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Executive summary

Minimum wages have long been the subject of considerable attention and debate. The controversy surrounding minimum wages arises from the tension between well-intentioned efforts to increase incomes for lower-income workers and the significant negative economic costs associated with increasing minimum wages. This controversy is also fuelled by a general misunderstanding of what kinds of workers actually earn the minimum wage.

The purpose of this study is to provide British Columbians, and indeed all Canadians, with an up-to-date account of these realities and other economic costs of the minimum wage. The study also aims to empirically assess the employment losses associated with increasing the minimum wage in British Columbia. Together, these analyses will help inform the public and policy makers about the impacts of increasing minimum wages.

Minimum wage earners in British Columbia

Minimum wage laws establish the lowest level of hourly pay that employers must pay workers. British Columbia's general minimum wage rate is currently $8.00 per hour, the 5th highest among the Canadian provinces. However, BC has one of the highest minimum wage rates relative to average earnings (37.8%) when compared with those in all 10 Canadian provinces and 50 US states (7th highest out of 60).

In British Columbia, 62,600 workers earned the minimum wage in 2007, representing 3.4% of total employment. The majority of individuals earning the minimum wage were young workers between the ages of 15 and 24 (55.9%), most of whom (86.6%) were living at home with family. More than half of these young workers were also attending school. Many of the remaining individuals earning minimum wages were adults supplementing their family income with part-time work during child-rearing years or after retirement. In general, the typical minimum wage worker in British Columbia—and across Canada—is someone who is young and living at home. As such, minimum wage increases would mainly affect younger workers, and would have a negligible effect on adults, generally, and those supporting families, specifically.

The economic effects of increasing minimum wages

A large body of research from Canada and around the world demonstrates convincingly that high minimum wages lead to lower employment levels. A recent, comprehensive study by renowned minimum wage experts University of California Professor David Neumark and US Federal Reserve Board economist Dr. William Wascher (Neumark and Wascher, 2007a) reviewed over 100 studies covering 20 countries over the past 15 years and found that the "overwhelming majority" of studies, especially the most credible, consistently show that minimum wage increases result in decreases in employment.

There have also been numerous studies that specifically examine the extent to which high minimum wages affect employment in Canada. This study examines 14 Canadian studies that focus on how minimum wage changes affect the employment of young workers (those between the ages of 15 and 24 years old). The Canadian studies span almost 30 years and can be organized into two groups: (1) 12 studies that examine the impact of increasing the minimum wage on large groups of people who typically earn the minimum wage (i.e., teens and young adults); and, (2) three studies that examine the employment effects on workers who are most directly affected, that is, workers earning a wage that falls in between the old minimum wage and the new minimum wage after a policy change. [1] The results are striking. The first group of studies report employment effects ranging from -0.3 to -0.6, meaning that a 10% increase in the minimum wage will likely decrease employment among those who typically earn minimum wage by 3% to 6%. The second group of studies report employment effects ranging from about -0.45 to -2.0, meaning that a 10% increase in the minimum wage will decrease employment among this smaller, more directly affected group of workers by 4.5% to 20%.

Furthermore, research shows that higher minimum wages have other negative effects including fewer benefits and less training for workers. Higher minimum wages can also have the unfortunate effect of inducing high school students to drop out and search for employment. Fewer employment opportunities and less education and training are particularly harmful, given that experience and skill development are important drivers of higher wages. All these negative effects support the conclusion that high minimum wages have no appreciable effect on alleviating poverty.

1 One study, Campolieti et al. (2006), examines both approaches and thus is counted in both groups.

The employment effects of increasing BC's minimum wage to $10

This study estimates the employment loss associated with increasing British Columbia's minimum wage to $10 per hour, a level advocated by numerous union and activist groups. Specifically, estimates of the employment effects from existing Canadian studies are used to estimate the loss in employment for teens and youths. As noted above, Canadian research finds that the employment effect for those workers directly affected range from -0.45 to -2.0, meaning a 10% increase in the minimum wage would likely decrease employment by 4.5 to 20.0%. Increasing British Columbia's minimum wage from $8 to $10 per hour represents a 25% increase for those earning the minimum wage and an average increase of 12.5% for workers earning between $8 and $10 per hour. Therefore, the average wage increase for all 158,800 young BC workers either earning the current minimum wage or earning between $8 and $10 per hour is 15.3%. This 15.3% increase in the minimum wage would be associated with a 6.9% to 30.5% loss in employment for teens and youths directly affected, equal to a loss of 10,898 to 48,434 jobs for these workers.

The employment effect for all teen and youth workers ranges from -0.3 to -0.6, meaning that a 10% increase in the minimum wage would decrease employment by 3.0% to 6.0%. Using estimates of the employment effect described above, a 25.0% increase in the minimum wage would be associated with a 7.5% to 15.0% loss in employment for teens and youths, equal to a loss of about 25,100 to 52,200 jobs. Thus, the overall range of employment loss expected from increasing British Columbia's minimum wage to $10 per hour is 10,898 to 52,200 jobs.

The bottom line is that while increasing the minimum wage to $10 per hour may be well intentioned, it will have a profound negative effect on those currently earning the minimum wage, and will have almost no effect on those in greatest need. If the government wishes to raise the incomes of and improve economic opportunities for British Columbia's working poor, it would be wise to steer clear of increasing the minimum wage.

Introduction

British Columbia has a long history with minimum wage legislation. Along with Manitoba, British Columbia was the first province in Canada to introduce minimum wage laws in 1918 (McCallum, 1986). Since then, changes to minimum wages have been the subject of considerable attention and debate. The controversy surrounding minimum wages arises from the tension between well-intentioned efforts to increase the incomes of lower-income workers and the significant negative economic costs associated with increasing minimum wages. This controversy is also fuelled by a general misunderstanding of what kinds of workers actually earn the minimum wage.

The purpose of this study is to provide British Columbians, and indeed all Canadians, with an up-to-date account of these realities and other economic costs of the minimum wage. The study also aims to empirically assess the employment losses associated with increasing the minimum wage in British Columbia. Together, these analyses will help inform the public and policy makers about the impacts of increasing minimum wages.

Organization

The first section defines minimum wages and compares British Columbia's minimum wage to those in other Canadian provinces and US states. Section II examines the number, age, and living situation of minimum wage workers in British Columbia. Section III examines the economic effects of higher minimum wages on employment, on-the-job training, education decisions, and poverty. The fourth section provides an estimate of the employment loss associated with increasing the minimum wage in British Columbia, based on existing scholarly research. The final section summarizes this study's findings and offers some conclusions.

I. Defining and measuring minimum wages

Minimum wage laws establish the lowest level of hourly pay that employers must pay workers. This wage rate, which is set by a government body (i.e., the Ministry of Labour and Citizens' Services in British Columbia), tends to be increased periodically. [2]

There are two main ways of comparing minimum wages across jurisdictions. The first and most common way is comparing statutory rates—the hourly rate established by government. The other way is to compare minimum wage income relative to average earnings within a jurisdiction. This study uses both measures to compare minimum wages in British Columbia with those in the other nine Canadian provinces and 50 US states.

Statutory minimum wage rates

Table 1 shows the general minimum wage rates for British Columbia and the other Canadian provinces for 2008. British Columbia has the 5th highest minimum wage in Canada at $8.00 per hour. Ontario has the highest minimum wage at $8.56, followed closely by Saskatchewan at $8.48 and Manitoba at $8.38. [3] Neighbouring Alberta has a minimum wage rate of $8.30 per hour while New Brunswick has the lowest minimum wage rate in Canada at $7.63 per hour. [4]

2 While minimum wage rates are broadly designed to create a base level of pay for all workers, there are exemptions for certain types of workers and/or minimum wage rates for certain sectors. For example, British Columbia has a rather large minimum wage exemption for inexperienced workers. New entrants to the labour force can be paid $6.00 per hour up until they have worked 500 hours, after which they have to be paid the general minimum wage ($8.00 per hour). British Columbia also has specific minimum wage rates for live-in home support workers and resident caretakers of apartment buildings, as well as piece rates for harvesting certain crops. For details, see British Columbia (2008).

3 Note that these rates are pro-rated averages of the legislated minimum wage rates during 2008. Ontario, for example, changed its minimum wage from $8.00 to $8.75 on March 31, 2008, resulting in an average rate of $8.56 for 2008 (see notes in table 1 for details).

4 Four provinces have scheduled increases in their minimum wages in 2009: Newfoundland & Labrador will increase its minimum wage to $8.50 on January 1 and again to $9.00 on July 1; Nova Scotia will increase its minimum wage to $8.60 on April 1; Ontario will increase its minimum wage to $9.50 on March 31; and, Saskatchewan will increase its minimum wage to $9.25 on May 1 (Human Resources and Social Development Canada, 2008).

Table 1: Statutory minimum wage rates in Canada, 2008

	Minimum wage (per hour)
New Brunswick	$7.63
Prince Edward Island	$7.73
Newfoundland & Labrador	$7.88
Nova Scotia	$7.93
British Columbia	**$8.00**
Alberta	$8.30
Quebec	$8.33
Manitoba	$8.38
Saskatchewan	$8.48
Ontario	$8.56

Notes:

1 Alberta's minimum wage rate changed from $8.00 to $8.40 as of April 1, 2008; the minimum wage presented is a pro-rated average.

2 Manitoba's minimum wage rate changed from $8.00 to $8.50 as of April 1, 2008; the minimum wage presented is a pro-rated average.

3 New Brunswick's minimum wage rate changed from $7.25 to $7.75 as of March 31, 2008; the minimum wage presented is a pro-rated average.

4 Newfoundland & Labrador's minimum wage rate changed from $7.50 to $8.00 as of April 1, 2008; the minimum wage presented is a pro-rated average.

5 Nova Scotia's minimum wage rate changed from $7.60 to $8.10 as of May 1, 2008; the minimum wage presented is a pro-rated average.

6 Ontario's minimum wage rate changed from $8.00 to $8.75 as of March 31, 2008; the minimum wage rate presented is a pro-rated average.

7 Prince Edward Island's minimum wage rate changed from $7.50 to $7.75 as of May 1, 2008, and changed to $8.00 as of October 1, 2008; the minimum wage presented is a pro-rated average.

8 Quebec's minimum wage rate changed from $8.00 to $8.50 as of May 1, 2008; the minimum wage presented is a pro-rated average.

9 Saskatchewan's minimum wage rate changed from $8.25 to $8.60 as of May 1, 2008; the minimum wage rate presented is a pro-rated average.

Source: Human Resources and Social Development Canada, 2008; calculations by authors.

By comparison, in the United States, the federal minimum wage effective July 24, 2008, is US$6.55 per hour. Prior to the July increase, the federal minimum wage rate was $5.85 per hour, resulting in an average rate of $6.16 for 2008. [5] The US federal minimum wage rate will be increased again on July 24, 2009, to $7.25. The US federal minimum wage covers workers who are

5 International comparisons need to be used with caution as there are significant differences in how other countries legislate minimum wages. For example, some countries (like Canada) let subnational jurisdictions set minimum wages while others legislate national minimum wages.

employed by government agencies or by firms with at least $500,000 revenue and/or are engaged in interstate commerce. [6] However, states are free to set a higher minimum wage, which typically applies to the same group of workers covered under federal law. [7] As of July 24, 2008, there were 14 states [8] with the same minimum wage as the federal government; 24 states [9] with a minimum wage higher than the federal level (Washington, at $8.07 per hour, and California and Massachusetts, at $8.00 per hour, have the highest minimum wages); and seven states [10] with minimum wages below the federal level (ranging from $2.65 in Kansas to $6.50 in New Mexico and Wisconsin). The remaining five states [11] have no minimum wage laws. In these states, the federal minimum applies to workers who are covered under the federal legislation.

Minimum wage as a percentage of per-worker wages and salaries

An important element is missed when minimum wages are compared only in terms of statutory rates. In order to measure how high minimum wages are in the context of each jurisdiction's ability to pay minimum wages, the income generated by earning the minimum wage needs to be compared to average earnings. Minimum wage as a percentage of average earnings can be obtained by calculating the annual income earned by someone working full-time for minimum wage as a ratio of average annual wages and salaries (i.e., earnings) per worker.

Figure 1 shows minimum wages as a percentage of wages and salaries per worker for the 10 Canadian provinces and 50 US states for 2007. British Columbia's minimum wage as a percentage of earnings per worker was relatively high (37.8%), making BC 54th out of the 10 Canadian provinces and 50 US states, the vast majority of which had lower minimum wages. British Columbia's minimum wage was about 50% larger than that in neighbouring Alberta (25.1%), and was similar to wages in New Brunswick (38.5%)

6 The US Department of Labor estimates that the federal minimum wage covered approximately 130 million workers in 2007 (United States Department of Labor, 2007).

7 See United States Department of Labor (2008) for a detailed breakdown of worker coverage by state.

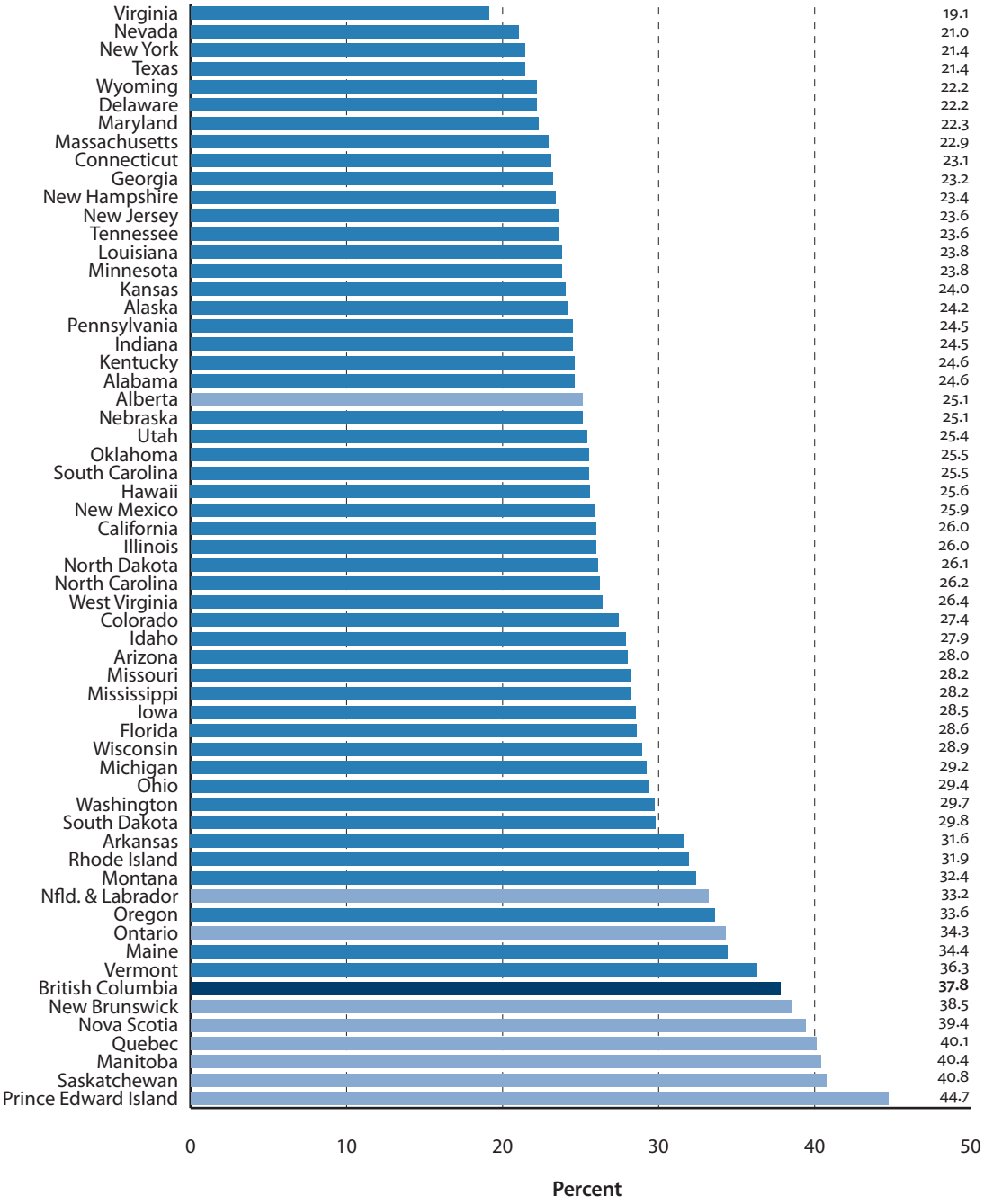
8 Idaho, Indiana, Kentucky, Maryland, Montana, Nebraska, New Hampshire, North Carolina, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Virginia.

9 Alaska, Arizona, California, Colorado, Connecticut, Delaware, Florida, Hawaii, Illinois, Iowa, Maine, Massachusetts, Michigan, Missouri, Nevada, New Jersey, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont, Washington, and West Virginia,

10 Arkansas, Georgia, Kansas, Minnesota, New Mexico, Wisconsin, and Wyoming.

11 Alabama, Louisiana, Mississippi, South Carolina, and Tennessee.

Figure 1: Minimum wages as a percentage of per-worker wages and salaries, 2007



Note: Data for wages in the United States are available up to 2006; data for 2007 were estimated by applying an average growth rate of wages and salaries from 2004 to 2006 to 2006 data.

Sources: Human Resources and Social Development Canada, 2008; Statistics Canada, 2008c; US Department of Labor, 2008; US Department of Labor, Bureau of Labor Statistics, 2008; calculations by authors.

and Nova Scotia (39.4%) (figure 1). [12] Put differently, a resident of British Columbia earning the minimum wage could earn about two fifths of the average per-worker earnings of the province. A resident earning minimum wage in Alberta, on the other hand, could earn about one quarter of the province's average per-worker earnings.

Conclusion

British Columbia maintains one of the highest minimum wage rates in Canada and the United States. In 2008, British Columbia's statutory minimum wage rate was $8.00 per hour, the fifth highest in Canada. British Columbia's minimum wage as a percentage of earnings per worker for 2007 was 37.8%, making BC 54th out of the 10 Canadian provinces and 50 US states, the vast majority of which had lower minimum wages.

12 British Columbia's minimum wage is also high relative to average wages and salaries over the last few years. When a sensitivity analysis was completed using a three-year average (2005-2007) and a five-year average (2003-2007), the overall rankings were similar to rankings for 2007, and British Columbia ranked 56th and 59th, respectively.

II. Profile of minimum wage earners in British Columbia

To analyze the impact of minimum wage increases, it is critical to understand who earns the minimum wage. This section presents the number, age, and living situation of minimum wage earners in British Columbia.

Number and age distribution of minimum wage workers

Table 2 presents the number of workers earning minimum wage by age in British Columbia in 2007. Overall, there were 62,600 workers earning the minimum wage in British Columbia in 2007, representing 3.4% of total employment. This means that the overwhelming majority of workers in British Columbia earn more than the minimum wage.

The highest percentages of minimum wage workers were found among the two youngest age groups. In 2007, 18.8% of workers aged 15 to 19 and 4.6% of workers aged 20 to 24 worked for minimum wage. In comparison, only 2.3% of those aged 25 to 34 earned minimum wage; 1.5% of those aged 35 to 44; 1.4% of those aged 45 to 54; and 2.5% of those over 55. Statistics Canada reports that the higher incidence of minimum wage workers among seniors "reflects some of the low-wage occupations in which working seniors tend to be concentrated" (2006: 14). [13]

Put differently, 40.3% (25,200) of minimum wage earners were between the ages of 15 to 19. Another 15.7% (9,800) were aged 20 to 24. Combined, young workers (those aged 15 to 24) represented 55.9% of all British Columbians earning the minimum wage.

British Columbia's age distribution of minimum wage earners was similar to the national average in 2007 (see Appendix A for a more detailed breakdown of the ages of minimum wage earners across Canada). Across Canada, 45.2% of minimum wage earners are between the ages of 15 to 19, while another 17.2% are aged 20 to 24. Combined, 62.4% of minimum wage earners across Canada are between the ages 15 to 24.

13 These include retail salespersons and clerks; general office clerks; janitors, caretakers, and building superintendents; babysitters, nannies, and parent's helpers; and light-duty cleaners.

Table 2: Number and percentage of workers earning minimum wage by age in British Columbia, 2007

Age group	Total employment	Minimum wage earners	Percentage of workers earning minimum wage	Proportion of minimum wage earners
15-19	134,100	25,200	18.8%	40.3%
20-24	213,900	9,800	4.6%	15.7%
25-34	401,600	9,200	2.3%	14.7%
35-44	429,700	6,600	1.5%	10.5%
45-54	424,600	5,800	1.4%	9.3%
55+	237,100	6,000	2.5%	9.6%
All ages	1,841,000	62,600	3.4%	100.0%

Source: Statistics Canada, 2008a; calculations by authors.

Living situation of minimum wage workers

Table 3 shows the breakdown of BC workers earning minimum wage by their living situation in 2007. There are four general categories: member of a couple, single parent, child or relative living with family, and unattached individual.

Examining the proportion of minimum wage workers by living situation reveals that most of these workers live at home with their families. In 2007, 34,200, or 54.6%, of all 62,600 minimum wage workers were living at home with family. Of these workers, over half (58.2%) were aged 15 to 24 and attending school. The number of minimum wage earners living in other living situations was comparatively small. A little more than one quarter of minimum wage workers were members of a couple. Of the 17,900 who were members of a couple, 14,600 (81.6%) lived in a household with an employed spouse, most of whom earned more than the minimum wage. Deborah Sussman and Martin Tabi (2004) of Statistics Canada suggest that this may reflect the number of women who supplement family income with part-time work during child-rearing years. A further 12.5% were unattached individuals. Only 4.3% of minimum wage workers were classified as single parents.

British Columbia's proportion of minimum wage earners living at home with family is generally the same as the proportion for Canada as a whole. In 2007, 59.7% of all minimum wage earners across Canada lived at home with family (see Appendix A for a more detailed breakdown of the living situations of minimum wage earners across Canada). Of these, 56.6% were between the ages of 15 to 24 and were attending school. The distribution of minimum wage earners across other living situations was also similar: 24.4% were members of a couple, 10.9% were unattached individuals, and 5.1% were single parents.

Table 3: Workers earning minimum wage by family structure in British Columbia, 2007

	Total employment	Workers earning minimum wage	Proportion of minimum wage earners
Total persons	**1,841,000**	**62,600**	**100.0%**
Member of a couple	**1,014,900**	**17,900**	**28.6%**
Spouse not employed	193,400	3,300	5.3%
Spouse employed	821,500	14,600	23.3%
Spouse earning minimum wage or less	11,300	0	0.0%
Spouse earning more than minimum wage	675,000	10,800	17.3%
Spouse self-employed	135,200	3,200	5.1%
Head of family, no spouse present	**117,200**	**2,700**	**4.3%**
Son, daughter, or other relative living with family	**360,500**	**34,200**	**54.6%**
15 to 19 years, in school	66,600	16,900	27.0%
15 to 19 years, not in school	53,700	6,900	11.0%
20 to 24 years, in school	32,300	3,000	4.8%
20 to 24 years, not in school	78,700	3,500	5.6%
25 years or over, in school	8,200	0	0.0%
25 years or over, not in school	121,100	3,800	6.1%
Unattached individual	**348,500**	**7,800**	**12.5%**

Note: A value of zero does not necessarily mean that there are no individuals earning the minimum wage. Statistics Canada explains that some data points are reported within a margin of error for confidentiality reasons. For British Columbia, a value of zero could mean that less than 1,500 individuals are earning the minimum wage.

Source: Statistics Canada, 2008a; personal communication with Fanita Tjiong of Statistics Canada, April 18, 2008; calculations by authors.

Conclusion

In British Columbia, 62,600 workers earned the minimum wage in 2007, representing 3.4% of total employment. Of those earning the minimum wage, well over half (55.9%) were young workers between the ages of 15 and 24. Further, the majority of minimum wage workers were living at home with family; most of these workers were also attending school. In addition, many of the remaining individuals earning minimum wage were adults who were likely supplementing their family income with part-time work during child-rearing years or after retirement. In general, the typical minimum wage worker in British Columbia—and across Canada—is someone who is young and living at home.

III. Economic effects of increasing minimum wages

While the creation of minimum wages may be well intentioned, the reality is that increasing the minimum wage will have numerous adverse effects. In fact, a large and growing body of research from Canada and around the world demonstrates that high and increasing minimum wages negatively affect employment, aspects of compensation such as training and fringe benefits, and education decisions. [14] Minimum wages have also been shown to have no appreciable effect on alleviating poverty.

Impact of increases in minimum wages on employment

One of the most serious consequences of increasing minimum wages is reduced employment opportunities for less skilled and/or young workers. This occurs as employers react to higher wages and labour costs by hiring fewer workers, reducing the number of hours employees work, and relying more heavily on other inputs such as machinery and equipment to keep their businesses going. [15]

It is important to note, however, that employers generally react to higher minimum wages by offering fewer employment opportunities in the future, rather than by terminating those who are already employed (Gunderson, 2007). [16] This is because it takes workers and employers time to adjust to

14 This section focuses on empirical research. There is, however, a large number of theoretical studies that explain in detail how minimum wages impact the labour market. For summaries of the theoretical research, see Law (1998) and West and McKee (1980).

15 Neumark (2006) explains that in addition to this "substitution effect," higher minimum wages can also reduce employment through a "scale effect." Higher minimum wages mean that the cost to employers of producing their good or service has increased, which translates into higher prices for consumers. Consumers, wanting fewer goods or services at the higher price, reduce their consumption. As a result, the overall "scale" or operation of the employer must be reduced, creating less of a need for workers.

16 Several studies report a significant lag between minimum wage increases and the resulting employment effects. That is, they find larger long-term employment elasticities than short-term elasticities. For Canadian studies on the subject, see Baker et al. (1999), Campolieti et al. (2005b), and Campolieti et al. (2006). For US studies that find similar results, see Partridge and Partridge (1999), Burkhauser et al. (2000), and Neumark (2006).

the new higher wages. Alternatively, employers may react by moving towards more capital-intensive methods of producing goods and services, or towards higher-skilled labour, both longer-term adjustments (Neumark, 2006).

Indeed, a large body of empirical research from Canada and around the world shows high minimum wages have a significant negative effect on the employment opportunities of those who are most likely to earn the minimum wage. [17] In this section, we will review the most important and recent studies to provide readers with an overview and to present the key conclusions found in the literature. [18]

Canadian evidence

There have been a number of studies focusing on how minimum wages have impacted employment in Canada. An important study by West and McKee (1980) was one of the first major Canadian studies to comprehensively review research on the effects of minimum wages. [19] The authors reviewed 20 empirical studies (seven of which were Canadian) and concluded, "From our survey of the empirical work, to date, we reach the strong conclusion that there is no convincing evidence to refute the prediction that minimum wages cause reductions of employment" (1980: 99).

One of the most important and recent Canadian studies was completed by University of Toronto professor Morley Gunderson for the Federal Labour Standards Review Commission. This 2005 report reviewed 23 Canadian studies on the effects of minimum wages. "Overall," Gunderson reported, "it appears that the Canadian studies tend to find adverse employment effects that are at least as large and likely larger than US studies" (2005: 44). Furthermore, Gunderson concluded that the Canadian studies, especially the

17 It is important to understand the method by which most researchers measure the impact on employment resulting from a change to the minimum wage. The large majority of studies measure the impact of minimum wages on employment by estimating what economists call "employment elasticity." In this case, elasticity refers to a measure of how sensitive employment is to changes in the minimum wage. More specifically, it is calculated as the proportionate change in employment divided by the proportionate change in wages caused by an increase in the minimum wage. It is commonly expressed as a percentage change and can be positive or negative. For instance, an employment elasticity of -0.5 implies that a 10% increase in the minimum wage is associated with a 5% reduction in employment.

18 In fact, there are hundreds of studies that analyze the effects of minimum wages. While this research has provided overwhelming empirical evidence that minimum wages have negative effects, many of the key findings are repetitive.

19 There were earlier Canadian studies examining the economic effects of minimum wages, but they were narrower in scope. For examples, see Cousineau (1979), Fortin (1979), Maki (1979), Swidinsky (1980), and Schaafsma and Walsh (1983).

most credible and recent, show that a 10% increase in the minimum wage leads to a 3% to 6% reduction in the employment of teenagers.

A more in-depth assessment of the Canadian research corroborates the conclusions reached by Gunderson (2005) and the earlier work by West and McKee (1980). Table 4 (pp. 18–19) summarizes the empirical results of 14 Canadian studies that focus specifically on the employment effects associated with increases in the minimum wage. [20] The studies span almost 30 years and concentrate for the most part on the employment effects for teenagers and young adults.

These 14 studies can be divided into two groups: (1) 12 studies that examine the impact of increasing the minimum wage on large groups of people who typically earn the minimum wage (i.e., teens and young adults); and, (2) three studies that examine the employment effects on workers who are most directly affected, that is, workers earning a wage that falls between the old minimum wage and the new minimum wage after a policy change. Analyzing these two groups of studies separately is important because the latter typically report much more significant employment effects.

The first group of studies examines employment effects for more general populations such as teenagers or young adults. [21] While both older and newer Canadian studies report negative employment effects, University of Toronto professor Morley Gunderson explains why there may be good reason to concentrate on more recent results: "More recent studies using different and more sophisticated methodologies as well as more recent data find larger adverse employment effects at the higher end and beyond the consensus range, especially in the longer run. The elasticities typically range from -0.3 to -0.6 for teens (slightly lower for young adults) … [The] fact they use different data sets and methodologies suggest that these results are robust" (Gunderson, 2005: 44).

Examining the Canadian research from the past decade confirms Gunderson's conclusion. For example, Baker et al. (1999) examined the employment effects of minimum wage legislation in Canada over the period of 1975 to 1993. The authors found that despite differences across provincial labour markets, a 10% increase in the minimum wage was associated with roughly a 2.5% decrease in teen employment. In a follow-up study, Baker (2005) replicated Baker et al. (1999) using new data for 1983 to 2000. He

20 Gunderson's (2005) review of 23 Canadian studies includes studies that examine other effects of the minimum wage, such as wage levels, wage distribution, relationship with natural rate of unemployment, spillover effects, and so on.

21 These 12 studies include Cousineau (1979), Fortin (1979), Maki (1979), Swidinsky (1980), Schaafsma and Walsh (1983), McKee and West (1984), Mercier (1985), Cousineau et al. (1992), Baker et al. (1999), Baker (2005), Campolieti et al. (2005a), and Campolieti (2006).

Table 4: Summary of empirical results of Canadian studies examining minimum wage employment effect

Study	Jurisdiction and years covered	Employment	Empirical results
Cousineau (1979)	Quebec; 1968-1977	Teenage employment and female employment	10% increase in minimum wage (relative to average hourly wage in manufacturing) increases unemployment rate by 2.9 percentage points for teenagers, and 1.7 percentage points for females.
Fortin (1979)	Quebec; 1978	Quebec employment	10% increase in ratio of minimum to average industry wage increases unemployment rate by: Young males (15-24): 2.5 to 3.5 percentage points Young females (15-24): 1.5 to 3.0 percentage points Adult females (25+): 0.4 to 0.7 percentage points Overall unemployment rate: 0.6 to 1.0 percentage points
Maki (1979)	Across provinces; 1970-1977	Provincial employment	10% increase in the minimum wage (relative to average wage) increases unemployment rate by 5.6%.
Swidinsky (1980)	Across provinces; 1956-1975	Teenagers (14-19)	10% increase in the minimum wage index (statutory minimum wage rate divided by average hourly earnings in manufacturing, adjusted for the proportion of the non-agricultural labour force covered by the minimum wage) decreases employment to population ratio by 1.0% for males, 2.7% for females, and 1.7% overall.
Schaafsma and Walsh (1983)	Across provinces; 1975-1979	Six categories: males and females in three age groups (15-19, 20-24, and 25+)	10% increase in the minimum wage decreases employment by: Males 15-19: 6.1% — Females 15-19: 6.0% Males 20-24: 2.9% — Females 20-24: 1.8% Males 25+: 1.5% — Females 25+: 0.6%
McKee and West (1984)	Across provinces; 1975-1981	Total working population, males and females in eight provinces (NL and PEI excluded because of small sample size)	10% increase in the minimum wage decreases the ratio of part-time to full-time employment for 12 of the 16 gender/province groups. The most statistically significant results revealed that a 10% increase in the minimum wage decreases the ratio of part-time to full-time employment by 2.96% to 14.86%.
Mercier (1985)	Quebec; 1966-1981	Four age/sex categories: males 14-19; males 20-24; females 14-19; females 20-24	10% increase in the minimum wage decreases employment to population ratio by: Males (14)15-19: 0.05% to 0.234% Males 20-24: 0% to 0.1% Females (14)15-19: 0.1% to 0.28% Females 20-24: 0% to 0.18%

Cousineau et al. (1992)	Ontario; 1968-1990	Youth (16-24) and females	10% increase in ratio of minimum wage to average wage increases unemployment rate by 1.53 percentage points for youth (16-24), and 1.40 percentage points for females. A 13 percentage point increase in the ratio of minimum wage to average industrial wage (a policy proposal at time of study) would result in an employment loss of 43,000 jobs for women and 18,000 jobs for youth in Ontario.
Baker et al. (1999)	Across provinces; 1975-1993	Teenagers (15-19)	10% increase in the minimum wage decreases employment to population ratio by 2.4% to 4.4%.
Yuen (2003)	Across provinces; 1988-1990	Teenagers (16-19) and young adults (20-24)	10% increase in the minimum wage (relative to average wage) decreases employment by: Permanent low-wage teen workers: 8.3% Permanent low-wage young adult workers: 11.9% Campolieti et al. (2005a) calculated the elasticity for the teenage low-wage group (i.e., those affected) to be -1.5, meaning that a 10% increase in the minimum wage would decrease employment in this group by 15%.
Baker (2005)	Across provinces; 1983-2000	Teenagers (15-19) and young adults (20-24)	10% increase in ratio of minimum wage to average wage decreases employment to population ratio by 3.23% to 5.72% for teenagers, and by 0.92% to 1.95% for young adults.
Campolieti et al. (2005a)	Across provinces; 1993-1999	Teenagers (16-19)	10% increase in ratio of minimum wage to average wage would be associated with a 25% reduction in the employment of teenagers—the low-wage workers most likely to be affected by minimum wage increases. 10% increase in the minimum wage decreases total employment in the study by 5%.
Campolieti et al. (2005b)	Across provinces; 1993-1999	Youths (16-24)	10% increase in the minimum wage decreases employment among youth (measured as the transition from employment to non-employment) in the low-wage group (i.e., those directly affected) by 10% to 20%, depending on the empirical methodology. 10% increase in the minimum wage ratio decreases employment (measured as the transition from employment to non-employment) among youths by about 3.0% to 5.0%, depending on the empirical methodology.
Campolieti et al. (2006)	Across provinces; 1981-1997	Teenagers (16-19), youths (20-24), and combined (16-24)	10% increase in minimum wage ratio decreases employment to population ratio by: Teenagers (16-19): 2.5% to 4.2% Youths (20-24): 1.4% to 2.7% Combined (16-24): 2.6% to 4.4% Combined (16-24), affected group: 4.5%

found that a 10% increase in the minimum wage decreased teen employment (those aged 15 to 19) by 4.8% to 5.7% and youth employment (those aged 20 to 24) by 1.7 to 2.0%.

Another important and recent study by Campolieti et al. (2005a), using Statistics Canada data from 1993 to 1999, examined how the 24 minimum wage changes in Canada during that period impacted youth (aged 16 to 19) education and employment outcomes. The authors estimated that a 10% increase in the minimum wage would decrease overall youth employment by 5%. In a follow-up study in 2006, Campolieti et al. found that a 10% increase in the minimum wage was associated with a 1.7% to 4.4% reduction in the employment of youth (aged 16 to 24).

The second group of studies specify employment effects for workers who are most directly affected (i.e., workers who currently earn between the old and new minimum wage). [22] A study by Yuen (2003) tracked the employment effects for a group of workers from 1988 to 1990. He specifically focused on workers aged 16 to 24 who would be "at risk" of a policy change—that is, workers whose wages fall in between the old and new minimum wage. He further subdivided this group into "permanent" workers (who account for more than three quarters of low-wage employment) and "transitory" workers (who account for less than three quarters of low-wage employment). There was virtually no effect for the transitory workers, but there was a large effect for permanent workers. Yuen found that an 8.4% increase in the minimum wage leads to a 7% decrease in teen employment and a 10% reduction for young adults. Put differently, Yuen's results indicate that a 10% increase in the minimum wage leads to an 8.3% decrease in teen employment and a 11.9% reduction for young adults. Based on these results, Campolieti et al. (2005a) calculated an implied low-wage employment effect of -1.5 for teens. This means that a 10.0% increase in the minimum wage decreases employment for this specific group by 15.0%.

Campolieti et al. (2005b) adopted a similar empirical model as Yuen (2003), examining the minimum wage employment effect for those affected (workers whose wages fall between the old and new minimum wage) and a control group (low-wage workers who did not experience a minimum wage change, but who likely would have been affected if one had occurred). Their key finding is that a 10% increase in the minimum wage would decrease employment for directly affected workers by 10% to 20%. The authors also specifically measured the effect of British Columbia's two 50-cent increases in 1994-1995. They found that the employment effects were about twice the magnitude of their main results (see section IV for a more detailed discussion

22 These studies include Yuen (2003), Campolieti et al. (2005b), and Campolieti et al. (2006).

of the employment effects associated with large and immediate minimum wage changes versus small and incremental changes).

Campolieti et al. (2006) examined 71 changes in the minimum wage across the provinces from 1981 to 1997 and found large adverse employment effects for workers who were directly affected. Specifically, they found that a 10% increase in the minimum decreased employment for young workers (aged 16 to 24) who were directly affected by 4.5%.

Overall, estimates of the employment effects range from 0% to almost 25%. However, it is important to acknowledge the difference between the employment effects that apply to specific groups of workers and employment effects that apply to employment more generally. For the former, employment effects range from about -0.45 to -2.0, meaning a 10% increase in the minimum wage could decrease employment for those workers most directly affected by 4.5% to 20.0%. For the latter group, most of the estimated employment effects range from about -0.1 to -0.6. However, similar to Gunderson (2005, 2007), a reasonable range that reflects the most up-to-date research using more sophisticated statistical techniques is a range of -0.3 to -0.6. This means that a 10% increase in the minimum wage could decrease employment for all teens and young workers by about 3% to 6%.

International evidence

A number of studies examining the impact of minimum wages have taken an international approach. An important 1998 study by the Organisation for Economic Co-operation and Development (OECD) examined the effect of increasing the minimum wage on employment in nine industrialized countries over the period of 1975 to 1996. [23] The OECD found that the impact of increasing the minimum wage on employment is mostly negative among younger cohorts. Specifically, they found that a 10% increase in the minimum wage rate reduces teenage employment by up to 3% to 6%. [24]

David Neumark and William Wascher (2004) examined the employment effects of minimum wages in 17 OECD countries over the period of 1975 to 2000. They found that a 10% increase in the minimum wage was associated with a 2.2% reduction in the employment of youth aged 15 to 24.

23 The countries analyzed included Belgium, Canada, France, Greece, Japan, the Netherlands, Portugal, Spain, and the United States.

24 The authors conducted two cross-country analyses: one including Spain and Portugal and another excluding them. The results when Spain and Portugal were included indicate that the reduction in employment ranges from 0% to 2%. However, the results were generally less statistically significant than they were for the results excluding the two countries. The authors report that Spain and Portugal were separated for part of the analysis because data were not available for constructing the relevant minimum wage ratios to compare with other countries.

A more recent study by Olalekan Edagbami came to a similar conclusion. The author conducted a review of 22 studies from around the world and concluded that "the picture that easily emerges from the wide range of evidence contemplated in this survey … is that the minimum wage is generally harmful to teenage and, to a large extent, youth employment" (2006: 31).

In one of the most comprehensive reviews of the effects of minimum wages, renowned minimum wage experts University of California Professor David Neumark and US Federal Reserve Board economist Dr. William Wascher (Neumark and Wascher, 2007a) reviewed over 100 studies covering 20 countries over the past 15 years. The authors found that the "overwhelming majority" of studies, especially the most credible, consistently show that minimum wage increases result in decreases in employment. Specifically, the authors found that 28 of the 33 most credible studies point to negative employment effects.

There have also been a number of important studies focusing exclusively on minimum wages in the United States. Examining American studies is important given the similarities between the Canadian and US labour markets, and the fact that US-based empirical studies on minimum wages have a long history and are wide in scope. For example, a seminal study by Brown et al. (1982) reviewed 25 empirical studies on the employment effects of minimum wages in the United States. The authors found that the general consensus of the research is that a 10% increase in the minimum wage reduces employment among teenagers (aged 15 to 19) by 1% to 3%. [25] Employment rates among young adults (aged 20 to 24) also decline when minimum wages

25 It should be acknowledged there are some studies that have found no effects or even positive effects on employment; however, these are a small minority. Perhaps the most notable studies within this minority are those by economists David Card and Alan Krueger (1994, 1995). The authors studied employment in fast-food restaurants in New Jersey and Pennsylvania and found that employment actually increased in some areas after an increase in the minimum wage. However, the authors' research has been challenged on theoretical grounds, and more importantly, their empirical work has received serious criticism, calling into question the validity of their results. For example, in a review of Card and Krueger's findings, Law (1998) explained that Hammermesh (1995) found that the timing of Card and Krueger's survey approach to collecting data biased their results. In addition, Welch (1995) explained that because Card and Krueger only focused on select fast-food restaurants, they failed to measure the overall impact on employment in the region associated with the minimum wage increase. Perhaps most importantly, a study by David Neumark and William Wascher (2000) in the *American Economic Review* replicated Card and Krueger's study using actual payroll data and found two important results: (1) Card and Krueger's survey data suffered from a rather severe measurement error regarding employment changes; and, (2) instead of positive effects on employment, the authors found large negative employment effects for the same areas studied by Card and Krueger.

are increased, but these declines were found to be smaller than those among teenagers.

Several studies buttress Brown et al.'s findings. Burkhauser et al. (2000), using employment data from 1979 to 1997, found that a 10% increase in the minimum wage leads to a 3% to 6% reduction in teen employment. Similarly, Williams and Mills (2001), using employment data covering 1954 to 1993, found that a 10% increase in the minimum wage leads to a 3% to 5% reduction in teen employment.

A study by Vedder and Gallaway (2002) found that when the minimum wage is increased, employers react not only by reducing employment, but also by reducing the hours worked by those currently employed. Using US employment data from 1954 to 1999, the authors found that a $1 increase in the minimum wage was associated with a decrease in hours worked of about 0.2% to 0.3%. Combining this finding with estimates of employment losses, the authors estimated that a $1 increase in the minimum wage in 2000 would result in a total reduction in hours of about 0.7%. [26]

In his review of the American research on minimum wages, Gunderson (2007) concluded that, overall, a 10% minimum wage hike could reduce employment by 0% to 3%, and sometimes up to 6%, in the United States.

Impact of minimum wage increases on benefits and training

The adverse impact of minimum wage increases extends beyond decreases in employment. As minimum wages increase, employers often respond to higher labour costs by reducing non-wage benefits such as fringe benefits and training. Decreasing on-the-job training is particularly problematic, given that research shows that this type of skills development is an important driver of young and less skilled workers making the transition to higher wages in the future (Even and MacPherson, 2003). [27] Even if minimum wage workers are fortunate enough to keep their jobs and maintain the number of hours worked, they may still not be better off if their benefits and training are reduced.

A number of empirical studies have examined the impact of increased minimum wages on worker benefits and on-the-job training. Wessels (1980) found that increases in the minimum wage in the United States during the

26 The authors also estimated that these lost hours—which would have been worked otherwise—were equal to $12 to $15 billion in lost income for workers.

27 See Hashimoto (1981) for a more in-depth discussion of the relationship between minimum wages, on-the-job training, and earnings.

1970s resulted in reduced spending on fringe benefits. [28] Likewise, studies by Leighton and Mincer (1981) and Hashimoto (1981) both found empirical evidence that higher minimum wages reduce training provided by employers.

More recently, Neumark and Wascher (2001), using data from 1983 to 1991, found that higher minimum wages lead to less training for workers. Specifically, they found that a 10% increase in the minimum wage for workers aged 20 to 24 reduced the proportion of minimum wage workers who received on-the-job training by 2 percentage points. In addition, the authors found that formal training—e.g., paid programs and schooling—decreased more than on-the-job training.

Baker (2005) examined the effect of minimum wage increases on training in Canada. The author found some evidence that higher minimum wages had a negative effect on on-the-job training, particularly for younger workers. Specifically, he found that increasing the minimum wage by 10% decreased training by 0% to 7.3% for workers aged 17 to 24. [29]

Impact of minimum wage increases on education

High minimum wages have also been associated with higher school dropout rates. When minimum wages increase, more young people leave school in search of employment.

Landon (1997) examined minimum wages and high-school enrollment rates for six Canadian provinces over the period of 1975 to 1989 and found that higher minimum wages have a significant and negative impact on school enrollment rates, especially for young males. Specifically, Landon found that a 50-cent increase in the average minimum wage causes a 0.7 percentage point decrease in the percentage of 16- and 17-year olds enrolled in school. For Ontario in 1989, he estimated that increasing the minimum wage by 50 cents would have caused enrollment to decline by 1,761 students.

Several empirical studies focusing on the United States have buttressed Landon's results. For example, a series of studies by Neumark and Wascher (1995a, 1995b, 1996, and 2003) have shown that minimum wage hikes encourage teenage workers to leave school in search of employment. Using data

28 Fringe benefits are broadly defined as a firm's non-wage expenditures on workers. More specifically, Wessels explains that these benefits "may include not only such items as life insurance and pension plans, but also items such as lower work load, steady employment, on-the-job training, and safe working conditions" (1980: 294).

29 The author calculated the training effect several ways and thus reported multiple results. While he found several results indicating that higher minimum wages have a negative impact on training, these results varied considerably in size and significance. Overall, he concluded that his empirical results were mixed.

from 1980 to 1998, Neumark and Wascher found that a 10% increase in the minimum wage in US states that allow students to drop out of school before they are 18 was associated with a 2.2% decrease in teenage school enrollment (Neumark and Wascher, 2003). [30] Their results were similar when different empirical methods were used (1995a, 1995b, 1996).

Similarly, Chaplin et al. (2003), using school enrollment statistics from 1989 to 1997, found that higher minimum wages led to more students dropping out of school in search of employment. Interestingly, this effect was most pronounced among students making the transition from grades 9 to 10. The authors reported that even a $1 increase in the minimum wage "could seem like an enormous incentive to leave high school" for this group, given their minimal knowledge regarding the labour market and the value of education for future earnings (2003: 20).

Impact of minimum wage increases on poverty: Understanding income mobility

Minimum wage advocates often argue that increasing the minimum wage will help alleviate poverty. The general idea behind this argument is that increasing the wages of low-income earners will help them in their struggle to purchase basic necessities and may even provide an incentive for some people receiving social assistance to search for work. While this line of thinking reflects good intentions, it is ultimately misguided and contradicted by the evidence.

As explained above, high minimum wages have numerous adverse effects on the labour market, the most important of which is the negative impact on employment. Moreover, research shows that negative employment effects can be even larger for workers with the fewest skills (Campolieti et al., 2006). [31] Furthermore, as noted in section II, most minimum wage earners are young and living at home, and often attending school. The reality is that

30 Understandably, there was almost no effect in states that require students to attend school until they are 18 years old. The authors reported that 17% of the state/year observations in the sample had a compulsory schooling age of 18 years old while the remaining 83% of the sample had a compulsory schooling age of 14 to 17 years old.

31 Campolieti et al. (2006) found that calculating employment effects using employment data for all young workers may have masked some of the impact minimum wage increases will have on young workers who are less skilled. In fact, the authors reported that "many of the elasticities [employment effects] for the less-skilled group are larger than the estimates in the baseline samples, so the minimum wages tend to have larger impact on the employment rates of less-skilled groups" (2006: 206). Given that most minimum wage earners are young and relatively less skilled, employment losses may be particularly large for those workers with the fewest skills.

fewer and fewer low-income workers are supporting a family while earning the minimum wage (Burkhauser and Sabia, 2005). [32] This indicates that minimum wages are poorly targeted to help those in need, and that they can actually make matters worse by reducing opportunities for work.

Another reason why minimum wages will not have an appreciable effect on poverty is that earning the minimum wage is largely a temporary experience. In fact, research shows there are very few workers who remain in minimum wage jobs year after year. While much of this research is US-based, given the similarities between the Canadian and US labour markets, similar results should be expected for Canada and, more specifically, for British Columbia.

An important study by Smith and Vavrichek (1992) examined the income mobility of minimum wage workers in the United States from 1983 to 1987 and found that most minimum wage workers were earning more than the minimum wage after just one year. In fact, 63% of workers who remained in the labour force earned more than the minimum wage after one year, with a typical wage gain of about 20%. [33] Importantly, the minority that did not experience wage gains were largely part-time workers and/or non-high school graduates. [34] The implication is that most workers earning the minimum wage experienced upward income mobility.

Long (1999) replicated the Smith and Vavrichek study using updated data from 1991 to 1995. He found that the majority (69.4%) of workers earning minimum wage earned more than the minimum wage after one year of work. After two years of work, 80.2% of these workers earned more than the minimum wage. Long noted that the few workers who remained in minimum wage jobs tended not to have a high school diploma or were elderly individuals.

Schiller (1994) examined the training and mobility experiences of young workers who entered the labour force between 1980 and 1987. He focused specifically on young workers who entered the labour force earning the minimum wage. He found that "[one] out of three minimum wage entrants consistently earns above minimum wages within one year of labor market entry. Sixty percent of the minimum-wage entrants had surpassed the minimum-wage threshold within two years. Only 15% of the 1980 entrants still had any minimum-wage experience after three years" (1994: 629). Schiller concluded that minimum wage workers "[are] not 'trapped' in a low-wage

32 Burkhauser and Sabia, examining American minimum wage workers, found that "fewer and fewer low-wage employees are supporting a family at the minimum wage, with only 9% of low-wage employees actually supporting a poor family" (2005: 3).

33 Approximately 19% of workers left the labour force during the time period.

34 See Carrington and Fallick (2001) for a more in-depth analysis of minimum wage workers who are less likely to experience wage gains.

orbit … their post-entry wage gains are substantial, both in the absolute and relative to non-minimum-wage entrants" (2004: 622).

More recently, a study by Even and MacPherson (2003) examined the mobility of minimum wage workers using the US Current Population Survey from 1979 to 1999. The authors corroborated earlier findings that earning the minimum wage is largely a temporary experience. Almost one half (47.2%) of minimum wage workers reported earning more than the minimum wage after one year.

This research shows that the vast majority of workers who earn the minimum wage today will earn more than the minimum wage in the near future. With experience and growing skills, these workers increase their productivity and thus garner higher wages. Increasing the minimum wage may actually make matters worse by retarding employment and training opportunities. This, coupled with the fact that most minimum wage earners are young and live at home, means that increasing the minimum wage will likely have no appreciable effect on poverty. [35] This conclusion has been reached by the majority of economists. As Gunderson reports, "There tends to be general agreement among economists that minimum wages are an exceedingly blunt instrument for curbing poverty" (2007: 19). [36]

35 While it is beyond the scope of this study to consider solutions to poverty in British Columbia, it is worthwhile to note the suggestive relationship between strong economic performance and the number of workers earning minimum wage. Consider the casual observation of economic growth rates and minimum wage incidence in the Canadian provinces. The three Canadian provinces with the lowest rates of minimum wage incidence—Alberta (1.2%), Saskatchewan (3.2%), and British Columbia (3.4%)—also have Canada's highest rates of economic growth. From 2003 to 2007, the average rate of real economic growth in these provinces was 4.7%, 2.9%, and 3.4%, respectively. Then consider Nova Scotia, Prince Edward Island, and Ontario, which from 2003 to 2007 had minimum wage incidence of 6.2%, 6.3%, and 6.8%, and economic growth rates of 1.4%, 2.2%, and 2.2%, respectively. Newfoundland & Labrador was an outlier, recording a minimum wage incidence of 7.4% while posting an average economic growth rate of 3.3%. However, Newfoundland & Labrador's relatively high average was driven by an uncharacteristically high growth rate in 2007; rates of real economic growth from 2003 to 2007 were: 5.9%, -1.8%, 0.3%, 3.3%, and 9.1% (Statistics Canada, 2008c). It is not unreasonable to conclude that strong economic performance may be the best remedy for low wages.

36 In 2007, the Employment Policies Institute conducted a survey of 280 labour economists in the United States and made a similar conclusion (see Fowler and Smith, 2007). About half (49%) believed that a minimum wage set to 150% of the current (federal) level would result in no change to poverty. Another 19% believed such an increase would actually increase poverty. Only a minority (32%) believed increasing the minimum wage would reduce poverty.

Conclusion

While minimum wages are implemented with the best of intentions, the economic reality is that they likely do much more harm than good. There is a vast amount of research from Canada and around the world that demonstrates convincingly that high minimum wages lead to lower employment levels, fewer benefits, less training, and lower school enrollment. Further, minimum wages have little or no effect on alleviating poverty and can even make problems worse for the workers minimum wages are intended to help.

IV. Employment effects of increasing BC's minimum wage to $10 per hour

Increasing BC's minimum wage from $8.00 to $10.00 per hour has recently been advocated by numerous groups in British Columbia and across Canada. [37] As the previous section explained, such a significant increase in the minimum wage would have numerous negative impacts, especially on the employment opportunities for the workers minimum wage increases are intended to help. This section calculates the employment effects of increasing the minimum wage in British Columbia to $10 per hour.

Profile of workers earning $10 per hour or less

To analyze the impact of increasing the minimum wage to $10 per hour, it is critical to understand who currently earns $10 per hour or less. This section presents a profile of workers who earned $10 per hour or less in British Columbia in 2007.

Number and age distribution of workers earning $10 per hour or less

Table 5 presents the number of workers earning $10 per hour or less by age in British Columbia in 2007. In 2007, there were 293,100 workers in British Columbia earning $10 per hour or less, representing 15.9% of total employment in the province; the vast majority of workers in British Columbia earned more than $10 per hour.

The prevalence of workers earning $10 per hour or less tended to be higher in younger age groups. In 2007, 72.0% of teenagers (aged 15 to 19) worked for $10 per hour or less, the highest percentage of any age group by a considerable margin. The next largest percentage of workers earning $10 per or less was

37 See for example, New Democratic Party of Canada (2008), Canadian Labour Congress (2008), British Columbia Federation of Labour (2008), and Murray and Mackenzie (2007) of the Canadian Centre for Policy Alternatives. There are several reasons why unions and union-financed organizations would benefit from an increase in the minimum wage. As Swidinsky and Wilton (1982) explain, unions benefit because (1) union wage structures are often pegged to market wage differentials; if the lower end of the wage scale increases, union wage differentials will increase proportionately; and, (2) low-wage (unskilled) labour is a substitute for high-wage (skilled) labour, which often characterizes union labour. For further reading on the political economy of minimum wages, see Neumark and Wascher (2008).

Table 5: Number and percentage of workers earning $10 per hour or less in British Columbia by age group, 2007

Age group	Total employment	Workers earning $10 per hour or less	Percentage of workers earning $10 per hour or less	Proportion of workers earning $10 per hour or less
15-19	134,100	96,600	72.0%	33.0%
20-24	213,900	62,200	29.1%	21.2%
25-34	401,600	42,400	10.6%	14.5%
35-44	429,700	35,200	8.2%	12.0%
45-54	424,600	31,000	7.3%	10.6%
55+	237,100	25,700	10.8%	8.8%
All Ages	1,841,000	293,100	15.9%	100.0%

Source: Statistics Canada, 2008a; calculations by authors.

found among workers aged 20 to 24 at 29.1%. Each subsequent age group had a lower percentage of workers earning $10 per hour or less, except the 55 and older age group (10.8%). As with minimum wage earners, this may reflect the number of retirees employed in part-time work to supplement their income.

Among workers earning $10 per hour or less, 33.0% were aged 15 to 19, and 21.2% were aged 20 to 24; combined, young people accounted for 54.2% of workers earning 10$ per hour or less. Thus, the data clearly show that earning low wages is for the most part a phenomenon experienced by British Columbia's youngest workers.

As with the profile of minimum wage workers, the general profile of workers earning $10 per hour or less in British Columbia is largely the same across Canada. In 2007, 31.7% of workers earning $10 per hour or less across Canada were between 15 and 19 years old; another 21.6% were between the ages of 20 and 24. Combined, these two groups accounted for 53.2% of workers earning $10 per hour or less (see Appendix A for a detailed breakdown of the ages of workers earning $10 per hour or less in Canada).

Living situation of workers earning $10 per hour or less

Table 6 shows the breakdown of those earning $10 per hour or less by family structure in British Columbia for 2007. There are four general categories: member of a couple, single parent, child or relative living with family, and unattached individual.

Examining the living situation of workers earning $10 per hour or less reveals that most of these workers live at home with family. In 2007, 145,300 (49.6%) of these workers were a son, daughter, or other relative living at home. Similar to the proportions among minimum wage workers, about half (48.5%) of workers earning $10 per hour or less were between the ages 15 of 24 and were attending school. The proportion of workers earning $10 per hour or less in

Table 6: Workers earning $10 per hour or less in British Columbia by family structure, 2007

	Total employment	Workers earning $10 per hour or less	Proportion of workers earning $10 per hour or less
Total persons	**1,841,000**	**293,100**	**100.0%**
Member of a couple	**1,014,900**	**87,100**	**29.7%**
Spouse not employed	193,400	17,100	5.8%
Spouse employed	821,500	70,000	23.9%
Spouse earning minimum wage or less	11,300	2,400	0.8%
Spouse earning more than minimum wage	675,000	55,400	18.9%
Spouse self-employed	135,200	12,200	4.2%
Head of family, no spouse present	**117,200**	**15,800**	**5.4%**
Son, daughter, or other relative living with family	**360,500**	**145,300**	**49.6%**
15 to 19 years, in school	66,600	55,700	19.0%
15 to 19 years, not in school	53,700	32,700	11.2%
20 to 24 years, in school	32,300	14,800	5.0%
20 to 24 years, not in school	78,700	21,900	7.5%
25 years or over, in school	8,200	0	0.0%
25 years or over, not in school	121,100	19,000	6.5%
Unattached individual	**348,500**	**44,900**	**15.3%**

Source: Statistics Canada, 2008a; calculations by authors.

other living situations was much smaller. Nearly one third of these workers were members of a couple, and similar to minimum wage earners, the vast majority of this group were living in a household with an employed spouse. A further 15.3% were unattached individuals, while only 5.4% were single parents.

To compare, 48.8% of all workers across Canada earning $10 per hour or less were a son, daughter, or other relative living with family. As with British Columbia, the proportion of workers in other living situations was much smaller: 31.3% were a member of a couple, the majority of whom lived in a household with an employed spouse; 13.2% were unattached individuals; and 6.7% were single parents (see Appendix A for a more detailed breakdown of the living situations of workers earning $10 per hour or less in Canada).

Overall, the data clearly show that the general profile of workers earning $10 per hour or less is strikingly similar to the general profile of minimum

wage earners. Critically, this means that the costs and benefits associated with increasing the minimum wage will largely be borne by the same type of workers currently earning the minimum wage: young and less skilled workers living with family.

Previous estimates of the employment loss associated with minimum wage increases

The overwhelming consensus of the academic research summarized in section III is that minimum wage increases have a significant impact on employment, particularly for younger workers. While the studies examine the impact of previous changes in the minimum wage, their findings can be used to estimate the likely impact of future minimum wage increases. Indeed, several authors have used historical research on the impact of minimum wage increases to estimate the likely impact of future changes.

In their 1992 study, Jean-Michel Cousineau, David Tessier, and François Vaillancourt of the Université de Montreal estimated the employment loss associated with increasing Ontario's minimum wage from $5.40 to $6.90 in 1990. [38] The authors first calculated the effect minimum wage increases had on unemployment rates for female and youth (aged 16 to 24) workers. They found that a 10% increase in the minimum wage was associated with a 1.4% increase in the unemployment rate for women and a 1.5% increase in the unemployment rate for young workers. The authors then calculated the employment loss by multiplying the percentage increase in the minimum wage by the employment effect found in their analysis. The 13 percentage point increase in the minimum wage (calculated as a ratio of $11.50, the average industrial wage at the time) would lead to a 1.82 percentage point increase in the unemployment rate of women and a 1.99 percentage point increase in the unemployment rate of youth workers. The authors then implied that this increase in unemployment was equal to a loss of employment of 43,000 jobs among women and 18,000 jobs among youth.

A 1995 study by Michael Shannon and Charles Beach published in *Canadian Public Policy* calculated the expected employment loss associated with increasing Ontario's minimum wage from $4.75 to $6.75 in 1989. [39]

38 Ontario's minimum wage in 1990 was $5.40. The authors estimated the employment loss associated with the New Democratic Party's (NDP) proposal to raise the minimum wage to 60% of the average industrial wage. The authors reported that the average industrial wage rate in 1990 was $11.50, meaning that the NDP proposal equates to a $6.90 minimum wage rate.

39 The $6.75 represents 60% of the average wage in Ontario, a proposal put forth by the Ontario government in 1991.

The authors reported that this minimum wage increase would increase the cost of wages in the province by 23.3%. Shannon and Beach then calculated the employment loss in Ontario by multiplying this percentage increase in minimum wages by the employment effect (i.e., employment elasticity) [40] found by Clark and Freeman (1980) of -0.33. Clark and Freeman's employment effect of -0.33 means that a 10% increase in the minimum wage would lead to a 3.3% reduction in the number of jobs. Shannon and Beach found that a 23.3% increase in minimum wages in Ontario would lead to a 6.2% to 7.7% reduction in jobs among those affected by the increase (73,000 to 92,000 workers). [41]

Another study by Professors William Even of Miami University and David MacPherson of Florida State University (1996) estimated the employment loss associated with increasing the minimum wage in the United States from $4.25 to $5.51 in 1993. [42] Using existing estimates of the employment effect of changing the minimum wage, [43] the authors estimated that this 29.6% increase in the minimum wage would have reduced teenage (16- to 19-year olds) employment by 240,000, and youth employment (20- to 24-year olds) by 349,000 in the United States. [44]

In 2007, Professor Morley Gunderson of the University of Toronto conducted a study for the Ontario Ministry of Finance on the effects of increasing the province's minimum wage from $8 to $10 per hour. Professor Gunderson estimated the likely impact of increasing Ontario's minimum wage using estimates of the employment effect based on existing Canadian research. In his review of the Canadian research, Professor Gunderson found that "a 10% increase in the minimum wage is likely to reduce the employment of teens by 3% to 6%, and slightly lower for young adults" (2007: 12). He calculated that Ontario's proposed 25% increase in the minimum wage would likely result in a teen employment loss of 7.5% to 15.0% in the province.

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40 See footnote 17.

41 The low-end estimate represents the authors' estimate of 20% non-compliance (because of minimum wage exemptions and/or employer non-compliance with the law). Put differently, the low-end estimate represents 80% of the base calculation.

42 The authors estimated the employment effect using what the minimum wage would have been in 1993 if the government indexed the minimum wage rate to the ratio of minimum wages to the average industrial wage starting in 1974. They found that instead of the legislated $4.25 per hour in 1993, the "indexed" minimum wage would have been $5.51 per hour.

43 The authors cite Brown et al.'s (1982) survey of the research which demonstrated that a 10% increase in the minimum wage causes teenage employment to drop between 1% and 3% with an average drop of 1.5%; and that a 10% increase in the minimum wage causes as much as a 1% decrease in the employment of young adults (aged 20 to 24).

44 The authors' use Brown et al.'s (1982) survey of 18 studies, which found that a 10% increase in the minimum wage reduces the employment of teenagers by an average of 1.5% and the employment of youth (20- to 24-year olds) by 1%.

Estimating the employment loss associated with a $10 minimum wage in British Columbia

This section presents an empirical estimate of the employment loss in British Columbia associated with increasing the minimum wage to $10 per hour. A range of the employment effects found in previous Canadian studies is used to estimate this employment loss.

Recall from table 4 in Section III that there are two general categories of employment effects: those that apply to workers who are directly affected (whose wage falls in between the old and new minimum wage) and those that apply to teens and youth workers more generally. Accordingly, two employment loss calculations will be presented. The first calculation estimates the employment loss for workers who currently earn $10 per hour or less. The second estimates the employment loss for all teen and youth workers.

Employment loss for workers directly affected

Section III showed that the employment effect for workers directly affected by a minimum wage increase ranges from -0.45 to -2.0. This means that a 10% increase in the minimum wage would likely decrease employment among this group by 4.5% to 20.0%.

Increasing British Columbia's minimum wage from $8 to $10 per hour constitutes a 25% increase for workers earning exactly the minimum wage and an average increase of 12.5% for workers earning between $8 to $10 per hour. [45] The average wage increase can be calculated by summing the proportion of workers earning exactly the minimum wage, multiplied by a 25% increase, and the remaining group of workers earning between the old and new minimum wage, multiplied by their average increase of 12.5%. [46] Table 2 (pg. 13) shows that the number of workers aged 15 to 24 who earn the minimum wage is 35,000, and table 5 (pg. 30) shows that the number of workers aged 15 to 24 who earn $10 per hour or less is 158,800. This implies that 22.0% of the 158,800 workers will experience a 25.0% wage increase. Assuming the remaining number of workers (123,800, or 78.0%) are equally distributed between the old minimum

45 This assumes an equal distribution of workers earning a wage between the old and new minimum wage.

46 The average wage increase for workers earning above the minimum wage can be calculated by averaging the percentage wage increases for each incremental increase in the minimum wage. Consider that for a worker currently earning $8.01 per hour, increasing the minimum wage to $10 per hour would constitute a 24.9% increase; for a worker earning $8.02, it would constitute a 24.8% increase. The same pattern holds for each one-cent increase in the minimum wage. Similarly, at the other end of the distribution, for a worker currently earning $9.99 per hour, increasing the minimum wage to $10 per hour would constitute a 0.13% increase; for a worker earning $9.98 per hour, it would constitute a 0.25% increase. The average of all the wage increases for this group will be the mid-point, or 12.5%.

Table 7: Employment effect associated with increasing the minimum wage rate to $10 per hour in British Columbia, 2007 – workers directly affected

Minimum wage, 2007	Percentage increase from general minimum wage to $10	Reduction (percentage change) in teen and youth employment		Teen and youth employment (15-24)	Reduction (number of jobs) in teen and youth employment	
		Lower bound employment effect (0.45)	Upper bound employment effect (2.0)		Lower bound estimate	Upper bound estimate
$8.00	15.3%	-6.9%	-30.5%	158,800	-10,898	-48,434

Sources: Human Resources and Social Development Canada, 2008; Statistics Canada, 2008a: table 9; calculations by authors.

wage and the new minimum wage, the average wage increase will be 12.5%. Therefore, the average wage increase for all 158,800 workers is 15.3%.

Using estimates of the employment effect described above, this 15.3% increase in the minimum wage is associated with a 6.9% to 30.5% loss in employment for the teens and youths who are directly affected. Table 7 shows that the estimated loss in teen and youth employment in British Columbia associated with increasing the minimum wage to $10 per hour equates to a loss of 10,898 to 48,434 jobs for these workers.

Employment loss for all teen and youth workers

This section will replicate the same methodology used for directly affected workers and apply it to all teen and youth workers.

Recall from section III that the employment effect for all teen and youth workers ranges from -0.3 to -0.6, meaning that a 10% increase in the minimum wage would decrease employment by 3.0% to 6.0%. As the minimum wage increase is applied to all teen and youth workers, there is no need to calculate an average percentage increase in wage rates; a 25.0% increase would be applicable to all workers. Using estimates of the employment effect described above, a 25.0% increase in the minimum wage is associated with a 7.5% to 15.0% loss in employment for teens and youths directly affected.

Table 8 shows the estimated employment loss in British Columbia associated with increasing the minimum wage to $10 per hour. Given that total teen and youth employment in British Columbia in 2007 was 348,000, the estimated 7.5% to 15.0% loss in employment equates to a loss of 26,100 to 52,200 jobs.

The above estimates clearly show that the workers most directly affected by minimum wage increases—young workers—will be severely affected if British Columbia raises its minimum wage to $10 per hour. Considering estimates derived from both methodologies produces a range of employment loss from 10,898 to 52,200 jobs for young workers.

Table 8: Employment effect associated with increasing the minimum wage rate to $10 per hour in British Columbia, 2007 – all teen and youth workers

Minimum wage, 2007	Percentage increase from general minimum wage to $10	Reduction (percentage change) in teen and youth employment		Total teen and youth employment (15-24)	Reduction (number of jobs) in teen and youth employment	
		Lower bound employment effect (0.3)	Upper bound employment effect (0.6)		Lower bound estimate	Upper bound estimate
$8.00	25.0%	-7.5%	-15.0%	348,000	-26,100	-52,200

Sources: Human Resources and Social Development Canada, 2008; Statistics Canada, 2008a: table 9; calculations by authors.

Large versus incremental increases in the minimum wage

An important but often overlooked aspect of the employment loss effect is the way in which minimum wages are increased, which can have an important impact on the magnitude of the employment loss. In a 2007 study, Gunderson explained that the effect of a large, one-time increase in the minimum wage could be larger than that of incremental increases in the minimum wage. Gunderson identified several reasons for this. First, the cost of a large increase may place a heavy burden on employers, especially smaller ones, and lead them to to contract or even close their business. A large increase may also "shock" employers such that they may make more significant adjustments to labour inputs (i.e., number of workers employed, hours worked, etc.) than they otherwise would. In addition, a large, one-time increase may signal to employers that the government favours low-wage labour at the expense of other economic activities. As such, employers may make a permanent change to their business by shifting away from low-wage labour and increasing their use of other resources.

In an earlier study, Michele Campolieti and his colleaugues (2005b) examined the employment loss effect during British Columbia's two 50-cent increases in the minimum wage from 1994 to 1995. These increases together were the largest cumulative increase among all Canadian provinces over their period of study, 1993 to 1999. The authors found that the employment effect associated with this minimum wage increase was about twice as large as the employment effect associated with all minimum wage increases from 1993 to 1999. They reported that "the results are suggestive of a much larger dis-employment effect emanating from a large as opposed to a series of smaller cumulative minimum wage increases of the same magnitude" (2005b: 96). While they caution that this conclusion is based on just one study, their research empirically demonstrates that large, immediate increases can have

a greater negative impact on youth employment than incremental increases can have.

As discussed above, Gunderson (2007) calculated that the employment loss associated with increasing the minimum wage in Ontario from $8 to $10 per hour would range from 7.5% to 15%. However, he also explained that this employment loss assumed no differential impact between a large, one-time increase and a series of incremental increases. Applying the findings from Campolieti et al. (2005b) to Ontario, he offered the following analysis: "If the effect of a one-time large increase is twice the magnitude as a series of ad hoc irregular increases (as the limited evidence suggests), then the effect would be double to approximately a 15% to 30% reduction in teen employment. The impacts would be slightly less for youths" (2007: 14).

The same adjustment that Gunderson (2007) used for Ontario is equally applicable to British Columbia. The estimate of the employment loss for British Columbia noted above assumes no differential impact between a large, one-time increase and a series of smaller incremental increases; the employment loss is calculated using estimates of employment loss associated with a marginal increase in the minimum wage. Applying Gunderson's adjustment, however, reveals that a large, one-time increase in British Columbia's minimum wage from $8 to $10 per hour could result in an employment loss ranging from 15% to 30%. This means that a large, immediate jump to a $10-per-hour minimum wage in British Columbia could result in a much larger loss for young workers in the province.

Conclusion

This section empirically assessed the impact of increasing the minimum wage in British Columbia to $10 per hour. It demonstrated that the costs and benefits of such an increase would largely be borne by the same group of British Columbians earning the current minimum wage, that is, young workers living at home. Workers such as single parents and unattached individuals would remain largely unaffected by this policy change. Using methodology developed by several Canadian and international economists, we found that increasing the minimum wage to $10 per hour would have significant negative effects on employment. Specifically, the employment loss in British Columbia is conservatively estimated to range from 10,898 to 52,200 jobs for young workers. While proposals to increase the minimum wage to $10 per hour may be based on good intentions, such an increase would have a profound negative effect on those currently earning the minimum wage, and would have almost no effect on low income workers who are struggling.

Conclusion

The purpose of this study is to inform British Columbians about the economic effects of high and increasing minimum wages. This study also aims to empirically assess the cost of increasing the minimum wage. Together, these analyses will help inform the public and policy makers about the impacts of changing minimum wage laws.

Minimum wage laws establish the lowest level of hourly pay that employers must pay workers. British Columbia's current general minimum wage rate is $8.00 per hour, the 5th highest among the Canadian provinces. However, it has one of the highest minimum wage rates relative to average earnings when compared to all 10 Canadian provinces and 50 US states (7th highest out of 60).

The most commonly cited purpose of minimum wages is to increase the incomes of society's low-income workers. But in reality, minimum wages are simply incapable of achieving the intended results. Moreover, minimum wages can actually worsen the situation of the people minimum wage laws are intended to help.

In British Columbia, 62,600 workers earned the minimum wage in 2007, representing 3.4% of total employment. Of those earning the minimum wage, well over half (55.9%) were young workers between 15 and 24 years old. Further, the majority of BC's minimum wage workers live at home with family; most of these workers also attend school. Many of the remaining individuals earning minimum wages are adults who are supplementing their family income with part-time work during child-rearing years or after retirement. In general, the typical minimum wage worker in British Columbia—and across Canada—is someone who is young and living at home. As such, minimum wage increases will largely affect younger workers and actually have a negligible effect on adults, generally, and those supporting families, specifically.

The economic reality of minimum wages is that they likely do much more harm than good. A large body of research from Canada and around the world demonstrates convincingly that high minimum wages lead to lower employment levels, fewer benefits, less training, and lower school enrollment. Fewer employment opportunities and less training are particularly harmful, given that experience and skill development are important drivers of higher wages. Research also shows that earning the minimum wage is almost exclusively a temporary experience. This, coupled with the fact that higher minimum wages actually retard employment and training opportunities, leads to the conclusion that minimum wages will have no appreciable effect on alleviating poverty—a conclusion reached by most economists.

Despite the overwhelming evidence documenting the negative effects of minimum wages, some groups continue to advocate for increases. Section IV of this study empirically assessed the impact of increasing the minimum wage in British Columbia from $8 to $10 per hour. The data show that the costs and benefits of such an increase would largely be borne by the same group of British Columbians earning the current minimum wage, that is, young workers living at home. Workers such as single parents and unattached individuals would remain largely unaffected by this policy change. Using methodology developed by several Canadian and international economists, we found that increasing the minimum wage to $10 per hour would have significant negative effects on employment. Specifically, the employment loss in British Columbia is conservatively estimated to range from about 10,898 to 52,200 jobs, but it could be higher. While increasing the minimum wage to $10 per hour may reflect good intentions, it would have a profound negative impact on those currently earning the minimum wage, and have almost no impact on those greatest in need.

If the government wishes to raise the incomes of and improve economic opportunities for British Columbia's working poor, they would be wise to steer clear of increasing the minimum wage.

Appendix A: Profile of workers earning $10 per hour or less in British Columbia and Canada

Table A1.1: Age and gender of workers earning minimum wage and workers earning $10 per hour or less in British Columbia, 2007

		Earning minimum wage			Earning $10 or less		
	Total employed persons (thousands)	Number of workers (thousands)	Percentage of workers earning minimum wage	Proportion of minimum wage earners	Number of workers (thousands)	Percentage of workers earning $10 per hour or less	Proportion of workers earning $10 per hour or less
Total	**1841.0**	**62.6**	**3.4%**	**100.0%**	**293.1**	**15.9%**	**100.0%**
15-19	134.1	25.2	18.8%	40.3%	96.6	72.0%	33.0%
20-24	213.9	9.8	4.6%	15.7%	62.2	29.1%	21.2%
25-34	401.6	9.2	2.3%	14.7%	42.4	10.6%	14.5%
35-44	429.7	6.6	1.5%	10.5%	35.2	8.2%	12.0%
45-54	424.6	5.8	1.4%	9.3%	31.0	7.3%	10.6%
55+	237.1	6.0	2.5%	9.6%	25.7	10.8%	8.8%
Male	**938.3**	**24.1**	**2.6%**	**38.5%**	**115.7**	**12.3%**	**39.5%**
15-19	68.1	10.8	15.9%	17.3%	43.6	64.0%	14.9%
20-24	111.0	3.4	3.1%	5.4%	23.4	21.1%	8.0%
25-34	210.0	3.0	1.4%	4.8%	16.3	7.8%	5.6%
35-44	217.9	2.3	1.1%	3.7%	11.5	5.3%	3.9%
45-54	205.6	1.8	0.9%	2.9%	9.7	4.7%	3.3%
55+	125.6	2.7	2.1%	4.3%	11.2	8.9%	3.8%
Female	**902.8**	**38.5**	**4.3%**	**61.5%**	**177.4**	**19.6%**	**60.5%**
15-19	66.0	14.4	21.8%	23.0%	53.1	80.5%	18.1%
20-24	102.9	6.3	6.1%	10.1%	38.8	37.7%	13.2%
25-34	191.6	6.2	3.2%	9.9%	26.1	13.6%	8.9%
35-44	211.8	4.3	2.0%	6.9%	23.7	11.2%	8.1%
45-54	218.9	4.0	1.8%	6.4%	21.4	9.8%	7.3%
55+	111.5	3.3	3.0%	5.3%	14.4	12.9%	4.9%

Source: Statistics Canada, 2008a; calculations by authors.

Table A1.2: Age and gender of workers earning minimum wage and workers earning $10 per hour or less in Canada, 2007

		Earning minimum wage			Earning $10 or less		
	Total employed persons (thousands)	Number of workers (thousands)	Percentage of workers earning minimum wage	Proportion of minimum wage earners	Number of workers (thousands)	Percentage of workers earning $10 per hour or less	Proportion of workers earning $10 per hour or less
Total	**14251.4**	**716.1**	**5.0%**	**100.0%**	**2532.4**	**17.8%**	**100.0%**
15-19	973.6	323.7	33.2%	45.2%	802.3	82.4%	31.7%
20-24	1526.5	123.5	8.1%	17.2%	545.8	35.8%	21.6%
25-34	3219.3	76.1	2.4%	10.6%	345.5	10.7%	13.6%
35-44	3387.2	70.1	2.1%	9.8%	306.9	9.1%	12.1%
45-54	3352.5	64.4	1.9%	9.0%	293.7	8.8%	11.6%
55+	1792.2	58.3	3.3%	8.1%	238.1	13.3%	9.4%
Male	**7185.8**	**285.9**	**4.0%**	**39.9%**	**995.3**	**13.9%**	**39.3%**
15-19	476.7	141.9	29.8%	19.8%	363.1	76.2%	14.3%
20-24	784.4	51.7	6.6%	7.2%	235.5	30.0%	9.3%
25-34	1657.2	28.5	1.7%	4.0%	130.3	7.9%	5.1%
35-44	1714.9	20.2	1.2%	2.8%	91.8	5.4%	3.6%
45-54	1632.0	22.3	1.4%	3.1%	86.3	5.3%	3.4%
55+	920.5	21.4	2.3%	3.0%	88.4	9.6%	3.5%
Female	**7065.6**	**430.2**	**6.1%**	**60.1%**	**1537.1**	**21.8%**	**60.7%**
15-19	496.9	181.8	36.6%	25.4%	439.2	88.4%	17.3%
20-24	742.1	71.8	9.7%	10.0%	310.4	41.8%	12.3%
25-34	1562.1	47.6	3.0%	6.6%	215.2	13.8%	8.5%
35-44	1672.4	49.9	3.0%	7.0%	215.1	12.9%	8.5%
45-54	1720.5	42.1	2.4%	5.9%	207.4	12.1%	8.2%
55+	871.7	37.0	4.2%	5.2%	149.8	17.2%	5.9%

Source: Statistics Canada, 2008a; calculations by authors.

Table A2.1: Living situation of workers earning minimum wage and workers earning $10 per hour or less in British Columbia, 2007

	Total employed persons (thousands)	Earning minimum wage			Earning $10 or less		
		Number of workers (thousands)	Percentage of workers earning minimum wage	Proportion of minimum wage earners	Number of workers (thousands)	Percentage of workers earning $10 per hour or less	Proportion of workers earning $10 per hour or less
Member of a couple	**1014.9**	**17.9**	**1.8%**	**28.6%**	**87.1**	**8.6%**	**29.7%**
Spouse not employed	193.4	3.3	1.7%	5.3%	17.1	8.8%	5.8%
Spouse unemployed	25.5	0.0	0.0%	0.0%	3.3	12.9%	1.1%
Spouse not in the labour force	167.9	2.5	1.5%	4.0%	13.7	8.2%	4.7%
Less than 55 years	107.0	0.0	0.0%	0.0%	8.5	7.9%	2.9%
55 years and over	60.9	0.0	0.0%	0.0%	5.2	8.5%	1.8%
Spouse employed	821.5	14.6	1.8%	23.3%	70.0	8.5%	23.9%
Spouse earning minimum wage or less	**11.3**	**0.0**	**0.0%**	**0.0%**	**2.4**	**21.2%**	**0.8%**
Spouse earning more than minimum wage	675.0	10.8	1.6%	17.3%	55.4	8.2%	18.9%
Spouse self-employed	135.2	3.2	2.4%	5.1%	12.2	9.0%	4.2%
Head of family, no spouse present	**117.2**	**2.7**	**2.3%**	**4.3%**	**15.8**	**13.5%**	**5.4%**
Youngest child is less than 18 years	60.7	0.0	0.0%	0.0%	5.7	9.4%	1.9%
No children, or youngest child is 18 years or older	56.4	1.5	2.7%	2.4%	10.1	17.9%	3.4%
Son, daughter or other relative living with family	**360.5**	**34.2**	**9.5%**	**54.6%**	**145.3**	**40.3%**	**49.6%**
15 to 19 years, in school	66.6	16.9	25.4%	27.0%	55.7	83.6%	19.0%
15 to 19 years, not in school	53.7	6.9	12.8%	11.0%	32.7	60.9%	11.2%
20 to 24 years, in school	32.3	3.0	9.3%	4.8%	14.8	45.8%	5.0%
20 to 24 years, not in school	78.7	3.5	4.4%	5.6%	21.9	27.8%	7.5%
25 years or over, in school	8.2	0.0	0.0%	0.0%	0.0	0.0%	0.0%
25 years or over, not in school	121.1	3.8	3.1%	6.1%	19.0	15.7%	6.5%
Unattached individual	**348.5**	**7.8**	**2.2%**	**12.5%**	**44.9**	**12.9%**	**15.3%**
Living alone	211.8	3.5	1.7%	5.6%	20.2	9.5%	6.9%
15 to 24 years	20.1	0.0	0.0%	0.0%	5.7	28.4%	1.9%
25 to 54 years	153.1	1.9	1.2%	3.0%	11.1	7.3%	3.8%
55 years and over	38.6	0.0	0.0%	0.0%	3.4	8.8%	1.2%
Living with non-relatives	136.7	4.3	3.1%	6.9%	24.7	18.1%	8.4%
15 to 24 years	44.8	1.6	3.6%	2.6%	13.4	29.9%	4.6%
25 to 54 years	86.0	2.5	2.9%	4.0%	10.8	12.6%	3.7%
55 years and over	5.9	0.0	0.0%	0.0%	0.0	0.0%	0.0%

Source: Statistics Canada, 2008a; calculations by authors.

Table A2.2: Living situation of workers earning minimum wage and workers earning $10 per hour or less in Canada, 2007

	Total employed persons (thousands)	Earning minimum wage			Earning $10 or less		
		Number of workers (thousands)	Percentage of workers earning minimum wage	Proportion of minimum wage earners	Number of workers (thousands)	Percentage of workers earning $10 per hour or less	Proportion of workers earning $10 per hour or less
Member of a couple	**8161.3**	**174.4**	**2.1%**	**24.4%**	**792.5**	**9.7%**	**31.3%**
Spouse not employed	1494.7	45.1	3.0%	6.3%	181.6	12.1%	7.2%
Spouse unemployed	271.6	10.2	3.8%	1.4%	42.4	15.6%	1.7%
Spouse not in the labour force	1223.1	35.0	2.9%	4.9%	139.2	11.4%	5.5%
Less than 55 years	749.4	17.5	2.3%	2.4%	71.0	9.5%	2.8%
55 years and over	473.7	17.5	3.7%	2.4%	68.2	14.4%	2.7%
Spouse employed	6666.6	129.3	1.9%	18.1%	610.9	9.2%	24.1%
Spouse earning minimum wage or less	**105.3**	**9.1**	**8.6%**	**1.3%**	**23.2**	**22.0%**	**0.9%**
Spouse earning more than minimum wage	5626.8	97.6	1.7%	13.6%	497.1	8.8%	19.6%
Spouse self-employed	934.5	22.6	2.4%	3.2%	90.6	9.7%	3.6%
Head of family, no spouse present	**1022.5**	**36.4**	**3.6%**	**5.1%**	**169.3**	**16.6%**	**6.7%**
Youngest child is less than 18 years	524.3	17.4	3.3%	2.4%	74.9	14.3%	3.0%
No children, or youngest child is 18 years or older	498.2	19.1	3.8%	2.7%	94.4	18.9%	3.7%
Son, daughter or other relative living with family	**2721.5**	**427.3**	**15.7%**	**59.7%**	**1236.4**	**45.4%**	**48.8%**
15 to 19 years, in school	524.4	209.3	39.9%	29.2%	470.1	89.6%	18.6%
15 to 19 years, not in school	363.2	97.8	26.9%	13.7%	271.4	74.7%	10.7%
20 to 24 years, in school	228.2	32.7	14.3%	4.6%	123.0	53.9%	4.9%
20 to 24 years, not in school	598.8	49.6	8.3%	6.9%	211.4	35.3%	8.3%
25 years or over, in school	56.2	2.7	4.8%	0.4%	11.8	21.0%	0.5%
25 years or over, not in school	950.8	35.3	3.7%	4.9%	148.7	15.6%	5.9%
Unattached individual	**2346.1**	**77.9**	**3.3%**	**10.9%**	**334.1**	**14.2%**	**13.2%**
Living alone	1540.1	38.5	2.5%	5.4%	165.4	10.7%	6.5%
15 to 24 years	125.7	7.9	6.3%	1.1%	37.8	30.1%	1.5%
25 to 54 years	1131.8	19.8	1.7%	2.8%	89.2	7.9%	3.5%
55 years and over	282.6	10.7	3.8%	1.5%	38.4	13.6%	1.5%
Living with non-relatives	806.0	39.4	4.9%	5.5%	168.8	20.9%	6.7%
15 to 24 years	257.9	20.5	7.9%	2.9%	91.9	35.6%	3.6%
25 to 54 years	505.5	16.6	3.3%	2.3%	69.5	13.7%	2.7%
55 years and over	42.5	2.2	5.2%	0.3%	7.3	17.2%	0.3%

Source: Statistics Canada, 2008a; calculations by authors.

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About the authors

Keith Godin

Keith Godin is a Senior Policy Analyst in the Fiscal Studies Department at the Fraser Institute. He has published 14 major studies on a range of policy issues including labour regulation and performance, entrepreneurship, taxation, banking, and investment. Most recently, he authored or co-authored *Canadian Provincial Investment Climate: 2008 Report* (2008), *Measuring Entrepreneurship: Conceptual Frameworks and Empirical Indicators* (2008), *Measuring Labour Markets in Canada and the United States: 2008 Report*, *Bank Lending and Entrepreneurial Finance: The Performance of Canadian Banks* (2008), *Measuring Business Creation in Canada and the United States* (2007), *Crowding Out Private Equity: Canadian Evidence* (2007), and *The Economic Costs of Capital Gains Taxes* (2007). He has also written numerous shorter articles on fiscal policy and government failure, as well as commentaries in newspapers across the country including the *National Post, Toronto Sun, Ottawa Citizen, Vancouver Sun,* and *Business in Vancouver.* Mr. Godin holds a B.A. in economics and a Master's of public policy from Simon Fraser University.

Niels Veldhuis

Niels Veldhuis is the Director of Fiscal Studies and a Senior Economist at the Fraser Institute. Since joining the Institute in 2002, he has authored or co-authored four books and 36 comprehensive studies on a wide range of topics including taxation, productivity, entrepreneurship, labour markets, and government performance. He has written over 125 articles, which have appeared in over 50 newspapers including the *National Post*, *Globe and Mail*, and *Wall Street Journal*. Mr. Veldhuis appears regularly on radio and television programs across the country and has appeared before committees of both the House of Commons and the Senate as an expert witness. He has a Bachelor's degree in business administration, with joint majors in business and economics, and an M.A. in economics from Simon Fraser University.

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