Labor Shortage in British Columbia's Construction Industry: Does it really exist, and are Immigrants the Solution?

Rohail Masood

BSc., University of Phoenix, 2006

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Abstract

British Columbia appears to be faced with a pressing labor shortage in its thriving construction industry. Most of the projections made by analysts point out that the nation's population are aging and that the numbers of individuals leaving the construction industry (through the combination of retirement and attrition) is on the rise. The next effect, that is feared, is that there will be a huge shortfall between supply and demand in the construction industry.

What appears to be a clear issue (not enough people to wield a hammer) quickly becomes complicated as the issue is investigated. According to the literature, there is quite a difference in the increasingly more high tech construction industry between a laborer, and a skilled or experienced laborer. There is also no disagreement that British Columbia will need construction workers through 2010. However, what will happen once the Olympics ceases construction is only a matter of conjecture.

The literature quickly brings us to the conclusion that there is little need for laborers from other nations and that the anticipated shortfall of *skilled* laborers, of all general construction categories, should be filled internally.

A number of recommendations are made to solve the shortage of trained workers by training Aboriginal populations, youth, and women, and by providing programs that will allow retirees to return to work part time without facing loss of benefits. Such solutions may increase productivity of the population of British Columbia without increasing the level of current governmental spending.

This project, while ostensibly about the construction industry in British Columbia, Canada, has global implications. British Columbia, far from being the only area with 'issues',

is one of many areas that are crying for skilled labor and facing an aging work population. As the world globalizes and 'third world nations' become a thing of the past, the construction industry in British Columbia reflects the same issues as those being experienced in other industrialized nations in terms of lack of availability of skilled construction workers.

1. Introduction: Nature of the Problem

British Columbia is facing a pressing labor shortage in its thriving construction industry[1]. A number of large construction project are underway, including construction for the 2010 Winter Olympics, and as a result, there is a need for almost all construction specialties. Unfortunately, even as construction demands are increasing, so is the age of the Canadian construction worker. It appears that many of the construction workers who might otherwise have retired have continued to work simply because of the high demand for their skills, but they will not be able to work indefinitely. Utilizing immigrant labor has been proposed as one possible solution to the labor shortage, and, indeed, much of the information in the population media relates to the pros and cons of using immigrant labor. This project investigates the perceived shortage of construction labor in British Columbia.

1.1 Questions that Guide the Investigation

Two preliminary questions are asked:

- Is there truly a shortage of labor in the construction industry in British Columbia, and if so, why?
- Can any labor shortage in British Columbia's construction industry be reduced if we hire more skilled immigrants, or are there other, more viable solutions to the problem of construction labor shortage?

These questions are addressed in the overall context of the construction industry in British Columbia, placed in the global frameworks of education and immigration. As investigation into the labor shortage in the construction industry in British Columbia progressed, additional questions were proposed, asked, and answered in the overall

[1] Canadavisa.com . "British Columbia construction industry fast-tracks skilled trades workers from Europe." Campbell-Cohen Canada Immigration Attorneys. Canadavisa.com. http://http://www.canadavisa.com/British-Columbia-construction-industry-fast-tracks-skilled-trades-workers-from-Europe.html

progression of analytic induction. Areas for investigation included possible methods of addressing any labor shortage either without, or in addition to, encouraging immigrant utilization. During the course of the investigation, training issues were reviewed, retention concerns investigated, the aging of the construction worker population was discussed, knowledge management and information technology utilization were studied, and factors that contribute to a perceived shortage were addressed. In addition, some troubling concerns regarding race and nationalism surfaced and were investigated in the context of worker shortages.

The original project began with a null hypothesis:

- H: Hiring more immigrants will solve the labor shortage in BC.

It was quickly determined, however, that in order to determine whether the use of immigrant labor is a possible solution to the professed lack of personnel in the construction industry, an examination must be conducted into whether or not a shortage genuinely exists, and if so how it developed to begin with. Thus, as part of this examination, it was necessary to look at the overall economy of British Columbia (BC) and the demographics of the population of the area. Once that was completed, an analysis of the collected data was performed and conclusions drawn. The question of whether or not hiring immigrant labor will solve any real (or perceived) shortage of construction labor in British Columbia was investigated. As the investigation was performed, the hypothesis and related questions developed and changed. The hypothesis was honed and sharpened, and a final hypothesis was developed and tested.

A number of possible solutions to present and future labor issues and shortages in the construction industry in British Columbia were presented in the recommendations.

1.2 Definition of Terms

As the process of investigation began, it quickly became clear that a number of terms would need to be clarified and defined. Though much of the information in the media utilizes these terms, and indeed the Canadian government utilizes these terms in discussion, it became evident that the terms did not necessarily mean the same thing to the construction industry representatives, governmental representatives from British Columbia and the Canadian government as a whole, to labor unions, and to the media and the general public. Thus, some definition of terms and consensus on their meaning is necessary for the reader to understand the materials that are being presented in this investigation.

The first question that arose when considering the subject was to address what an immigrant is, and what a shortage really is. The next term that needed to be defined is what exactly is meant by skilled labor.

1.3 Order of Presentation

This investigation is divided into seven sections. The first, the introduction, sets the general tone of the investigation, defines terms, and provides an overview of later chapters. The second part of the investigation defines the background of the investigations and explains the significance of the problem. The third section, the literature review, provides a wide variety of information relating to the topics of labor in British Columbia, with emphasis on real or perceived shortage of labor in the construction industry. An in-depth investigation and review of construction labor issues is presented, especially as relates to an aging population. Issues relating to the upcoming youthful workers and their seeming lack of interest in the construction industry are reviewed. Canada's labor unions will be investigated for any complicity in the current construction labor difficulties, as will governmental policies

that may be contributing. Finally, issues relating to proposed immigration policies for construction workers will be reviewed.

In the fourth section, on methodology, an in-depth discussion of the methodology of analytic induction, or taking many facts and developing conclusions from them, will be reviewed. An analysis of how the literature base is analysed is presented. The fifth chapter or section provides a step-by-step application and analysis of the data, along with a discussion and analysis of the findings. The sixth section provides the conclusions of the investigation and recommendations for solutions to labor issues in the Canadian construction industry in British Columbia. One last section provides the bibliography and notes of information utilised in the investigation.

1.4 Chapter Summary

This chapter has provided background information on the study and its applicability to an increasingly globalized world, as well as defining the areas of investigation and providing a general map of the organization of the document. In the next chapter, a more detailed examination of the background and significance of British Columbia labor shortages in the construction industry are addressed.

2. Background and Significance of the Problem

According to the Youth and Labor Market Services Ministry of Advanced Education of British Columbia[2] (2001), there are expected to be significant shortfalls in the numbers of trained construction workers in the future British Columbia market. In the knowledge-based economy, when employees leave a company, a large part of the company's knowledge base, or human capital goes with them. While we might not initially think of construction work as being important in a knowledge base, the reality is that a company cannot function without knowledge, and experience is applied knowledge. Thus, experienced workers represent a significant part of a company's human capital and knowledge base. When there is a short fall of trained employees, the company is fails to live up to its potential and cannot reach its strategic objectives. Individual companies, therefore, have as much at stake in developing and keeping trained construction employees as do the organizations which expect to have the buildings constructed, or the government organizations which expect to see the economy grow as the housing and construction base expands.

2.1 Significance

In order to address possible solutions for a labor shortage in the construction industry, we must first question why any shortage is occurring. In the Youth and Labor Market Study[3] (2001), a number of explanations for a labor shortage in the construction industry are proposed. The Ministry suggests that some of the reasons for the shortage are natural and cyclic, and are not necessarily a bad thing. Some of the reasons, on the other hand, are negative; according to the Ministry, the industry itself is not necessarily expanding, but the

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[2] Youth and Labor Market Services Branch. "An Overview of Labor Market and Skills Shortage Issues in British Columbia and Canada." Labor Market and Skills Shortage Issues. Ministry of Advanced Education British Columbia. June 2001.

[3] ibid.

construction industry is loosing trained workers and younger workers are not interested in entering the industry[4] .

Other sources, however, disagree with the Ministry. Todd Hirsch (2006) states that the industry is actually expanding a great deal, and many jobs are presently going unfilled. Hirsch (2006) reports that baby boomers are retiring, and young people are not filling available spots for several reasons. The first reason may be the lack of trade school slots; the second reason relates to the state of technology and perception of parents of the young. Most young people today want to have a "high tech" job, which dovetails with parents' pressure on the young to get a university education. The reality, states Hirsch (2006), is that many construction jobs today are very high tech. As a result, it is rarely unskilled labor jobs that are going unfilled; it is high tech, high skilled construction jobs that are left open as experienced workers retire, or migrate to other companies[5] (2006).

2.2 Background

It is important to place this shortage in context of retirement. Statistics (Statistics Canada, 2006)[6] show that British Columbia's construction workforce is aging rapidly. Construction is an industry that requires physical labor, and age becomes a limitation for many people. Workers tend to leave the construction industry at an earlier age than they would in a more sedentary occupation. As trained, experienced workers age or retire, a plethora of related problems occurs. The number of injuries goes up, and the amount of days off increase. Illness increases as an aging population is exposed to outdoor work in inclement

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[4] ibid

[5] Hirsch, T. "Coming Up: The transformation of Western Canada's Economy." Canada West Foundation February, 2006. Publications. Canada West Foundation. http://www.cwf.ca/V2/files/Coming%20Up%20Next.pdf

[6] Statistics Canada. "Canadian workforce aging rapidly." http://www.nipissingu.ca/faculty/davidp/dphome/class%2012%20Canadian%20workforce%20aging%20rapidly%202008.doc.

weather. Planning and costing becomes more difficult with older workers since management cannot be certain that any given older worker will be available to work on any given day. In addition, British Columbia had a mandatory retirement age of age 65; individuals who are forced to retire at this age had no recourse under discrimination laws. Thus, a company's most experienced workers may have been forced to leave the industry, and there is no evidence that retired construction workers returned to work when mandatory retirement laws in British Columbia ended on January 1, 2008.

In the Literature section, modification of the traditional workweek to more adequately accommodate aging workers will be investigated as one potential way to partially remedy the shortage of skilled construction workers. Other accommodations that may be made to allow older, more experienced workers to successfully continue to work in this taxing industry will be discussed.

As we will see in the Literature section, there are a number of issues, which relate to the hiring and maintenance of employees in the construction field in British Columbia. One example of a concern that has surfaced is that the British Columbia Federation of Labor has charged that companies which intend to bring in immigrants to fill the widening breach between demand (openings) and supply (potential construction employees) are turning down fully qualified and experienced Canadian construction workers in order to hire cheaper foreign labor[7] (Sanborn, 2006). This possibility is investigated in the Literature Review.

Other topics that have been investigated include issues relating to the Aboriginal population and their ability and availability to work in the construction industry in British Columbia. Because of the timeliness of the topic and the fact that the nature of the

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[7] Sanborn, T. "Canadian ironworkers shut out of big bridge job, say unions, contractors." The Tyee, September 1, 2006. http://http://thetyee.ca/News/2006/09/01/Ironworkers/

information available on the topics to be studied changes nearly daily, both traditional scholarly sources of information and less traditional sources have been investigated and considered. Thus, the literature investigation will reflect a combination of media, government sources, popular media (websites and web postings), and scholarly sources. When synthesized, these varying types and levels of information are expected to reflect a wide variety of perceptions on the issue of labor shortages in British Columbia and throughout Canada. These perceptions will become invaluable as we investigate how labor shortages occurred (if they did) and why there is a perception of shortage if a shortage has not occurred. These perceptions and their origins are just as valuable when generalizing to other nations and discussing globalization of the issues as the facts are, for it is perception that guides public concerns, rather than reality.

2.3 Chapter Summary

In this chapter, the background and significance of the study was established. In the next chapter, the literature that will form the basis of the study is reviewed and presented.

3. Literature Review

A literature review of pertinent literature was conducted to explore the overall environment relating to the construction industry in British Columbia. This review was initially of an exploratory nature and was conducted as a preliminary step to beginning the process of analytic induction. During the process of exploring the literature for the formal investigation, some clear areas of concern evolved and those areas were explored in greater depth during the investigation. The general nature of the review has already been described in previous sections, but the review will address five general areas: Is there a construction labor shortage, and if so what is the reason, including aging of the population as a whole and construction workers specifically; utilization of Aboriginal populations in construction work; lack of youthful construction workers; use of immigrants in construction; and finally, how the labor unions may be contributing to construction labor issues, particularly shortages.

It is not always possible to separate one issue from another, as the issues overlap, but they will be presented in separate sections to the extent feasible.

3.1 Is there a Construction Labor Shortage, and if so, Why?

Not everyone agrees that there is a labor shortage, and tempers run quite high over the issue. In Alberta, the Alberta Labor Federation (2008) states that reports of shortages are greatly exaggerated[8]. The Federation points out that the Canadian government believes that a labor shortage does not really occur until unemployment is below 3.5%. Until that point, markets are considered 'tight', not 'short'. With unemployment in British Columbia hovering at 4.1%, there is technically no labor shortage. The Government of British Columbia points out that during the last 15 years, the rate of unemployment among construction workers has

[8] Alberta Federation of Labor. "The truth about labor shortages in the oil patch." 2008. Alberta Federation of Labor. April 4, 2008 <http://www.afl.org/campaigns-issues/fortmcmurray/shortage.cfm>.

averaged higher than for other occupations, at an average of 11.3%, compared to a province average of 8.4% unemployment[9] (Province of British Columbia, 2007). The province government also points out that much of the current boom is based on Olympic construction, which will be completed by 2010. After that, the province expects the demand for construction workers to level off, and even fall. Employment is not expected to grow as fast in actual numbers as it is in other industries, and may even fall.

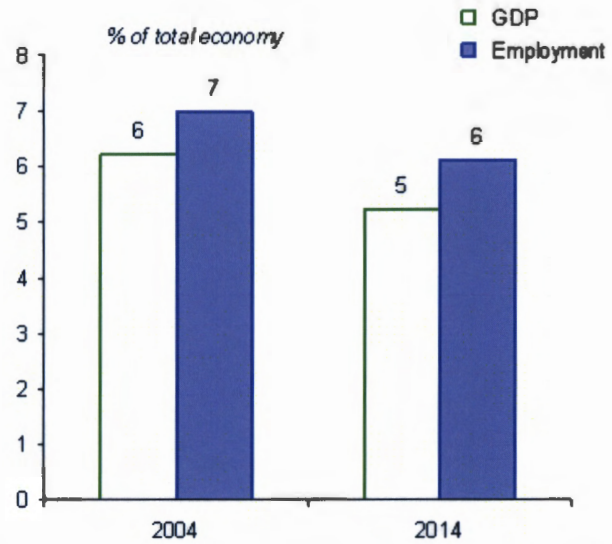

Figure 1. Canadian Occupational Projection System Forecast 2014. Source: Statistics Canada 2004[10]

WorkPermit.com[11] (2007), a private company that makes its money providing immigration advice to potential immigrants from various nations, provides information on a number of issues facing the economy of British Columbia as it seeks to fill job positions that

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[9] Province of British Columbia. "Construction." British Columbia: A guide to the BC Economy and Labor Market. 2007. Government of British Columbia. April 4, 2008 <http://www.guidetobceconomy.org/major_industries/construction.htm>.

[10] ibid

[11] WorkPermit.com (2007). WorkPermit.com. "Canada - record low unemployment, 350,000 workers needed in British Columbia." *The world's most popular immigration advice site.* WorkPermit.com. http://http://www.workpermit.com/news/2007_03_22/canada/british_columbia_needs_350000_workers.htm

are expected to occur in the next few years. The company reports that one million jobs will be available within the next 12 years, with a shortfall of over 350,000 jobs that are termed "key sector"(WorkPermit.com, 2007). WorkPermit.com (2007) discusses economic causes that have led to the shortage, and discusses the implications to the economy should the positions not be filled. Problems in filling the jobs due to shortage of skilled and experienced workers are discussed at length, along with efforts that Canada is taking to get the jobs filled. Problems of an aging workforce are discussed, including the fact that older workers have more physical needs and health care needs than younger workers (WorkPermit.com, 2007).

Of particular interest is the notation that Canada is finding that there is a shortage of skilled and experienced workers. As a result, WorkForce.com reports (2007), many companies are now hiring unskilled or uneducated workers who would have been considered unemployable in the past. In response, the search for skilled workers has been accelerated, but competition from around the world is high as nations that were considered third world in the past are entering a more industrialized cycle, thus spreading the educated and experienced work pool even more thinly. According to WorkPermit.com (2007), the problem is complicated by the fact that uneducated or unskilled workers has "undermined the quality of work" in the province. The article also points out that most companies have not matched the skills they do have in their work force to the individual job requirements, resulting in poor utilization of the workers and skills that *are* available[12] (WorkPermit.com, 2007).

Hirsh (2006) presents a comprehensive study conducted by Canada West, a charitable foundation devoted to "non-partisan, accessible research and active citizen engagement". Hirsch is the chief economist for the organization, which states that a strong western Canada is good for the entire nation. The article points out that construction worker in Canada oppose

[12] ibid

using immigrant labor, a theme that appeared throughout the research conducted for this paper. This article points out that there is a shortage of 'qualified' workers in the construction industry, but that there is also a shortage of unskilled labor. The preface to the document takes care to point out that the study's predictions are based on current information, and predictions can be very wrong. Nevertheless, the document provides a great deal of factual information on the state of the industry in British Columbia, combined with reasonable predictions for the future (based on current information and conditions).

Hirsch (2006) attempts to convince the reader that there is a shortage, reveal how the shortage developed, under what conditions it will or will not continue, and give the reader a basis for understanding the possibilities for remedying the shortage[13] (Hirsch, 2006).

Penner (2008)[14] presents a completely different perspective. According to Penner, the British Columbia construction industry was able to put 4,600 additional construction workers to work in March 2008, making a total of 28,000 new workers since March of 2007. Despite large numbers of layoffs in the finance, insurance, and real estate industries, British Columbia's unemployment rate fell from 4.3% to 4.1% in February 2008, a trick that Smelser, of Service Canada, attributes to people who were unemployed reentering the job market[15] . Essentially, the construction market was able to absorb not only all of the laid off workers in British Columbia, but some workers who were unemployed and wished to return to work. While these figures could be used to make the argument that there is a shortage of construction workers in Canada, it is just as possible to use them to make the argument that

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[13] Hirsch, 2006.
[14] Penner, D. "Construction leads way to strong B.C. job growth." The Vancouver Sun. 05 April 2008. April 12, 2008. <http://www.canada.com/vancouversun/news/business/story.html?id=d19528b6-7f7d-4e47-b05c-ce6e9edc2d7f&k=82714>.
[15] ibid

there is not. After all, the jobs were filled somehow: the point is that they were, indeed, filled, and filled with Canadians.

The Alberta Federation of Labor (2008) states that some of the Canadian provinces have higher unemployment rates than others, and that companies should turn first to construction workers in other regions as they search for trained employees. The union also points out that there is a high rate of unemployment among First Nations peoples, and that they represent a large untapped working population. The Federation states that one of the non-traditional labor unions, the Christian Labor Association of Canada (CLAC), undercuts unions that are more traditional and then ends up trying to import workers to fill jobs that they have promised to fill. By accepting lower working rates for their members, the CLAC acquires more contracts, which it then cannot fill because Canadian workers do not want to work for the bargain-basement wages. When the jobs go unfilled, CLAC turns to the government for permission to import temporary workers from other nations. This, the Alberta Federation of Labor believes, undermines not only the traditional unions but also independent workers who want a living wage. They point out that CLAC's constant requests to bring in foreign workers also gives Immigration and the government the impression that there are no workers, when in fact there are no cut-rate workers[16](Alberta Federation of Labor, 2008).

Sandborn (2006) [17] provides a similar perspective. He points out that most of the concern that British Columbia had "construction shortages" began when Olympic buildings began to experience cost overruns, largely due to high labor costs. Both the Union and non-Union sectors of the market have stated that salaries for workers are rising, which increases

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[16] Alberta Federation of Labor, 2008

[17] Sandborn, T. "Does BC really need 20,000 global temps?" The Tyee. February 24, 2006. April 12, 2008. <http://thetyee.ca/News/2006/02/24/BCGlobalTemps/>.

base costs. In addition, increasing materials costs, inspection fees, land, and especially rising fuel costs are driving up expenses. The issue is not, they say, a lack of workers; it is workers who need to be paid a reasonable wage. As early as 2005, market analysts were warning Olympic officials that failure to properly cost, combined with "fast track" construction, would leave budgets off balance. That point has come, and now the non-traditional unions and many of the non-union shops do not have the skilled labor to fill the needed openings.

Just as the Alberta Federation of Labor (2008) believes that the real issue is the desire to acquire lower-paid employees, so do most of the local unions. In addition, they point out that the Unions have strong training and apprenticeship programs, so they have trained and skilled workers. The non-traditional union and non-union shops are working their employees for less, so they do not have money to put into training. When they need additional trained and cheap labor, they feel there is no alternative but to look for foreign labor. Sandborn (2006) points out that while the non-traditional unions search for foreign labor, the large unions have always been willing to compromise and accept a blanket bargaining arrangement such as the types that had done during the Olympics in Sydney. Such an agreement would keep costs steady low and ensure that there would not be cost overruns, although the cost of labor would be higher than a non-union shop's cost. The net effect would be to keep costs lower than either non-traditional unions or independent shops could guarantee. It is not likely to happen since the mind-set is strictly free-market. As a result, British Columbia faces the possibility of a huge debt on the Olympic Village once it has closed its doors, and no one is certain what will happen at that point[18] (Sanborn, 2006).

Others argue that since the population as a whole is aging but the economy growing, there *must* be a labor shortage. One thing is clear: no one denies that baby boomers are aging,

[18] Sandborn, 2006.

and are less interested in doing construction work than they once were. Even boomers who stay on the job are 'slowing down'; they need more time off, more sick leave, need more medical care, and are more likely to not show up to work for a plethora of other reasons[19] (Malatest, 2003). In 2001, the median age of the Canadian worker hit 41.3 years of age, and is expected to hit nearly age 44 by the year 2011. By 2011, nearly half of the workforce will be between the ages of 45 and 64, which represents a 29% increase since the early 1990s. At the same time, Canadian workers are retiring significantly earlier than they did two decades ago, meaning that the average work-years of a Canadian worker are decreasing.

In 2001, 35% of the construction workers were age 45 or over. 12% of the construction workers were aged 55 or over. To put this in perspective, only 16% of the population was aged 15-24. This means that only 37% of the construction workers in Canada were both trained and skilled and likely to keep working. Younger workers are less well trained; older workers are approaching retirement[20] (Malatest, 2003).

Earlier in this report, it was stated that older workers have difficulty keeping the fulltime schedules of younger employees. Malatest (2003) reports that there are varieties of reasons for this phenomenon. Older workers may simply want more time off, or they may need more time for doctor's appointments, family care, or personal needs. The issue of family care becomes critical as we realize that people are living longer, so older employees (who are tiring themselves) may also be caring for aging and elderly parents, frequently in their own homes rather than in nursing centers. In order to accommodate the needs of these older employees, construction companies may need to consider alternative scheduling. Shared-jobs, intermittent work, part time work, flextime, and phasing into retirement should

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[19] Malatest, R. The aging workforce and human resources development implication for sector councils. Ottawa: Self, 2003.
[20] Malatest, 2003.

all be considered. Another option that would be of benefit both to the company and the employee is the idea of job sharing to shadow or mentor younger employees; utilizing the elder employees' knowledge to train and mentor younger employees, and relying on older workers to assist with administrative details and job supervision whenever possible. Active construction workers can serve as code enforcement officers or trainers with a minimum of additional education (Alberta Employment, Immigration and Industry, 2008). .[21] All of these options allow older workers to be productive while increasing their value to the company, albeit in a different direction than anyone may have expected[22].

How successful would these efforts be? The Alberta Employment, Immigration, and Industry Council (2008) conducted a survey of recent retirees, and determined that there were a number of reasons that the retirees had ceased to work. The reasons offer insight into options that might entice older workers to return.[23], [24]

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[21] Alberta Employment, Immigration and Industry. "Mature workers in Alberta and British Columbia: Understanding the issues and opportunities." *Employment Alberta*. Government of Alberta, Canada. 2008. http://http://www.csc-ca.org/pdf/Aboriginal_report_e.pdf.

[22] **Malatest, 2003**

[23] Alberta Employment, Immigration, and Industry, pg. 13, 2008

[24] The reader should note that mandatory retirement laws have been repealed according to Alberta Employment, Immigration, and Industry, 2008.

Reasons given that they might return	% of retirees polled
Could work fewer days and receive pension	28
Could work part time	28
Could work shorter days without affecting pension	26
If their health was better	26
If they got a better salary	21
If they could take more vacation leave without it affecting the pension	19
If mandatory retirement did not exist	12
If they could find suitable care-giving arrangements (spouse or parent)	6

Table 1. Retirees Would Return to Work "if".[25] (Alberta Employment, Immigration, and Industry)

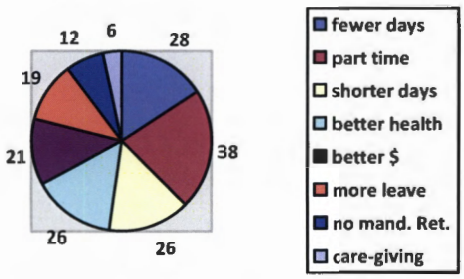

Table 2. Data from Table 1 in Graphic Representation

3.2 Utilization of Aboriginal Populations in Construction

Canada has a high Aboriginal population, representing a total of 3.3% of the population (Aboriginal Human Resource Development Council of Canada, 2007) [26]with an increasing number of the population being based in Canada's large cities. Employment rates for Aboriginal populations vary widely from area to area and region to region, and even from

[25] Alberta Employment, Immigration, and Industry, pg. 13, 2008
[26] Aboriginal Human Resource Development Council of Canada. "A study of Aboriginal participation in the construction industry." *Construction Sector Council*. Construction Sector Council, Canada 2007. http://http://www.csc-ca.org/pdf/Aboriginal_report_e.pdf.

identity group to identity group. The three primary identity groups of Aboriginal populations in Canada are North American Indian, Metis, and Inuit (Lamontagne, 2004).[27] In the past, there has been a marked disparity in both education and employment between Aboriginal and non-Aboriginal populations, but that has been steadily changing over the last decade. While large gaps remain in some areas, the past decade has seen an interesting change, with rates of Aboriginal women who hold a university degree employed at a much higher rate than any other demographic category (see Table 3).

The large disparity in employment and unemployment rates of Aboriginal women who have either do not have a high school diploma or only a high school diploma, and the rate of Aboriginal women who have a University degree may be explained by the cultural concept that Aboriginal women tend to have their families while they are younger and thus not be as concerned about employment as some other demographics. This may explain why only 30% of the Aboriginal women without a high school diploma are employed, but the unemployment rate is calculated at 22.1% -- they simply are not looking for work (Table 4).

In the two charts below, the yellow highlighted areas draw the reader's attention to the highest percentages in each educational category. In Table 4, when the unemployment rates of Aboriginal and non-Aboriginal workers are compared, it is clear that they represent a large manpower segment for the nation. Since the unemployment rate represents persons actively looking for work, who will accept work if offered, we can conclude that there is a large portion of the Aboriginal population who would like to be working. One potential solution to the construction labor shortage in British Columbia is to put these willing workers

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[27] Lamontagne, F. "The Aboriginal workforce: What lies ahead, a CLBC commentary." *Canadian Labor and Business Center*. 2004 Canada. http://http://www.clbc.ca/files/Reports/Aboriginal_Commentary_piece.pdf.

into jobs, but there are hurdles that must be solved, including basic educational and vocational skills for this population.

Level of Education / Category	Less than High School	High School Diploma	Some post-secondary	Post-secondary certificate, Diploma	University degree
Males, non-Aboriginal	50.1	76.0	69.5	78.7	78.5
Males, Aboriginal	43.2	75.4	63.8	80.7	82.3
Females, non-Aboriginal	32.4	61.3	62.6	68.5	74.4
Females, Aboriginal	30.0	65.5	52.1	72.4	85..2
Combined non-Aboriginal	41.4	68.4	66.0	73.6	76.5
Combined, Aboriginal	36.3	70.2	57.5	76.0	84.1

Table 3. Employment Rates of Aborigines and non-Aborigines, 2001-2005.[28] Adapted from Luffman and Sussman, 2007.

Level of Education / Category	Less than High School	High School Diploma	Some post-secondary	Post-secondary certificate or Diploma	University degree
Males, non-Aboriginal	8.0	5.0	5.5	3.4	3.5
Males, Aboriginal	20.4	9.7	10.7	9.5	-
Females, non-Aboriginal	9.4	4.6	4.7	3.7	3.5
Females, Aboriginal	22.1	9.0	16.4	7.1	-
Combined non-Aboriginal	8.6	4.8	5.2	3.5	3.5
Combined, Aboriginal	21.2	9.3	13.6	8.2	3.9

Table 4. Unemployment Rates of Aborigines and non-Aborigines, 2001-2005.[29], Adapted from Luffman and Sussman, 2007.

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[28] Adapted from Luffman, J. and Sussman, D., "The Aboriginal labor force in Western Canada," *Statistics Canada 75-001 XIE*, no.January (2007): 13-27. http://sc.gc.ca/english/freepub/75-001-XIE/10107/art-2.pdf, pg. 17.

[29] Adapted from Luffman and Sussman (2007).

As of 2007, 19% of the Aboriginal men who were between the ages of 25 and 64 are certified in building and construction technology and building trades. A high proportion of the Aboriginal population reports that they would like to work in these industries. Thus, governmental and private sector efforts to increase their employment in building and construction trades and to train younger Aboriginal workers, including females, in these trades would undoubtedly help solve the construction shortage. One complication of this desire to work, however, is the fact that no one is certain what the literacy level of many Aboriginal workers is. There is a relatively high rate of Aboriginals who do not have a high school diploma, having a high school diploma does not necessarily guarantee literacy. Thus, ability to read may be a hurdle that needs to be overcome; the construction industry itself is changing and it is not longer merely manual labor. Construction workers are facing increasingly higher levels of technology and this can represent a challenge.

National Resources Canada (2007) has also reported that the Aboriginal population may represent relief to the construction industry. Not only are Aboriginal workers younger than the average population, but they tend to stay in the rural areas when jobs are available. Other young people go off to college, but in this case, failure to do so may be an advantage to the construction industry. National Resources (2007) states, "In an aging society, Aboriginal people are the niche market, the treasure trove of youthfulness." They also recommend that companies invest in technology to lessen the physical strain of the work, and train workers in how to utilize the new equipment (National Resources Canada, 2007). [30]

The attitude that is reflected by the Aboriginal Human Resource Development Council of Canada (2007), which suggests that an emphasis on technology is essential in any

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[30] "An Aboriginal "treasure trove" and older workers could alleviate a skilled labor shortage in rural areas." *National Resources Canada*. Viewpoint Newsletter, Fall 2007. http://http://cfs.nrcan.gc.ca/news/552.

program that assists Aboriginals in preparing to enter the construction industry. British Columbia is in the process of developing a Coordinated Aboriginal Apprenticeship Strategy to address the issue of technology in construction employment, in order to develop enough Aboriginal workers to lessen the construction worker shortage prior to the 2010 Olympic Games (Aboriginal Human Resource Development Council of Canada, 2007) [31]. The program focuses on young Aborigines and is intended to address the issue of under-education in the Aboriginal population.

The number of Aborigines registering for construction education programs increased from 35,390 in 1995, to 43,960 in 2001, which represents a 24.2% increase. However, the number of individuals actually completing the course and reaching certification decreased; in 1995, 2,510 trainees finished apprenticeships but by 2001, only 2,100 trainees were able to complete the program and certify that year. Trainees who were able to reach certification in other trades were nearly double that of the construction industry. The connection appears to be education; with a fair level of math skills required to be a carpenter or other construction technician and to operate higher tech equipment, the education must be adequate to the task, and Aboriginals have typically acquired less education. This deficit has led the nation of Canada to develop a plan to fund a number of capital improvement programs for First Nations. This effort will provide better housing and support to Aboriginals in order to encourage them to stay in school, and provide additional money for their education. In British Columbia, the government authorized $148,257 million in capital improvements, and $85,642.5 million in Aboriginal education, to extend from 2002-2007 (Aboriginal Human Resource Development Council of Canada, 2007). Nationwide, Aboriginal capital improvements were authorized at $1,251,380.5 million, with an additional $605,040.4

[31] Aboriginal Human Resource Development Council of Canada, pg. 15 2007.

million authorized for education and career training (Aboriginal Human Resource Development Council of Canada, 2007).[32]

Given that, the Aboriginal population is young, with a median age of 27 and half of the population at age 24 or younger, and that the population of Aborigines has grown 45% since 1996[33], their potential should not be overlooked as a resource, especially as many of them are mobile, or ready to relocate to find work. According to Versace (2008), it is possible that many people, including human resources managers and project managers, simply do not know that Aboriginal workers are available. To that end, the First Nations should be encouraged to mount an information campaign to industry leaders, similar to what they are already doing *within* the First Nations (Versace, 2008).

3.3 Developing Youthful Labor Force

Thus far, it has become clear that one of the largest problems facing the construction industry in Canada is that of aging. Given that, the population of baby boomer construction-workers is aging and less able to complete daily activities required in the construction industry, as well as being more prone to injury and illness, attention must be given to developing a youthful labor force to replenish the ranks. Regardless of whether new workers come from immigrant ranks, First Nations Aboriginals or other venues, consideration must be given to developing a more youthful work force.

The Government of British Columbia has developed new certification programs that can cut the amount of time students spend in class, while maintaining a high quality work force. Part of the education money discussed in previous sections was utilized to refine the apprenticeship and certification programs so that highly qualified candidates can challenge

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[32] Aboriginal Human Resource Development Council of Canada, pg. 18.2007

[33] Versace, V. "Labor crunch: Canadian construction industry turns to Aboriginal workers to solve labor shortage." *Journal of Commerce*, January 28, 2008. http://http://www.joconl.com/article/id26151.

the education program and, if successful, receive certification. This means that young people who have worked construction for summer jobs, learned to do the work in assisting with family projects, or worked in volunteer capacities can ask to take the certification exams. Apprentices can challenge all of the formal training, and if they pass exams with a 70%, move on to the next level without ever having taken a class.[34] This allows apprentices to complete their programs at significantly less cost and increase their earnings at the same time.

How likely are young people to enter the trades?

> ".....while 6 out of 10 parents said they would recommend a career in the trades to their kids, 59 per cent of youth said their parents have not pushed them towards the trades. In addition, nearly half of parents and 41 per cent of youth polled thought trades involve hard, physical labor. Finally, over seven out of 10 youth polled said their school counselors have not encouraged them to enter the trades (Greer, 2005)."[35]

Youth, their parents, and school counselors do not seem to have gotten the message that the construction industry is changing and entering the age of technology. While construction certainly takes a solid constitution, pneumatic hammers, electric drills, and other power tools make the work significantly less physically stressful than it was even a generation ago.

The issue is not only one of perception, however. Just as there is an education gap with the Aboriginal tribes, businesses report that younger applicants overall are less able to meet the academic challenges of working in construction. New job applicants have a poor work ethic, especially among youth. The applicants as a whole lack "life skills" or the

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[34]Greer, D. "BC's looming skilled labor shortage." *The Tyee*, May 13, 2005. http://http://thetyee.ca/News/2005/05/13/BCsLoomingSkilledLaborShortage/.
[35] ibid.

capacity to show up for work on time, with a good attitude, and with basic work skills. All across British Columbia, small businesses report that applicants fresh from the educational system lack practical skills, making skills and job training of paramount importance once the youth have graduated and are entering the workforce. [36]

Small businesses as whole report that existing training programs can seem very far removed from 'real life' jobs. The programs as a whole do not seem to have many applied construction skills and seem very far removed from the business community. While businesses are advocating more emphasis on the trades and more education on the trades throughout students' high school careers, the schools themselves do not appear to support these links. Thus, even though the business community is offering to provide on-the-job work experience, apprenticeship programs, and mentoring to youth, the current educational system appears to discourage such interactions to a large degree. Businesses report that it is time to consider online training and career training in a variety of venues and at differing times of the day, providing more flexibility to students and businesses alike. Small businesses have recommended that the government automatically tie available educational spaces to forecasting procedures, which predict labor shortages, so that the spaces are available in fields that will fulfill the need, rather than having too many individuals training in positions that are not needed (Coalition of British Columbia Businesses, 2007).[37]

At the present time, youth who choose to apprentice rather than go to University can expect to finish 'school' with money in the bank, a job, no school-related debt, and earning an above average income. Students who choose the University frequently graduate with as

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[36] Coalition of British Columbia Businesses. "Labor supply strategy for small businesses in British Columbia." *Welcome to ASTTBC*. Applied Science Technologists and Technicians of British Columbia.2007 http://http://www.asttbc.com/services/docs/LaborSupplyReport_Jun07.pdf.

[37] ibid

much as $40,000 in debt, heavy competition for lower paying jobs, and several years of attempting to build a living wage.[38] Yet students still choose the University; apprenticeship programs seem to be "underappreciated (Dunn, 2004)."

3.4 Using Immigrant Labor

The possibility of utilizing immigrant labor has been suggested throughout the popular media as the solution to British Columbia's construction labor shortage, but how realistic is this possibility? The Internet is full of sites advertising construction work for laborers willing to immigrate to Canada. A recent Google search on the string "construction jobs" Canada' netted over half a million hits, and a quick look down the list leads to the inescapable conclusion that Canadian companies are advertising virtually in every nation for construction workers willing to move to Canada.

How successful is the search? In February 2008, British Columbia announced that it had signed a deal with the Philippines to provide hotel, restaurant, and construction workers as a priority to British Columbia.[39] The Philippine Islands are already providing over a million workers to other nations and the country boasts that it is "one of the biggest exporters of skilled and unskilled labor in the world." British Columbian government (2008) has stated that the economy simply cannot grow without additional workers and that several important projects, including a major university project, have already been delayed due to lack of workers. The Philippine government is preparing to establish an overseas labor office in

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[38] Dunn, A. "Canada faces a shortage of people who make things work." Capital News Online, a publication of Carleton University, April 2, 2004. http://http://www.carleton.ca/jmc/cnews/02042004/n3.shtml.
[39] "BC seals labor deal with Philippines." *The Asian Pacific Post*, February 6, 2008. http://http://www.asianpacificpost.com/portal2/c1ee8c4417efb1780117f01fdd8a0035

Canada to help Philippine workers evaluate companies, submit applications, and to expedite social services (Lee-Young, 2008).[40]

As a result, Canadian lawmakers are pushing the idea of loosening immigration laws. They report (2008) that the government is already spending more money on internal training than any Canadian government has ever spent, yet there are still thousands of jobs going unfilled. The solution, according to these lawmakers, is to bring in immigrant workers, and their families, to fill the jobs. They are proposing law changes that will allow tax breaks to companies that either must bring in foreign workers, or must import workers from other Canadian regions. Opponents, on the other hand, insist that by better utilizing the aging workforce and by increasing productivity of the existing workforce, some of these problems would be alleviated (Akin, 2008). [41]

In the meantime, one of the more interesting facets of the immigration question has occurred in the United States, in Arizona; where a family has opened a business helping illegal aliens who are being expelled from America locate construction work in Canada. The company's owners joke that they will help Mexican workers find the jobs "that Canadians don't want to do."[42] The company emphasizes that workers must have the appropriate paperwork and that they must have the appropriate paperwork for their families, and that Canada 'is not like the US' in this regard. Nevertheless, there is a great deal of interest in these positions, and the company stays busy assisting workers who hope to leave the US and move on to Canada.

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[40] Lee-Young, J. "BC signs labor agreement with Philippines." Vancouver Star, January 29, 2008. http://http://www.canada.com/vancouversun/news/story.html?id=95b86a97-add5-4d16-8310-a7ed7d6ee43d&k=62607.

[41] Akin, D. "Canada's top problem is filling labor shortage." *CanWest News Service*, May 5, 2008. http://http://www.amren.com/mtnews/archives/2008/05/canadas_top_pro.php.

[42] Rico, G. "Firm helps Mexicans get jobs in Canada." *Arizona Daily Star*, March 14, 2008. http://http://www.azstarnet.com/sn/border/229617.

The British Columbia Ministry of Economic Development (2006) sponsors a program for immigrants, ArriveBC. ArriveBC will help immigrants pay fees, class stipends, and licensing and certification fees if the immigrant agrees to work in construction, healthcare, or transportation. The program is not designed to train uneducated immigrants; rather it takes immigrants with some training and English language skills and helps them upgrade their skills to qualify for employment in British Columbia's most needy employment areas. The program requires that the candidate have permanent resident status, and prefers that the immigrant have arrived in Canada recently (within 5-6 years), be able to speak intermediate level English, and have at least 3 years work experience in healthcare, construction, or transportation. The agency also provides coaching, job support, mentoring, shadowing, and apprenticeships or internships.[43] The organization assists employers who may have need for employees, as well as immigrants searching for employers.

Canada is also making it easier for foreign workers to enter Canada under the "guest worker" or "temporary foreign worker" option. These laborers may be skilled or largely unskilled; they can receive visas for as long as two years. Their visa is tied to working for a particular company, and they must have a job lined up to enter the country under this type of visa. Entering Canada as a temporary foreign worker does not necessarily make it easier to become an immigrant if the individual decides to try to stay in Canada (The Economist, 2007) [44]; decisions on immigrant visas are made on other criteria that are largely based on job experience, education, and proof either of offered employment or of a substantial bank

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[43] British Columbia Ministry of Economic Development. *ArriveBC: Advancing immigrants' skills building BC's workforce*. 2006. /http://www.arrivebc.com/index.html.

[44] "Canada's guest workers: Not such a warm welcome." *The Economist*, November 22, 2007. http://http://www.economist.com/world/la/displaystory.cfm?story_id=10177080.

account. Skilled workers are now required to score only 67% on a criteria listing that can be found at http://www.workpermit.com (WorkPermit.com, 2007) [45]

The issue does not seem to be whether or not immigrants will work in Canada, but rather how to keep laborers. Canada, and specifically British Columbia, is not the only nation scrambling for laborers; British Columbia is competing with most of the world's industrialized nations to acquire laborers from a finite labor pool, even when addressed on a global basis. Critics argue that if Canada is to acquire a reasonable number of employable immigrants, it must revise its immigrant visa requirements yet again, placing more emphasis on practical experience than on university study (WorkPermit.com, 2007).[46]

3.5 Labor Unions and the Construction Industry

How have the labor unions affected the construction industry? The answer may lie in whose perspective is adopted. The unions insist that any shortages can be filled first by union workers, then by local workers that can be trained and assimilated into the unions, utilising immigrants only as a last possible resort. The unions argue that by reducing the visa requirements for immigrants who are trained as construction workers, the government is encouraging local businesses to hire 'cheap labor' that cuts out Canadians, specifically Canadian union workers.

Some analysts believe that the gap between union and non-union wages is steadily narrowing, especially if differential for increased technical education, certification, and on-the-job experience is considered.[47] Unions also argue that one of the reasons that companies

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[45] "Canada skilled worker immigration - Points based immigration." *The world's most popular immigration advice site*. SIA Workpermit.com. 2008. www.workpermit.com/canada/individual/skilled.htm.

[46] "Construction sector wants review of Canada's immigration program." *The world's most popular immigration advice site*. SIA Workpermit.com. http://www.workpermit.com/news/2007-09-05/canada/canada-needs-more-immigrant-construction-workers.htm

[47] Fang, F. and Verma, A., "Union wage premium," *Statistics Canada: Perspectives*, no.Catalogue no. 75-001-XPE (Winter 2002): 17-23. http://www.statcan.ca/english/studies/75-001/archive/e-pdf/e-0242.pdf.

try to bring in immigrant workers on guest visas is related to the quality of the company's operations: not only can the visiting workers be paid less, but they are 'attached' to the company by immigration law. If the workers complain over field conditions, job safety, or pay, they can be fired and immediately expelled from Canada. Thus, say the unions, the issue is not necessarily one of pay, but of job quality.

A example of this controversy occurred in 2006, when a German company that had been awarded a construction contract for the Golden Ears Bridge (between Maple Ridge and Langley) announced that it could not find enough qualified workers in Canada to do the job and applied for leave to bring in immigrant workers. Leaders of local businesses and the unions gathered to request that the government block the applications, citing Bilfinger Berger's failure to negotiate "in good faith" with Canadian workers. Instead, local leaders allege that Bilfinger Berger simply did not want to hire local workers at the going rate and saw the newly reduced immigration criteria as a way to acquire cheap labor. This case is unique in that both business owners and the union worked together in an effort to block the visas and permits (Sandbom, 2006).[48] In the Bilfinger case, four British Columbian companies had offered to provide construction workers for the project (thereby belying the company's argument that local workers were not available). Each of the four companies was allowed access to the bridge's construction drawings during the bid process, and each of the companies later alleged that the drawings were "incomplete", "imprecise" and "imperfect". All four companies submitted bids based on the inadequate drawings and were turned down. Another company that exhibited interest in working with Bilfinger was alleged told to bid low, that the company "would not be blackmailed by contractors on the price, they were a

[48] Sandborn, T. "Canadian ironworkers shut out of big bridge job, say unions and contractors." The Tyee, September 1, 2006. http://thetyee.ca/News/2006/09/01/Ironworkers/.

very large, important company and if they needed to, they would just go offshore and obtain lower priced workers."[49] This incident tends to confirm the unions' allegations of utilizing the immigrant system as a price-breaker.

Teo (2007) has argued that the use of immigrants as price-breakers has become so severe that many of the immigrants on guest or limited work visas regard themselves as prisoners. He provides this explanation from one of his case studies:

> "We joke that skilled immigrants are like those Sichuanese seasonal migrant workers coming to Guangdong to do very laborious work. They have poor meals and live in very bad conditions… very, very bad ones. We compare ourselves – skilled immigrants who have *come to Canada* – to agricultural workers who *come to Guangdong* to do those kinds of work."[50] (Teo's emphasis has been included.)

While Teo's study was conducted in Vancouver, it is unlikely that the situation is much different for immigrant families in British Columbia. The majority of the families that Teo studied emphasized that even though Canada requires a certain level of education to immigrate on a permanent basis, it does not mean that companies will accept the education as being equivalent to a Canadian education. Thus, a doctor in China might end up an ambulance attendant in Canada, or an engineer might end up as a construction worker. The immigrants accept a far lower income and standard of living than they would have had in China or their nation of origin, and they are stuck at that level until they earn citizenship (three years or more). The process generally ensures that immigrants will be cheap labor, and that they will not necessarily be well trained in the jobs they are hired to do. One can be an

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[49] Sandborn, September 2006.

[50] Teo, S., "Vancouver's newest Chinese diaspora: settlers or "immigrant prisoners"?" *GeoJournal*, no.February 2007: 211-222. http://http://www.riim.metropolis.net/Virtual%20Library/2007/WP07-02.pdf.

excellent engineer or architect, but a lousy roofer. It is this combination of poor training and virtual servitude that the labor unions argue they are fighting.

One of Canada's largest unions, the Boilermakers Contractors Association (BCA), has attempted to address the aforementioned shortcomings in its own way: by voluntarily translating training materials into other languages and visiting potential union members in other nations to upgrade safety and operational training prior to the immigrants' arrival in Canada (Versace, 2008). Through union partnerships, they established in Brazil and Argentina, the union was even donated Canadian equipment for training so that immigrants would arrive fully trained in operational and safety procedures (Versace, 2008). [51]

The British Columbia Sheet Metal Association (Proctor, 2006) (SMACNA-BC) is also doing its part to ensure a supply of trained union workers. They developed a pre-apprenticeship program that has taught young workers what to expect once they are officially on the job. The program, which admits pre-apprentices to the union for free for one year, lets young people "try out" the career at the normal first-year apprentice rate of $15 an hour. Each of the contractors evaluates their pre-apprentices monthly. The organization has found that the best apprentices are those that have gone through the pre-apprentice program and understand fieldwork. They have found that university students or students from the technical colleges, who have not gone through the pre-apprentice program, simply do not understand the required work ethic and as a result have a much higher rate of attrition. Experience has shown that young people who go through field pre-apprenticeship tend to be better, more knowledgeable workers than those who have gone through the technical college's pre-apprenticeship. They also have lower turnover rates, quit less seldom, and are not laid off as

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[51] Versace, V., "Foreign workers form essential part of Canada's labor force, panel says," *Journal of Commerce*, June 11 (2008): http://http://www.joconl.com/article/id28200.

often (Proctor, 2006). [52]" Overall, the union finds them to be more dependable and stable workers.

3.6 Income of the Construction Worker

When statistics on 'work shortages' and 'construction workers' are being collected, what professions are included in the definitions? The BC Work Futures organization (Proctor, 2006) lists the following professions as being the construction careers. In the list that follows, the number designates the job category code, provided for the reader's reference. Thus, "log home" builders 0712.01 is a subset of residential home builders and renovators (0712) and so on:

- residential home builders and renovators (0712)
- log home builders (0712.01)
- industrial instrument technicians and mechanics (2243)
- construction inspectors (2264)
- house and property inspectors (2264.01)
- registered fire protection technicians (2264.02)
- construction safety officers (2264.03)
- contractors and supervisors, electrical trades and telecommunications occupations (7212)
- contractors and supervisors, pipefitting trades (7213)
- contractors and supervisors, metal forming, shaping and erecting occupations (7214)
- contractors and supervisors, carpentry trades (7215)

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[52] Proctor, 2006.

- contractors and supervisors, other construction trades, installers, repairers and servicers (7219)
- machinists and machining and tooling inspectors (7231)
- electricians (except industrial and power system) (7241)
- industrial electricians (7242)
- plumbers (7251)
- steamfitters, pipefitters and sprinkler system installers (7252)
- steamfitters and pipefitters (7252.1)
- sprinkler system installers (7252.2)
- sheet metal workers (7261)
- structural metal and platework fabricators and fitters (7263)
- welders and related machine operators (7265)
- carpenters (7271)
- cabinetmakers (7272)
- bricklayers (7281)
- plasterers, drywall Installers and finishers and lathers, (7284) which includes plasterers (7284.1), drywall installers and finishers (7284.2) and lathers (interior systems mechanics) (7284.3)
- roofers and shinglers (7291)
- glaziers (7292)
- insulators (7293)
- floor covering installers (7295)

- construction millwrights and industrial mechanics (except textile), (7311) which includes millwrights, (7311.01) and industrial mechanics (7311.02)
- heavy-duty equipment mechanics, (7312) which includes diesel mechanics, heavy equipment (7312.01)
- machine fitters (7316)
- elevator constructors and mechanics (7318)
- crane operators.[53]

To the reader, the categories may appear somewhat subjective. Indeed, it is difficult to understand why diesel mechanics, industrial mechanics, millwrights, and such diverse groups as telecommunicator operators, and fire protection technicians are considered in this category. One might wonder if including these groups of highly trained individuals may actually skew the "average salary" range for construction workers.

According to the BC Work Futures, the average salary in British Columbia is $44,321 (BC Work Futures for Trades and Technical Operations, 2008).[54] In this section, a comparison of construction salaries to the national average salary is provided. In the chart below, jobs with a salary that is below average, average, or barely above average are highlighted. Bolded lettering indicates a job category not traditionally associated with construction work. The implications of these two categories will be discussed in Chapters 5 and 6.

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[53] BC Work Futures for Trades and Technical Operations (2008). Construction Introduction. Retrieved online July 12, 2008 at http://handson.workfutures.bc.ca/profiles/ind.cfm?id=5&lang=en&site=graphic

[54] BC Work Futures (2008). Residential Home Builders and Renovators (0712). Retrieved online July 12, 2008 at http://handson.workfutures.bc.ca/profiles/profile.cfm?noc=0712&lang=en&site=graphic

Job Code	Average Salary	Unemployment	%55 and over	Increase
residential home builders and renovators (0712)	36,814	4.4%	26%	1.7%
industrial instrument technicians and mechanics (2243)	**60,417**	**4.8%**	**33%**	**1.4%**
construction inspectors (2264)	49,683	7.3%	39%	1.4%
contractors and supervisors, electrical trades and telecommunications occupations (7212)	**62,607**	**2.8%**	**41%**	**1.1%**
contractors and supervisors, pipefitting trades (7213)	64,921	1.7%	25%	1.5%
contractors and supervisors, metal forming, shaping and erecting occupations (7214)	58,064	2.8%	26%	1.4%
contractors and supervisors, carpentry trades (7215)	44,482	8%	24%	1.4%
contractors and supervisors, other construction trades, installers, repairers and servicers (7219)	42.936	4.7%	22%	1.7%
machinists and machining and tooling inspectors (7231)	**46,741**	**5.2%**	**28%**	**1.0%**
electricians (except industrial and power system) (7241)	43,857	7.9%	23%	1.6%
industrial electricians (7242)	58.850	4.8%	35%	1,4%
plumbers (7251)	38,056	7.2%	19%	1,5%
steamfitters, pipefitters and	53,161	9.8%	29%	1.3%

sprinkler system installers (7252)				
sheet metal workers (7261)	41.691	8.4%	18%	1.9%
structural metal and platework fabricators and fitters (7263)	46,578	9.2%	32%	1.2%
welders and related machine operators (7265)	44,447	9.3%	25%	--[55]
carpenters (7271)	35,020	11.3%	22%	1.6%
cabinetmakers (7272)	31,134	8.2%	19%	1.5%
bricklayers (7281)	42,731	1 0.2%	28%	1.6%
plasterers, drywall Installers and finishers and lathers, (7284) which includes plasterers (7284.1), drywall installers and finishers (7284.2) and lathers (interior systems mechanics) (7284.3)	31,732	10.%	16%	1.4%
roofers and shinglers (7291)	35,361	17.3%	9%	1.8%
Glaziers (7292)	31,608	9.5%	15%	1.9%
insulators (7293)	33,982	8.8%	15%	1.8%
floor covering installers (7295)	35,238	7.5%	14%	1.9%
construction millwrights and industrial mechanics (except textile), (7311) which includes millwrights, (7311.01) and industrial mechanics (7311.02)	**58,698**	**6.1%**	**35%**	**.5%**
Heavy-duty equipment mechanics, (7312)	**53,530**	**4.9%**	**31.%**	**1.4%**

[55] Not defined in the materials.

which includes diesel mechanics, heavy equipment (7312.01)				
machine fitters (7316)	44,553	3.9%	39%	4.1%
elevator constructors and mechanics (7318)	**64,554**	**4.1%**	**33%**	**1.6%**
crane operators (7371)	50,597	8.3%	28%	2.2%

Table 5. Occupations, average salary, unemployment rate, retirement rate, expansion rate. From BC Work Futures. (2008)

3.7 Chapter Summary

In this chapter, a great deal of current information on the status of construction workers in British Columbia was reviewed. The chapter began with a discussion of whether or not there really is a construction labor shortage in British Columbia. Literature was presented both for and against the position, and possible explanations for why there is a shortage were discussed. In the next section, the utilization of Aboriginal labor to lessen any construction labor shortage was discussed. Issues involved in developing the youth labor force were reviewed, and utilising immigrant labor to offset potential labor shortages in the construction industry were reviewed. Finally, the impact of the unions on construction labor shortages was discussed.

Throughout the literature, several clear threads of concern evolved. These will be discussed in Chapter 5, Analysis.

4. Methodology

It is clear from the literature review that a number of differing opinions exist as to whether or not there is an actual labor shortage, and if so, what causes it. Even the unions, which alleges that there are plenty of workers in Canada, will concede that they cannot fill all of the available jobs. Instead, they request that qualified Canadians be hired first and that companies not be allowed to "import" workers without clear and present proof that there are no available qualified Canadians who have applied for the construction jobs.

Whether or not the industry is actually expanding is a question that remains to be answered. Analysts do agree that there are many jobs going unfilled, and projections for the future generally concur that there will be shortages in construction labor for the next 5 years; although many believe shortages will exist for many years. We return, then, to our two initial questions: Why is there a shortage of labor in the construction industry in British Columbia, and will utilizing immigrant labor reduce the shortage?

In answering these questions, we utilize a qualitative research methodology, archival research, and analytic induction. These methods are described below.

4.1 Qualitative Research

Qualitative studies try to use a cultural context to address issues related to phenomena or situations that the researcher has noted. Thus, it is ideal for investigations in which a description of human behaviour is required (Marshall and Rossman, 2006).[56] When investigating behaviours, researchers may use interviews, memos, private papers, newspaper clippings, or other business or cultural data, in what is termed 'archival research' (Heaton,

[56] Marshall, C., & Rossman, G. Designing qualitative research. Newbury Park, CA: Sage.

1998).[57] The researcher attempts to bring order or logic to what they observe, and a great deal of interpretation is involved. Qualitative research allows for the possibility of more than one 'reality', because it studies more than one type of data. Qualitative research does not force the researcher to conclude that one way is wrong and another way is right. A holistic description of procedures and philosophies involved in a setting may be needed to make an accurate assessment of a situation.[58] . In quantitative research, pre-defined variables are selected and studied and all else is excluded. Thus, it limits the study of materials that in reality might have a great bearing on the outcome of a studied situation.

Qualitative research is normally inductive, a process in which the researcher makes observations and generalizations and then develops a specific theory. In quantitative research, the process is the opposite: the researcher begins with a very narrow hypothesis and then tests it. Inductive reasoning is generally used in projects that need an open-ended, exploratory process (Trochim, 2002).[59] For these reasons, a qualitative, inductive research model, one utilising archival research of secondary materials, was chosen.

4.2 Archival Research

Archival research concentrates on gathering and interpreting information from a wide variety of studies and research materials that have been developed by someone else. Because of the unlimited nature of the materials, a wealth of data is provided without requiring an intensive level of experience or training that might be necessary to produce an extensive qualitative primary source study. This particular research project is particularly well suited to

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[57] Heaton, J., "Secondary analysis of qualitative data," *Social Research Update*, no.22 .1998:
[58]Stainback, Susan and William. "Conducting a Qualitative Research Study." Understanding and conducting qualitative research. 1988 Reston, VA:
[59] Trochim, W. Deduction and induction.2002. Retrieved May 24, 2008 from http://www.socialresearchmethods.net/kb/dedind.htm

the use of archival materials because of the depth and breadth of the research questions and the need to examine a large number of resources during the process of analytic induction.

Archival research, sometimes-called secondary analysis, studies existing data. It has been used a great deal in the past in quantitative studies but is becoming quite utilised as a method of implementation in qualitative research (Heaton, 1998). [60] Since the data can include published materials, unpublished materials, journals, peer reviewed documents, books, and even materials as diverse as diaries and personal emails, there is a great wealth of data and the information can be exceptionally informative. In addition, the data does not have to be written or collected in bound format; it can be visual, or even aural. Because archival research is so closely connected to 'daily life', it is sometimes referred to as grounded research (Heaton, 1998).

While it is impossible to generalize about a research approach to be taken with materials that can vary so widely, it is clear that by varying the research approach with the material, the researcher can develop theories and a hypothesis; determine whether or not the hypothesis is likely to be correct, and discard materials based on the information gleaned. It is important to develop a clear plan of investigation, and that plan uses analytic induction as its basis. Every case of archival research varies, because the materials to be studied vary, but the process of analytic induction remains substantially the same.

4.3 Analytic Induction

It has been clear from the preliminary literature review that there is a great deal of conflicting information regarding construction labor in British Columbia. In order to answer the questions posed in the first section of this paper, qualitative investigation techniques were utilized. Methods of analytic induction were employed to review an expanded body of

[60] Heaton, 1998

literature. As literature was reviewed and extracted, analytic induction was used to search for similarities in broad categories of information relating to the research questions. Gradually subcategories of information were developed, with the extracted information compared, in order to recognize causal relationships.

As Znaniecki (1934) has pointed out, the general concept of analytic induction has been used throughout history to make conclusions.[61]. While the method may have been used throughout history, it was Znaniecki who named the method and developed a method of systemization of analysis. The great advantage of this method of investigation and reasoning is that it is possible to modify theories or hypothesis as the relationship between the concepts changes over the course of the research. In a field or area of investigation that is constantly changing and developing, this method of investigation allows the researcher to account for and incorporate new information in his or her conclusions, making this method ideal for this investigation.

Robinson (1951) pointed out that analytic induction has been utilized by a number of individuals who were fore thinkers in their fields. Angell (1936) utilized the method in studies on the family in depression; Sutherland (1949) utilized the method of analytic induction in his studies on the causation of crime; Lindesmith (1940) used the method for his studies on addiction, and Cressey (1953) utilized the method on his studies of embezzlement and white-collar crime.[62]

In Robinson, Cressey summarised six steps that could be used to successfully utilize analytic induction:

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[61] Znaniecki, F. The method of sociology. New York: Farrar and Rinehart, 1934

[62] Robinson, W. "The logical structure of analytic induction." American Sociological Review 16, no. 6 (Dec 1951): 812-818.

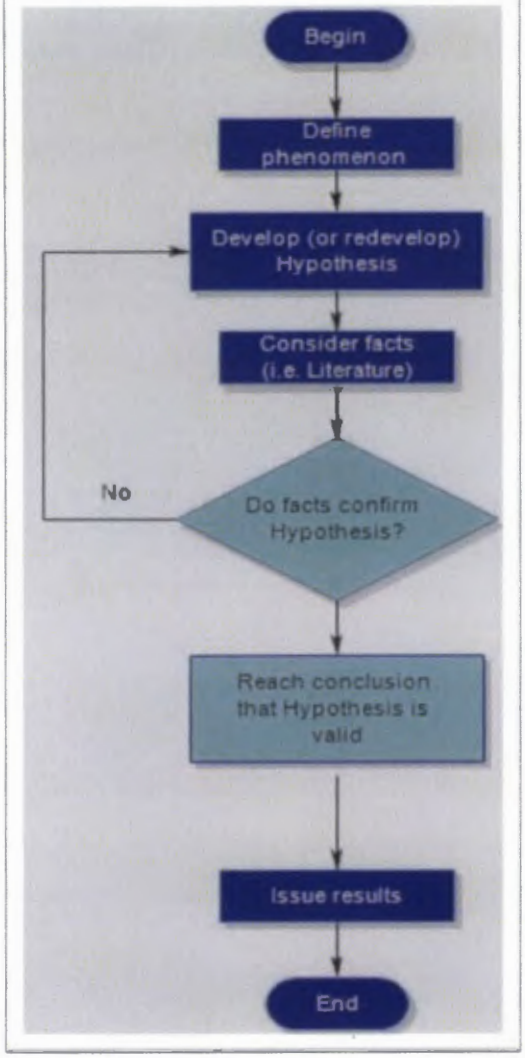

Figure 2. Analytic Induction Methodology (Robinson, 1951, citing Cressey)

1. Define a phenomenon
2. Develop a hypothesis
3. Consider one set of facts to determine if the facts confirm the hypothesis
4. Redefine either the phenomenon or the hypothesis so that new information is included
5. Examine additional information to determine if the new hypothesis is confirmed, and if it is, reach the conclusion that there is some certainty about the results of the hypothesis, or

6. If the hypothesis is not confirmed, reformulate the hypothesis until there are no exceptions and the hypothesis is confirmed.[63]

This method was utilized in the investigation of labor shortage in British Columbia and whether or not the importation of immigrant labor can solve any labor shortages in the construction industry. The analytic inductive method as proposed by Cressey (cited in Robinson, 1951) allowed the researcher to hone both the questions and hypothesis during the course of the research. When this project was proposed, the researcher had stated that the final question, hypothesis, and confirmed hypothesis might differ significantly from the originally proposed questions. As we will see in the next chapter, they did indeed change over the course of the research.

5. Analysis

A number of questions were investigated in the search of the research materials relating to a labor shortage in the construction industry in British Columbia. The research was guided by the initial questions and hypothesis:

- Is there truly a shortage of labor in the construction industry in British Columbia, and if so, why?
- Can any labor shortage in British Columbia's construction industry be reduced if we hire more skilled immigrants, or are there other, more viable solutions to the problem of construction labor shortage?

- H: Hiring more immigrants will solve the labor shortage in BC.

[63] Cressey, cited in Robinson, 1951.

5.1 Application and Analysis of Data

It quickly became clear that the validity of the hypothesis could not be determined without thoroughly investigating the background of labor in the construction industry in British Columbia. The investigation took place in a number of background areas. The question of whether or not there even is a construction labor shortage in British Columbia was first addressed.

5.1.1 Is there a Shortage of Labor in the Construction Industry in British Columbia?

There was little doubt that at the present time, it is difficult to fill construction positions in British Columbia. Whether or not this is a genuine 'shortage' or a temporary condition caused by natural cycles of construction combined with the impending Olympics is a different matter. The current trend is expected to continue until 2010; after the Olympics are over, no one is certain what will happen to construction demand in British Columbia. It is unlikely, however, to continue at the present frenzied demand. The answer to whether or not there is a construction labor shortage in British Columbia, and why, is very clear but somewhat qualified:

1. At the *present time*, there is a construction labor shortage in British Columbia, due to increased Olympic demand and due to lack of available acceptable workers[64] (Greer, 2005)[65].
2. No one is certain what will happen after 2010, which is only two years away, but a natural cycle of supply and demand[66], illustrated below, tends to occur in the construction industry (Youth and Labor Market Services Branch, 2001).

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[64] The concept of 'available acceptable workers' will be discussed further.
[65] Greer, 2005
[66] Youth and Labor Market Services Branch, 2001.

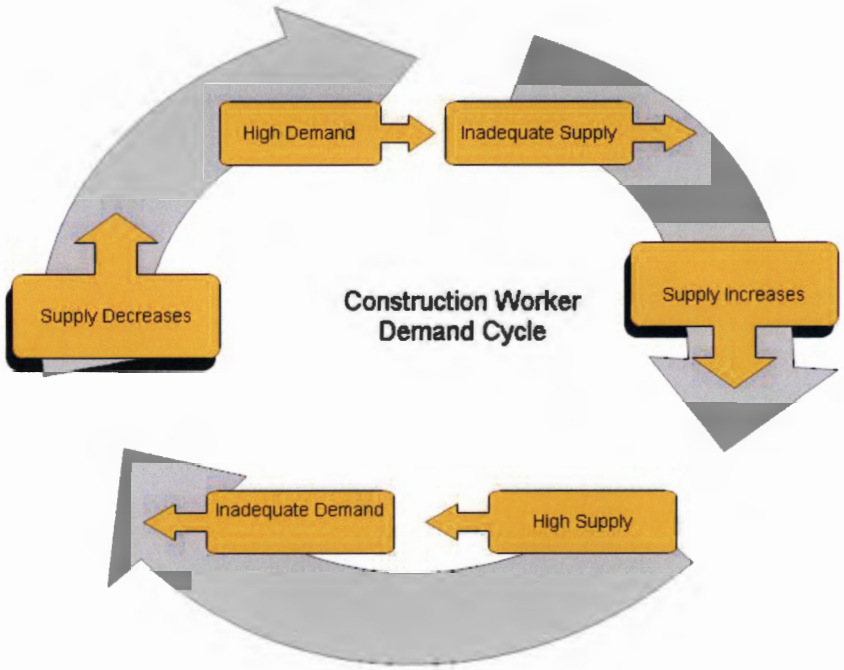

Figure 3. Construction Worker Demand Cycle (based on information in Youth and Labor Market Services Branch, 2001)

At this point, British Columbia is in a "high demand" cycle. The economy of British Columbia is expanding. The supply of workers will increase through one mechanism or another; once the supply is high, and the demand for workers will fall, resulting in a decrease in supply. The demand increases, and the cycle begins again.

Given the nature of the cycle, combined with the approach of the 2010 Olympics and a likely post-Olympic construction demand, the second research question acquires a great deal of importance.

5.1.2 Can Shortage be reduced by More Skilled Immigrants or Are There Other Alternatives?

In answering the second question en route to proving or disproving the hypothesis, it became necessary to investigate the possibility of utilizing skilled immigrant workers and determining what other viable alternatives, if any, there might be. Each of the possibilities is discussed below.

5.1.3 Utilization of Aboriginal Populations in Construction

The research (Alberta Employment, Immigration and Industry, 2008; Aboriginal Human Resources Development Council of Canada, 2007; Lamontagne, 2004) revealed that there are a large number of aborigines searching for work and very interested in working in the construction industry. They are young, mobile, hard working, and in general do not mind physical labor. Unfortunately, they also tend to have lower education levels and are not necessarily literate in English or French even though they may have an education. Many companies do not realize that Aboriginal workers from other regions are available and willing to relocate to work in their industry, and the workers might need assistance acquiring a place to stay or live while working.

5.1.4 Youthful Labor Force

Many of the same advantages and disadvantages exist to hiring young laborers (Greer, 2005; Coalition of British Columbia Business, 2007; Dunn, 2004). Many of the young have high school diplomas but may be functionally illiterate. They have not yet developed a work ethic, and unlike the Aboriginal population tend to steer away from what they believe will be universally physically demanding work. While they are willing to relocate, they may not have familial support and may leave the industry for that reason. While Aboriginals leave the industry because of housing difficulties and this can be

remedied, it would be much more difficult to acquire familial support for the young. The combination of lack of education, lack of experience, and lack of desire to endure hard work may make the youthful population a less desirable workforce choice.

5.1.5 Immigrant Labor

A two-fold difficulty in hiring immigrant labor was revealed through the research (Lee-Young, 2008; Asia Pacific Post, 2008; Rico, 2008; the Economist, 2008; Workpermit.com, 2007). The first, and most basic difficulty, is that nearly every industrialized nation is clamouring for laborers, and Canada is only one nation in the competition. In order to fill its construction needs with immigrants, Canada would need to establish more programs to entice immigrants to the country, provide safeguards against termination for immigrants who have been required to invest thousands of dollars in entering Canada, and work out more partnership agreements with nations similar to the one signed with the Philippines.

The second major difficulty with hiring immigrants is that most immigrants are highly *educated,* but not highly *skilled.* The current 'immigrant score' process gives more value to education than to practical skills. In addition, the immigrant may be highly educated and may pass a basic language test, but still communicate so poorly that acquiring construction skill education is difficult. Under these conditions, the immigrant can indeed be hired by construction companies and can be hard working, strong, and have a good work ethic, but still suitable only for unskilled construction labor. Unfortunately, that is not where the openings are.

5.1.6 Labor Unions

The Unions argue that they have workers that can fill the positions in Canada and that they are working with other nations to recruit highly trained union workers ready to deploy to Canada to fill Olympic construction positions. They also argue, and the research confirmed, that many times Canadian workers are already available and ready to work, but companies hire cheap immigrant labor. The unions also suggest that field experience programs combined with apprenticeships will help them train young and Aboriginal workers in work ethic and allow these trainees to pass certifications much quicker and with a higher rate of success, both in the certifications and in developing a work ethic.

5.1.7 Other Workforce Possibilities

Other possibilities reviewed were that of expanding the numbers of women in the construction field, and re-hiring individuals who retired from construction work. Both of these options have advantages and disadvantages. Women tend to be literate and ready to work, but they also have very little practical training or experience in fieldwork. They may not have experience in the level of physical work required to succeed.

Retirees expressed several issues regarding returning to work, including the need for more time off or job-sharing in order to meet doctor's appointments and to maintain their pensions. However, a large portion of the recently retired would return to work if these conditions (among others) could be worked out. Retirees are highly trained, can work for less pay as they are receiving a pension, have experience, are certified, and literate. They are also weaker, aging, and more prone to illness and injury. One possibility it to utilize retirees to train to be inspectors and job coaches for construction sites and new hires.

5.2 Discussion and Analysis of Findings

Once the research was compiled, a simple grid analysis, or decision matrix analysis[67], is utilized to find the most effective solution to Canada's temporary construction labor shortage. In the weighted grid analysis method of decision-making, all of the needed criteria, or factors, are entered (in this case as rows) and the options are listed (in this case as columns). The relative importance of each factor is determined. The importance of some of the options is obvious (a construction worker should be strong) but others are less so. The next section discusses the results of the weighted grid analysis and the implications.

5.2.1 Weighted Grid Analysis

In this analysis, the researcher had a clear concept of the importance of the criteria (factors), but if the importance had not been clear, then paired comparison analysis[68] would have been utilised to assist in the decision making process. The data was collected from all of the sources throughout this investigation. The grid is developed using analysis developed by David, 1988. The questions utilized to drive the numbers and criteria was based on the totality of information gathered during the study as being criteria necessary for a construction worker. The criteria from each population were then scored with a scale of 1 to 5, with 1=failing to meet need and 5=meeting the need extremely well. (Weights and scores may be duplicated.) Each of the scores is multiplied by the weighted value to acquire a relative score. The relative scores for each population are added, and the total relative scores are compared. The higher the total relative score, the more nearly the population would meet the criteria for

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[67] Government of Victoria. "Model Matrix evaluation Annex A." 2002. Retrieved online June 20, 2008 at http://www.vgpb.vic.gov.au/CA256C450016850B/WebObj/Matrixfm1/$File/Matrixfm1.DOC

[68] David, H.A. "The Method of Paired Comparisons". New York: Oxford University Press. 1988

fulfilling a short-term labor issue in the construction industry. The second table shows the weighted assessment of how well each population fits the criteria.

Need/criteria		Population				
	Weights	Aboriginal	Youth	Immigrant.	Unions	Other
Heavy, "grunt" labor	4	5	5	3	4	1
Skilled construction labor	4	3	3	3	5	3
Higher-tech construction labor	5	3	3	2	5	3
Ease of becoming an inspector or teacher/mentor	2	1	1	1	5	3
Basic mathematic and literacy skills	4	3	3	2	5	3
Able to move to find work	3	5	4	1	5	3
Easy to let go if do not work out	2	5	5	5	1	3
Cheap Labor	3	3	3	5	1	3
Total Score						

Table 6. Grid or Matrix Analysis

Need/criteria		Population				
	Weights	Aboriginal	Youth	Immigrant	Unions	Other
Heavy, "grunt" labor	4	20	20	12	16	4
Skilled construction labor	4	12	12	12	20	12
Higher-tech construction labor	5	15	15	10	25	15
Ease of becoming an inspector or teacher/mentor	2	2	2	2	10	6
Basic mathematic and literacy skills	4	12	12	8	20	12
Able to move to find work	3	15	12	3	15	9
Easy to let go if do not work out	2	10	10	10	2	6
Cheap Labor	3	9	9	15	3	9
Total Score		95	92	72	111	73

Table 7. Weighted Grid or Matrix Analysis

Utilising the weighted decision-making matrix, it becomes clear that filling available job slots with union workers is the best option despite what some analysts argue is a higher price tag. None of the other groups has a consistently high level of criteria to surpass the experience, skills, strength, dexterity, and knowledge of the typical union-certified worker. Evidence was presented in the research that the wage gap between union and non-union workers is steadily closing (Fang and Verma, 2002) [69].

[69] Fang and Verma 2002.

In addition, other factors relating to wage and income must be addressed. These factors may shed light on the alleged wage gap between union and non-union workers. In the previous chapter, a list of the 'construction categories' for workers in British Columbia was given. The average income for 16 of those 29 construction occupations falls below the average income in British Columbia, sometimes by a significant margin. Of the remaining 13 job categories, 6 of them are not categories that the typical observer would consider to be "construction work." Cable installers, diesel repairmen, millworkers, and others not only are not typically considered construction workers, but may actually be employed in large measure by other industries. Yet, for the government's purposes, the "numbers" are considered in construction work statistics.

The net result of the two observations (BC Work Futures, 2008) above is to lower the number of "high paying" construction work categories even further, with the conclusion that of 29 construction occupation categories, only six job categories pay more than the average wage in British Columbia. When viewed from this perspective, the concept of the 'expensive union construction worker' takes on a different outlook.

The "average" salary in each of the areas is further clarified by government's notation that if the employee is 'certified' or above the apprentice level, his or her income will be higher than the average. By inference, individuals without these certifications will be on the lower side of the employment salary. It becomes easy to understand why employers may prefer to hire immigrants with no real construction skills: they are very much cheaper than the average worker in British Columbia. As an example taken from Table 5, consider the average income in British Columbia of $44,321 per year. A significant number of workers

will be above the $44,321, and a significant portion lower, but the income of the *average* worker in British Columbia is $44,321.

Consider two groups of workers, insulators at an average of $33,982 per year, with unemployment, and the Steamfitters, with an average income each year of $53,161. Unemployment in both groups is relatively high. A significant number of employees in the insulators will make more than $33,982; they will be the employees with higher certifications who have completed apprenticeships. A significant number will earn less than $33,982; they will be the unskilled workers who are in training for certifications. The same criteria, of course, apply to steamfitters.

As a practical matter, an employer who is not concerned with quality, such as the bridge construction company described in the previous chapter, will opt for cheaper workers. Consider the math, based on information gained in BC Work Futures (2008). They may opt for 3 unskilled workers at $28,000 each ($84,000 total) rather than 3 skilled workers at $38,000 (total $114,000). At first glance, the unskilled workers look like a far better deal: they are much cheaper indeed. However, the reality is that the skilled and certified workers are trained, experienced, quicker, and safer, as shown by the research presented. In the long run, the three skilled workers can accomplish more work, better, than the unskilled workers. They also require less supervision, and there is less risk from shoddy workmanship. Placed in this perspective, the trained union worker becomes a bargain compared to the unskilled worker. The higher the salary of the construction group, the greater the savings appear by hiring under-skilled workers, but in reality the greater the potential for loss would be.

Previously, the research showed that the salary gap in trained and certified workers is closing between union and non-union workers, meaning that the only group that provides

employers with a real financial advantage to hire is the immigrant group, which scored significantly lower on the weighted assessment than all of the other skill groups. Indeed, the weighted differential is so extreme compared to *all* of the other groups that the question arises why some companies continue to hire these groups. The answer may lie in the research[70],[71]; which presented examples of the level of control that companies have over immigrants. By tying immigration visas for an individual to a particular company, the Canadian government essentially enters the immigrant into servitude. If they do not comply with their host company directives, if they complain, if they ask for more money, they are simply returned to their home country. It is clear that an unscrupulous company whose only concern was the bottom line would have a reason to hire immigrants.

They can pay immigrants minimum subsistence rates, while virtually guaranteeing that there will be no labor complaints.

In such a situation, it would not matter if the immigrants were less skilled and worked slower; two to three times as many immigrants could be hired for the same price as union level workers, while ensuring that the immigrants do as they are told, without complaint. The bigger question then becomes whether or not the company would hire more, or just "make do" with an inadequate and untrained workforce. The overall affect of indentured servitude of the immigrants should be enough for the Canadian government to require local and national level hires first, and to consider immigrant labor only as a last possible solution. The suggestion has been made that some form of oversight must be given to companies before they bring in immigrants, to ensure that Canadian workers are not available, rather than not

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[70] Sandborn (2006)
[71] Teo (2007)

available at the rate the company *wishes to pay*[72]. By closing this gap or "loophole," the Canadian government would acquire a better perspective as to whether or not immigrant workers were necessary, or merely 'cheap'.

5.2.3 Other Possible Solutions

The unions argue that they have enough workers to fulfill job needs, and that any shortages can be filled through aggressive apprenticeship and field programs. Indeed, several of the unions have established their own 'immigrant' programs, travelling to other countries to train union counterparts on Canadian methods and job skills so that union immigrants can come into the country as fully productive workers. The unions have also proposed an aggressive 'youth acquisition and training' program, and an accelerated field apprenticeship for both Aboriginal populations and youth populations. In the areas that these programs have been implemented, the main problems experienced have been the relative lack of literacy of the candidates and the lack of 'real world' work ethic. One possibility for remedying these problems would involve the re-hire of retirees, for a limited number of hours, for training and mentoring purposes.

5.3 Rejection of the Null Hypothesis

During the course of the research, Cressey's six steps for successful analytic induction were followed. The phenomenon was defined and clarified, and expressed in the response to the first research question. There is indeed, a construction labor shortage in British Columbia that will last through 2010, but the long-term future is unclear. There is significant evidence that the expansion of the construction industry in British Columbia may crash at the end of the Olympics. The hypothesis that hiring more immigrants will solve the

[72] Sandborn (2006)

labor shortage in BC was developed, and research was conducted to determine if the facts confirm the hypothesis. The phenomenon had to be somewhat refined to incorporate the information received, and additional information was examined to determine how it fit into the phenomena. Finally, the conclusion was reached that there is indeed some certainty about the results of the hypothesis.[73]

The null hypothesis, that hiring more immigrants will solve the labor shortage in BC, has been rejected based on the investigation, research, and analysis given. The conclusion made is that it is unlikely that hiring more immigrants will solve the labor shortage in British Columbia.

5.4 Weaknesses of the Study

The specific method of analysis utilised with the research, the weighted grid analysis or matrix, is arguably somewhat subjective. Other researchers might give different factors higher weights, or consider different categories of potential workers. Given the vast difference between the categories, however, and based on the research, it is very likely that even if the factors were given different weights, utilising union workers would still be the best choice with the highest total factor score.

5.5 Chapter Summary

In this chapter, the guiding research questions were discussed and answered; a weighted grid analysis of the research data was provided and analysed, and the null hypothesis was rejected. The conclusion was made that it is unlikely that hiring more immigrants will solve the construction labor shortage in British Columbia.

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[73] Cressey, cited in Robinson.

In the next chapter, specific recommendations will be made for alleviating the construction labor shortage in British Columbia.

6. Conclusions and Recommendations

Today's construction industry needs highly trained, certified, experienced workers who are literate and hold a good work ethic. The research revealed that skilled national residents of Canada and British Columbia are a far better choice to solve the construction labor shortage than the use of immigrant labor would be. Though it appears, on the surface, that importing labor is the easy and quick solution, the use of immigrants does not solve the problem. Instead, utilizing immigrants compounds existing social problems and adds a new layer to social issues that already exist (Lee-Young, 2008; Rico, 2008; the Economist, 2008; Workpermit.com, 2007).

6.1 Conclusions

Within Canada, the most highly trained and experienced group of workers is undoubtedly the union populations. Once a worker joins the union, there is a tendency to "police from within." Workers must meet certain job standards to progress from apprentice to journeyman and finally to a fully qualified job as a certified construction worker with a specialty. Union members tend to support and coach each other through this progression, but there is also steady "peer pressure" to exceed safety standards on the job, as everyone depends on everyone else. This solidarity is not always seen in non-union shops. In addition, non-union shops do not have the level of certifications that union organizations require. Salary differentials, however, appear to be linked more to certifications than to union membership.

The research revealed that controversy exists over whether or not there are enough union workers to fill available jobs, with the unions saying that there are, and some employers loudly proclaiming there are not. One thing is certain, with an unemployment rate of greater than 4% for union construction workers, there are workers available who are not being utilised, and the reason appears to be financial, as given in the previous chapter. Many employers profess to believe that union workers are 'expensive' but the research suggests that it may be less a case of union workers being expensive than it is a case of immigrant labor being cheap and controllable. It is difficult to explain why high unemployment levels exist for many certified construction workers while certain companies are complaining there are no workers. The conclusion is made that these companies are really complaining that there are not enough *cheap* workers, a statement that is ludicrous in light of the low average construction salary.

Unions throughout Canada have repeatedly offered to assist in developing and implementing more training programs for Aboriginal populations, youth, and women. At the present time, most of the construction job categories are filled with 96% males, or higher (BC Work Futures, 2008) .[74] The unions however, cannot, sponsor the cost alone, and indeed the argument may be made that it is unreasonable for them to attempt to do so. While some unions have gone to the extent of going to other countries to train and certify union workers there so that immigration to Canada is easier, the process of training and certifying workers is expensive. It is not reasonable to expect the unions to bear the total brunt of training workers when the trained workers will benefit the nation as a whole. Instead, much of the money that Canada is utilising to attempt to attract immigrants should be channeled into providing

[74] BC Work Futures, 2008

training funds for residents and for promotional funds to attract new trainees into the field, especially youth, women, and Aboriginal workers.

6.2 Recommendations

By analysing the information acquired during the project and applying the knowledge gained about the construction industry during the last two years, specific recommendations have been arrived at below.

- Increase funding available for housing for indigenous populations in order to allow natives to study and work without having to stop the program to deal with issues related to unsafe housing.
- Increase funding for basic level-education programs to be included within the fieldwork and apprenticeship programs of union training.
- Assist in development of programs that will allow qualify older workers (in *all* fields) to return to work part time or with accommodation, without losing pensions or facing undue hardship, and in developing programs to train retirees to mentor and teach.
- Require that all requests for immigrant worker visa sponsorships be reviewed by a panel consisting of a government official, a human rights worker, a union official, and two local business owners.
- Provide economic stimulus to Canadian nationals who are willing to train in construction to the same extent that it would have been provided to immigrant workers.
- Develop special training or incentive programs aimed at each of the three categories targeted: youth, women, Aboriginal workers.

6.2.1 Provide Funding for Aboriginal Housing

The research showed that one of the factors contributing significantly to attrition of indigenous workers was the lack of safe and comfortable housing[75]. Conditions in Aboriginal homes were not conducive to studying in acquiring a basic education, and once the workers were in the field, the housing conditions tended to distract them from jobs as they worried about families. Thus, fixing these conditions should help Aboriginal workers become successful construction workers, as shown in Aboriginal Human Resource Development Council of Canada, (2007).

6.2.2 Provide Funding for Adult Basic Education within the Context of Construction Education

The research revealed that lack of basic educational skills, even among high school graduates. This is a concern among union workers who are attempting to improve retention rates in fieldwork and apprenticeship programs. Having a certificate of graduation does not necessarily mean that the graduate can read, communicate, or measure and calculate, and all of these skills are essential in the construction industry.

Lack of basic literacy and numeric skills makes it difficult for the worker (trainee) to produce satisfactory work. Illiterate workers who manage to complete an assignment have been required to invest so much energy in completing the tasks that they tend to quit and find other employment in other fields. For these reasons, it makes both financial and practical sense to expand on-site training of basic and applied education skills.

[75] Aboriginal Human Resource Development Council of Canada, 2007

6.2.3 Assist in Developing Programs to Allow Older Workers to Re-Enter the Workforce

The Canadian government must develop programs that assist older workers in returning to work on a part-time basis or that allow workers to go from full- to part-time jobs without risking loss of pension (Malatest, 2003). Adult day care programs will assist with family obligations that cause workers this age to retire, and should be part of a full plan to assist older workers who wish to remain employed or return to part-time employment (Malatest, 2003).

Assisting retirees to return to the workforce in modified capacities represents one of the greatest contributions that the government can make to solving the construction labor issue, simply because retirees are educated, experienced, and conscientious. Their potential contributions as workers are wonderful, but they would also be the easiest group to cross train to become inspectors and mentors. Further, the synthesis of my knowledge on this subject and from the articles read, it has let me to realize that returning retired educators could be assigned to job sites to help trainees who are having trouble reading or calculating, or even to provide a daily educational briefing (Alberta Employment, Immigration and Industry, 2008).

6.2.4 Require Panel Oversight of all Corporate Visa Sponsorship Requests

In order to prevent a repeat of the incident that occurred with the company constructing the Golden Ears Bridge,[76] a panel consisting of one regional government official, a human rights worker, a regional union representative, and two local construction business owners should be convened, based on a synthesis of my learning and the information acquired in this project. Each request for a corporate Visa sponsorship should be

[76] Sandborn

investigated and reviewed by this committee. If investigation determines that there are Canadian nationals available to take the job, then the request for Visa sponsorship will be denied. If the request is approved, then the human rights worker becomes a 'case manager' for the company's immigrant employee.

Instituting this panel would do two things: it would require construction firms to hire locally and avoid "wage gouging" as a first option, since the Visas would not be approved if there were any local workers, even at market price. It would also require firms to treat employees better. As a practical matter, because the firm would not be able to automatically hire immigrants if they were so vile that they could not keep local employees. Thus, the panel would become an informal market regulator. Again, this suggestion was based on the information gathered in the course of this investigation.

6.2.5 Provide Economic Stimulus to Canadian Workers

Monies that would have provided economic stimulus to immigrant groups should be transferred to programs for Canadian nationals who are willing to train in construction. Millions of dollars have been allocated to helping immigrant workers assimilate, learn the language, and gain skills. These funds should be transferred to programs for Canadian workers not only in construction but in other fields that are lacking workers, such as health care and transportation.

If these funds were expected to attract immigrants who are willing to retrain (and that was their stated purpose[77]), then it is just as logical to believe that they will attract Canadian workers who need assistance.

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[77] British Columbia Ministry of Economic Development

6.2.6 Develop Training and Incentive Programs Aimed at Youth, Women, Aboriginal Workers

Each of the three suggested categories of workers has high unemployment rates. By developing attractive training materials and programs for youth, women, and Aboriginals, the unions and the government of British Columbia may be able to attract more workers from each of these groups. There are a number of advantages to doing so, not the least of which is the concept that companies would be 'hiring Canadian' while taking people off the unemployment dole. If Canada must train workers, it should be training citizen workers first.

6.3 Project Summary

The investigation began with the question of whether or not a construction labor shortage really exists in British Columbia, and if it does, whether or not immigrant labor would be the solution to the shortage.

Through the use of a qualitative study of archival materials, inductive reasoning was applied to investigate the circumstances of construction labor and potential shortages in British Columbia. By utilizing these methods, it became clear that a shortage exists at the present time and is expected to continue through 2010. *After that, however, no one is certain of the future of construction in British Columbia, but natural cycles suggest that the construction boom will slow and perhaps reverse.*

Investigation of the possible solutions to the construction shortage revealed that there is a shortage of qualified, educated workers both at home and abroad. Competition for workers in the construction field is intense, not just in British Columbia, but throughout the world. There is no logic nor advantage, then, to putting a great deal of effort and money into attracting workers from foreign nations who will have to be retrained, acclimated, and assisted to assimilate when the money could be used to train, retrain, and assist Canadian

national workers, and who may leave as soon as their commitment to their hiring company expires.

Indeed, the conclusion of the investigation was that the only real advantage to bringing in foreign workers is that companies sponsoring Visas can mistreat employees and undercut local pay scales without fear of retribution from a population that is essentially held hostage by paperwork. The analysis clearly showed that hiring unskilled labor is cheaper on the surface, which undoubtedly attracts companies, which make these types of expeditious hiring decisions, but it is equally clear that hiring untrained and unskilled is a "cheap economy" which can easily backfire.

The final recommendation of the research is to hire trained Canadian workers as primary source labor, and to institute or accelerate programs of training and education for Aboriginal populations, youth, and women, while developing programs to utilise retirees who may wish to return to part-time employment. Companies should also be educated as to the true value of using native workers with skills rather than importing labor.

7. References

Aboriginal Human Resource Development Council of Canada. "A study of Aboriginal participation in the construction industry." *Construction Sector Council*. Construction Sector Council, Canada. 2007. http://www.csc-ca.org/pdf/Aboriginal_report_e.pdf.

Akin, D. "Canada's top problem is filling labor shortage." *CanWest News Service*, May 5, 2008. http://http://www.amren.com/mtnews/archives/2008/05/canadas_top_pro.php.

Alberta Employment, Immigration and Industry. "Mature workers in Alberta and British Columbia: Understanding the issues and opportunities." *Employment Alberta*. Government of Alberta, Canada. August 2008. http://http://www.csc-ca.org/pdf/Aboriginal_report_e.pdf.

Alberta Federation of Labor. "The truth about labor shortages in the oil patch." 2008. Alberta Federation of Labor. April 4, 2008 <http://www.afl.org/campaigns-issues/fortmcmurray/shortage.cfm>.

"An Aboriginal "treasure trove" and older workers could alleviate a skilled labor shortage in rural areas." *National Resources Canada*. Viewpoint Newsletter, Fall 2007. http://http://cfs.nrcan.gc.ca/news/552

"BC seals labor deal with Phillipines." *The Asian Pacific Post*, February 6, 2008. http://http://www.asianpacificpost.com/portal2/c1ee8c4417efb1780117f01fdd8a0035

BC Work Futures. Residential Home Builders and Renovators (0712). Retrieved online July 12, 2008 at http://handson.workfutures.bc.ca/profiles/profile.cfm?noc=0712&lang=en&site=graphic

British Columbia Ministry of Economic Development. *ArriveBC: Advancing immigrants' skills building BC's workforce*. 2006. http://www.arrivebc.com/index.html.

"Canada skilled worker immigration - Points based immigration." *The world's most popular immigration advice site*. SIA Workpermit.com. http://http://www.workpermit.com/canada/individual/skilled.htm.

"Canada's guest workers: Not such a warm welcome." *The Economist*, November 22, 2007. http://http://www.economist.com/world/la/displaystory.cfm?story_id=10177080

Canadavisa.com . "British Columbia construction industry fast-tracks skilled trades workers from Europe." Campbell-Cohen Canada Immigration Attorneys. Canadavisa.com. http://http://www.canadavisa.com/British-Columbia-construction-industry-fast-tracks-skilled-trades-workers-from-Europe.html

Coalition of British Columbia Businesses. "Labor supply strategy for small businesses in British Columbia." *Welcome to ASTTBC.* Applied Science Technologists and Technicians of British Columbia. http://http://www.asttbc.com/services/docs/LaborSupplyReport_Jun07.pdf.

"Construction sector wants review of Canada's immigration program." *The world's most popular immigration advice site.* SIA Workpermit.com. http://www.workpermit.com/news/2007-09-05/canada/canada-needs-more-immigrant-construction-workers.htm

David, H.A. "The Method of Paired Comparisons". New York: Oxford University Press. 1988

Dunn, A. "Canada faces a shortage of people who make things work." Capital News Online, a publication of Carleton University, April 2, 2004. http://http://www.carleton.ca/jmc/cnews/02042004/n3.shtml.

Fang, F. and Verma, A., "Union wage premium," *Statistics Canada: Perspectives*, no.Catalogue no. 75-001-XPE (Winter 2002): 17-23. http://www.statcan.ca/english/studies/75-001/archive/e-pdf/e-0242.pdf.

Government of Victoria. "Model Matrix evaluation Annex A." 2002. Retrieved online June 20, 2008 at http://www.vgpb.vic.gov.au/CA256C450016850B/WebObj/Matrixfm1/$File/Matrixfm1.DOC

Greer, D. "BC's looming skilled labor shortage." *The Tyee*, May 13, 2005. http://http://thetyee.ca/News/2005/05/13/BCsLoomingSkilledLaborShortage/.

Heaton, J., "Secondary analysis of qualitative data," *Social Research Update*, no.22 (1998):

Hirsch, T. "Coming Up: The transformation of Western Canada's Economy." Canada West Foundation Publications. Canada West Foundation. February, 2006. http://www.cwf.ca/V2/files/Coming%20Up%20Next.pdf

Lamontagne, F. "The Aboriginal workforce: What lies ahead, a CLBC commentary." *Canadian Labor and Business Center.* Canada. 2004. /http://www.clbc.ca/files/Reports/Aboriginal_Commentary_piece.pdf.

Lee-Young, J. "BC signs labor agreement with Philippines." Vancouver Star, January 29, 2008. http://http://www.canada.com/vancouversun/news/story.html?id=95b86a97-add5-4d16-8310-a7ed7d6ee43d&k=62607.

Luffman, J. and Sussman, D., "The Aboriginal labor force in Western Canada," *Statistics Canada 75-001 XIE*, no.January (2007): 13-27. http://sc.gc.ca/english/freepub/75-001-XIE/10107/art-2.pdf

Malatest, R. The aging workforce and human resources development implication for sector councils. Ottawa: Self, 2003.

Marshall, C., & Rossman, G. Designing qualitative research. Newbury Park, CA: Sage.2006

Penner, D. "Construction leads way to strong B.C. job growth." The Vancouver Sun. 05 April 2008. April 12, 2008. <http://www.canada.com/vancouversun/news/business/story.html?id=d19528b6-7f7d-4e47-b05c-ce6e9edc2d7f&k=82714>.

Proctor, D. "Contractors face the perfect storm." *Sheet Metal Journal*, Fall 2006. http://http://www.sheetmetaljournal.com/issues/fall2006/perfect_storm.htm.

Province of British Columbia. "Construction." British Columbia: A guide to the BC Economy and Labor Market. 2007. Government of British Columbia. April 4, 2008 <http://www.guidetobceconomy.org/major_industries/construction.htm>.

Rico, G. "Firm helps Mexicans get jobs in Canada." *Arizona Daily Star*, March 14, 2008. http://http://www.azstarnet.com/sn/border/229617.

Robinson, W. "The logical structure of analytic induction." American Sociological Review 16, no. 6 (Dec 1951): 812-818.

Sandborn, T. "Does BC really need 20,000 global temps?" The Tyee. February 24, 2006. April 12, 2008. <http://thetyee.ca/News/2006/02/24/BCGlobalTemps/>.

Sanborn, T. "Canadian ironworkers shut out of big bridge job, say unions, contractors." The Tyee, September 1, 2006. http://http://thetyee.ca/News/2006/09/01/Ironworkers/

Stainback, Susan and William. "Conducting a Qualitative Research Study." Understanding and conducting qualitative research. 1988 Reston, VA:

Statistics Canada. "Canadian workforce aging rapidly." http://www.nipissingu.ca/faculty/davidp/dphome/class%2012%20Canadian%20workforce%20aging%20rapidly%202008.doc

Teo, S., "Vancouver's newest Chinese diaspora: settlers or "immigrant prisoners"?" *GeoJournal*, no.February (2007): 211-222. http://http://www.riim.metropolis.net/Virtual%20Library/2007/WP07-02.pdf.

Trochim, W. Deduction and induction.2002. Retrieved May 24, 2008 from http://www.socialresearchmethods.net/kb/dedind.htm

Versace, V. "Labor crunch: Canadian construction industry turns to Aboriginal workers to solve labor shortage." *Journal of Commerce*, January 28, 2008. http://http://www.joconl.com/article/id26151.

Versace, V., "Foreign workers form essential part of Canada's labor force, panel says," *Journal of Commerce*, June 11 (2008): http://http://www.joconl.com/article/id28200.

WorkPermit.com (2007). WorkPermit.com. "Canada - record low unemployment, 350,000 workers needed in British Columbia." *The world's most popular immigration advice site.* WorkPermit.com. http://http://www.workpermit.com/news/2007_03_22/canada/british_columbia_needs_350000_workers.htm

Youth and Labor Market Services Branch. "An Overview of Labor Market and Skills Shortage Issues in British Columbia and Canada." Labor Market and Skills Shortage Issues. Ministry of Advanced Education British Columbia. June 2001.

Znaniecki, F. The method of sociology. New York: Farrar and Rinehart, 1934