builders and contractors who participated in the focus groups felt that a more formal relationship between industry and educational institutions was required.

Common sense would indicate that training programs designed to meet the needs of the construction industry should receive significant direction from employers as well as employees in the industry. A strong finding of the focus groups is that there needs to be a much more effective working relationship between the education and training system and the industry.

Employers in the focus groups expressed the view that there appears to be no focused energy or mechanism within the industry to discuss and determine constructive ways to respond to the challenges outlined in this report. The lack of industry cohesiveness has prevented a collective industry response to the serious problems facing the industry. While daunting, many employers believe that immediate steps have to be taken to address these problems.

23.2 Creation of a Sector Council(s)

The possibility of forming a sector council(s) warrants careful analysis and broad discussion. A unified approach to human resource issues has major advantages for the construction industry.

The residential construction industry is very different from the other sectors. It has a number of unique features may not be shared with other sectors of the industry including: a large number of small employers, a non-unionized workforce, low relative wages and specialized skill requirements. The industrial structure of the industry, and its vulnerability to the underground economy, also are distinguishing characteristics of this sector. These unique features call for a special status for the residential construction within a sector council for the construction industry or for a separate sector council for residential construction.



The primary mandate of the sector council should be to attract and retain more workers into the industry and improve the competitiveness of trades careers in relation to other occupations. The specific workplan of the sector council(s) should be to develop and implement human resource policies and programs in response to the policy considerations presented above.