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Increasing the Minimum Wage in British Columbia

A Flawed Anti-Poverty Policy



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MAIN CONCLUSIONS

- As part of its effort to alleviate poverty, Premier John Horgan's government plans on raising the minimum wage from \$11.35 in 2018 to \$15.20 per hour by 2021, a 34% increase over three years. But, raising the minimum wage is not an effective way to alleviate poverty primarily because the policy fails to provide help targeted to families living in poverty.
- In 2015, the latest year of available data, 84.3% of workers earning minimum wage in British Columbia did not live in a low-income family. Though counterintuitive, it makes sense once we explore their age and family situation. In fact, most of those earning minimum wage are not the primary or sole income-earner in their family.
- In 2017, 55.7% of all minimum wage earners in BC were under the age of 25 and the vast majority of them (77.9%) lived with a parent or other relatives. Moreover, 22.2% of all minimum wage

- earners in BC had an employed spouse. Of these, 93.1% had spouses that were either self-employed or earning more than the minimum wage. Just 2.0% of workers earning minimum wage in Canada were single parents with young children.
- In addition to ineffectively targeting the working poor, raising the minimum wage produces several unintended economic consequences to the detriment of young and inexperienced workers. These include fewer job opportunities, decreases in hours available for work, reductions in non-wage benefits, a shift towards automation, and higher consumer prices, which disproportionately hurt the working poor.
- A work-based subsidy is a more effective policy since it better targets the benefits to those in need without these negative economic consequences.

Introduction

British Columbia Premier John Horgan's government plans to raise the minimum wage from \$11.35 per hour in 2018 to \$15.20 by 2021, a 34% increase over three years. On why his government will do so, Premier Horgan said: "The way to start down the right path is to find a way to lift people out of poverty" (Zussman, 2018). However, raising the minimum wage is not an efficient way to provide help targeted to families living in poverty and therefore will largely be ineffective at lifting workers out of poverty. The inability to provide help targeted at the working poor, coupled with the associated negative unintended economic consequences, is why raising the minimum wage is not an effective way to alleviate poverty.

This publication evaluates increasing the minimum wage as a strategy for alleviating poverty in British Columbia. It is divided into four sections: the first discusses the evolution of British Columbia's minimum wage since 2002; the

second discusses the characteristics of minimum wage earners in British Columbia; the third briefly discusses the unintended economic consequences of raising the minimum wage. The final section points to an alternative policy option—a work-based subsidy such as the Canada Workers Benefit—that more directly targets benefits to the working poor without causing the same negative economic consequences.

Evolution of British Columbia's minimum wage since 2002

Before discussing the characteristics of those earning minimum wage, it is useful to give the background of the government's plan to raise the minimum wage to \$15.20 per hour by 2021. Figure 1 displays the evolution of the minimum wage in British Columbia over the course of two decades, with average minimum wage rates from 2002 to 2021. To control for inflation, the rates are in constant 2021 dollars.



Figure 1: Minimum wage rates (2021 \$) in British Columbia, 2002–2021

Notes: [1] The minimum wage rates are pro-rated averages of the legislated minimum wage rates. For example, the BC government plans on raising the minimum wage from \$14.60 to \$15.20 on June 1, 2021, resulting in an average rate of \$14.95 in 2017. [2] Inflation rates for 2018 and beyond are projections from the BC government's 2018 budget.

Sources: British Columbia, Ministry of Finance, 2018; British Columbia, Office of the Premier, 2018; Canada.ca, 2017; Statistics Canada, 2018a.

From 2002 to 2010, the inflation-adjusted minimum wage declined 12.1% from \$10.84 to \$9.53, reflecting the freeze of the nominal minimum wage rate that started in November 2001. However, after 2010, increases in the minimum wage outpaced inflation. British Columbia's inflation-adjusted minimum wage is expected to increase by 56.9%, from \$9.53 in 2010 to an average rate of \$14.95 in 2021.

Notably, despite there being a freeze in the nominal minimum wage rate for a decade, the inflation-adjusted minimum wage rate is expected to be 37.9% higher in 2021 than 2002. If the minimum wage had grown since 2002 in line with inflation, the wage rate in 2021 would be \$10.84 instead of the planned rate of \$15.20 in 2021.

Minimum wage fails to give help targeted at the working poor

To assess the minimum wage as a strategy for alleviating poverty, it is important to measure how well the program helps those living in poverty. If British Columbia's minimum wage earners tend not to live in poverty, then many of the poor would not benefit from the policy and much of the benefit would go instead to those who are not poor. An anti-poverty policy that does not provide help focused on the poor is not an efficient way of providing assistance to those in need.

This section discusses the latest available data on the characteristics of minimum wage earners. Most of this data is for 2017, the year before the government announced the increase to \$15.20. Knowing who earns the minimum wage is critical for an evidence-based understanding of why the minimum wage does not effectively target the working poor. In 2017, there were 104,000 workers earning minimum wage in British Columbia, making up 5.1% of the working population.

Defining poverty or "low-income"

While Canada does not have an official poverty line, Statistics Canada's low income cut-off (LICO) is often used as a proxy for measuring absolute poverty.3 There are other measures of low income in Canada, namely the low income measure (LIM) and the market basket measure (MBM). However, the advantage of LICO is that it is closely tied to the share of family income that is used to pay for necessities relative to the average. Specifically, a family would be at the threshold if it is expected to spend 20 percentage points more of its family income on necessities than the average family. This connection to spending on necessities is important because poverty is often defined as a lack of adequate basic necessities to sustain long-term health and wellbeing (Lammam and MacIntyre, 2016).

Most workers earning minimum wage in British Columbia tend not to live in low-income families

Based on data from a special tabulation by Statistics Canada using the *Canadian Income Survey* (Statistics Canada, 2018b), in 2015, the latest year of available income data, 15.7% of minimum wage earners in British Columbia

¹ The nominal minimum wage was frozen at \$8.00 from November 2001 to May 2011.

² The average rate for 2021 reflects the fact that for a portion of the year the minimum wage will be \$14.60 and after June 1 it will be \$15.20.

³ A key distinction between poverty and low income is that poverty is the deprivation of necessities and is not dependent on the condition of others, while low income is the relative well-being compared to other members of society. For more discussion, see Lammam and MacIntyre, 2016.

lived in a low-income family.⁴ In other words, 84.3%—or more than four out of five—of British Columbia's minimum wage workers did not live in low income families.

The fact that most British Columbians earning minimum wage do not live in low income families is a critical insight. It helps explain why the two academic studies measuring the effect of raising the minimum wage on poverty in Canada both found that it did not reduce poverty. Campolieti, Gunderson, and Lee (2012) measured the impact on poverty (using multiple measures of low income as proxies for poverty including LICO) of minimum wage increases in Canada from 1997 to 2007, controlling for other economic factors. They found that the minimum wage had no effect on poverty and that 70% of the benefits of an increased minimum wage go to those who are not poor.

The other Canadian study measured the impact of minimum wage increases from 1981 to 2004 and found that a 10% increase in the minimum wage is associated with a 4% to 6% *increase* in the percentage of families falling below the LICO threshold (Sen, Rybczynski and Van De Waal, 2011). The authors explained the increase in relative poverty by noting that a reduction in employment (and thus income) as a consequence of an increase in the minimum wage results in some families falling below the low income threshold.

Most workers earning minimum wage are not the primary or sole earner in their family

It is certainly counterintuitive that the overwhelming majority of British Columbians earning minimum wage do not live in low-income families. However, this result begins to make sense once we explore their age and family situation. The following data is based on a special tabulation of the *Labour Force Survey* provided by Statistics Canada (2018c) for 2017, the latest year of data available. The data show that most of those earning minimum wage are not the primary or sole income-earner in their family. This is consistent with the findings of past research (Murphy, Lammam, and MacIntyre, 2016; Ontario, Ministry of Labour, 2014).

First, consider that most minimum wage earners in British Columbia were either teenagers or youths. Figure 2 displays the distribution of those earning minimum wage by age group. Those under the age of 25 constituted 55.7% of all minimum wage earners, by far the largest group. Another 11.1% of minimum wage earners were in the group aged 25 to 34 years old. Small shares belonged to older age groups. In fact, the smallest group was also the oldest, with 5.4% of workers earning minimum wage being 65 or over.

For many youths, a minimum wage job is their first while in school and often a stepping stone

⁴ The low income rates under alternative measures of low income are 16.6% for the low income measure and 20.6% for the market basket measure (Statistics Canada, 2018b).

⁵ For a complete breakdown of the characteristics of minimum wage earners in Canada and British Columbia in 2017, see Appendix 1 and Appendix 2 (pp. 10–11).

⁶ Note that the share of those in low-income families who are earning minimum wage is for the year 2015 and data on other characteristics of minimum wage earners is for 2017 because the data come from two different Statistics Canada surveys: the low income statistics come from the *Canadian Income Survey* and the rest of the data come from the *Labour Force Survey*.

⁷ This is not to trivialize the importance of a youth's contribution to the income of a low income family. However, the vast majority of minimum wage earners are not part of a low income family and such families are less likely to rely heavily on a youth's contribution.

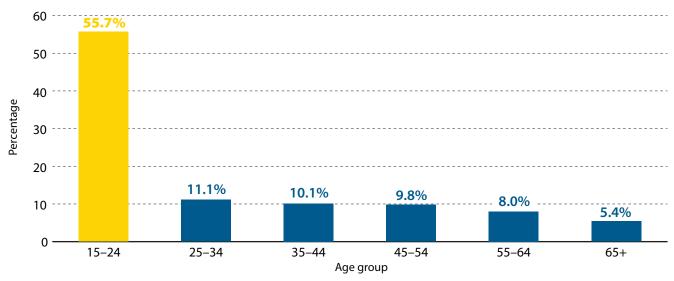


Figure 2: Shares (%) of workers earning minimum wage in British Columbia, by age group, 2017

Source: Statistics Canada, 2018c.

to higher paid employment. In fact, typically minimum wage earners do not remain such for long but increase their incomes as they gain experience (Long, 1999).8

Notably, most youths earning minimum wage lived with a parent or other relative. Specifically, 77.9% of minimum wage earners in British Columbia aged 15 to 24 lived with family. Among this group of youths, most (59.9%) are attending school while living at home. The share of young minimum wage earners living with family is even larger for the younger members of this age group. Almost all (91.4%) teenaged minimum wage earners (aged 15 to 19) lived with a parent or other relative. In short, minimum wage earners in 2017 tended to be teenagers or youth living with family.

Moreover, many older minimum wage earners were also not the prime or sole income-earner in

their family: 22.2% of minimum wage earners had an employed spouse. Of these, 93.1% had spouses who were either self-employed or earning more than the minimum wage. This reinforces the point that many minimum wage earners are not actually supporting a family solely on a single minimum wage income alone.

Thankfully, it is quite rare for a single parent with a young child to be working a minimum wage job. While data for British Columbia is not available as a result of the small sample size, in 2017 only 2.0% of all Canadians earning minimum wage were single parents with young children (Statistics Canada, 2018c). Proponents of increasing the minimum wage often give the impression that many of those earning minimum wage are single parents struggling to support their family. The reality is different as only a small share of minimum wage earners are in this circumstance.

⁸ Additional Canadian research has shown the transience of work at minimum wage. Battle (2003) found that, of Canadians that have held their position for five years, only 1% were minimum wage earners. Gunderson (2007) found that nearly half (46.4%) of workers earning minimum wage in Ontario had been at their position for less than a year.

Other studies of the characteristics of those earning minimum wage have found a similar weakness in the connection between earning the minimum wage and living in low income families. For example, in 2014, the Ontario government commissioned an advisory panel on the minimum wage to provide recommendations on future increases. Like this publication, the report of the Minimum Wage Advisory Panel examined the characteristics of Ontarians earning the minimum wage in 2012 and concluded: "Many minimum wage workers are youth who live in non-poor families, or are persons in multiple earner families where the combined earnings takes them out of poverty" (Ontario, Ministry of Labour, 2014: 36). A later study that examined the characteristics of Canadians earning minimum wage in 2014 also found similar results (Murphy, Lammam, and MacIntyre, 2016). Indeed, the weak connection between earning minimum wage and living in lowincome families has been consistent over time.

British Columbians earning minimum wage tend to be less educated and work part-time

Proponents of raising the minimum wage have sometimes voiced a concern that there is a wide-spread problem of minimum wage earners being skilled workers with university degrees (e.g., Van Santvoort, 2017). In reality, and consistent with their young age profile, British Columbians earning minimum wage in 2017 were usually less educated than the general population of workers. Table 1 compares the share of minimum wage workers who attained various levels of education to the general population of workers.

In 2017, 54.4% of those earning minimum wage had a high school diploma or less. In contrast, the share of workers in British Columbia's general population with only this level of education is 29.1%. In other words, a minimum wage worker was much more likely to have completed only

Table 1: Educational attainment of the general population of workers and workers earning minimum wage in British Columbia

Educational level	General population of workers	Workers earning minimum wage
High school diploma or less	29.1%	54.4%
Some post-secondary	8.7%	15.9%
Post-secondary diploma or certificate	32.8%	16.0%
University degree	29.4%	13.7%
Source: Statistics Canada, 2018c.		

high school or less than BC workers in general. The difference between the general population of workers and minimum wage workers is even more stark when looking at those who obtained education lower than a high school diploma: 24.4% of minimum wage earners did not have a high school diploma compared to 7.4% of workers overall. Moreover, a minimum wage worker was much less likely (13.7%) to have a university degree than workers in general (29.4%). For those workers earning minimum wage who did have a university degree, it was more than likely a stepping stone to a higher paid position as it is rare for someone with a university degree to be earning minimum wage. In fact, of the nearly 600,000 British Columbian workers with a university degree in 2017, only 2.4% had a minimum wage job.

In addition to being young and generally less educated, minimum wage earners are more likely to work part-time. In 2017, 58.5% of British Columbia's minimum wage earners worked part-time. By comparison, only 19.9% of all workers worked part-time. It is rare for full-time workers to earn the minimum wage: only 2.7% do. The data clearly does not support the notion of a large cadre of full-time workers earning the minimum wage.

Minimum wage increases produce negative economic consequences

As we have seen, raising the minimum wage does not efficiently target assistance to the working poor. But it also produces several unintended economic consequences to the detriment of young and inexperienced workers. Increasing the minimum wage is a government mandated rise in the price of low-skilled labour. This artificially raises the cost of labour and, in absence of productivity gains, businesses respond in a myriad of ways to offset this increase, producing several negative unintended consequences.

Just as consumers purchase less of a good if the price rises with no corresponding increase in quality, businesses often respond to an increase in the minimum wage by purchasing less labour. The result is fewer job opportunities for workers, particularly young and inexperienced workers. Canadian empirical research has generally found that a 10% increase in the minimum wage rate reduces employment among teens by 3% to 6% (Godin and Veldhuis, 2009; Gunderson, 2014; Ontario, Ministry of Labour, 2014). In fact, after an extensive search, we identified 20 Canadian studies of the minimum wage that have been published in academic journals (table 2). The consensus among them is that increases in the minimum wage reduce employment opportunities for young (under 25) workers.9 Not a single one of these Canadian studies contradicts this conclusion. While research from the United

States similarly finds declines in youth employment from minimum wage increases, unlike the Canadian research, there is more disagreement among researchers. For a detailed discussion on the state of the US minimum wage research, see Murphy, Lammam, and MacIntyre (2016).

The minimum wage can affect workers in more subtle ways as well. For example, businesses can reduce their labour costs by decreasing hours available for work. A review of the literature by the advisory panel on minimum wages established by the Ontario government highlights evidence that raising the minimum wage is associated with a reduction in hours worked. As the advisory panel's final report points out, focusing on employment reductions alone understates the total effect of the minimum wage on workers (Ontario, Ministry of Labour, 2014: 35). A reduction in hours means minimum wage hikes could leave some workers earning less overall even if their hourly wage increase. 10 This is because total earnings are determined by hourly rates multiplied by hours worked. If the increase in hourly rate is not sufficient to offset the reduction in hours, then the worker would have lower overall earnings.

Besides reducing employment and work hours, businesses can respond in other ways to offset government-mandated wage increases. For instance, employers can reduce non-wage compensation (fringe benefits) such as on-the-job training (Ontario, Ministry of Labour, 2014). Businesses may also respond by moving towards more automation

⁹ Interestingly, Fang and Gunderson (2009) found that raising the minimum wage increased employment for older workers (aged 50 and over). The authors' preferred explanation is that, in the event of a minimum wage increase, employers substitute away from inexperienced younger workers to more experienced older workers.

¹⁰ A study examining recent minimum wage increases in the City of Seattle found that low-wage workers (defined as earning under \$19 per hour) were made worse off on average due to the reduction in hours (Jardim et al., 2017). Specifically, raising the minimum wage from \$11 to \$13 in Seattle led to an average net reduction in earnings of \$125 per month for low-wage workers. For a summary of Jardim et al., 2017, see Lammam, MacIntyre, and Hunt, 2017.

Table 2: Twenty Canadian studies of the minimum wage from academic journals

Year	Author(s)	Title	Journal
1979	Cousineau	Impact du salaire minimum sur le chômage des jeunes et des femmes au Québec.	Industrial Relations
1979	Fortin	L'effet du salaire minimum sur les prix, l'emploi et la répartition des revenus : le cas du Québec.	Industrial Relations
1979	Maki	The Effect of Changes in Minimum Wage Rates on Provincial Unemployment Rates, 1970–77.	Industrial Relations
1980	Swidinsky	Minimum Wages and Teenage Unemployment.	Canadian Journal of Economics
1983	Schaafsma and Walsh	Employment and Labour Supply Effects of the Minimum Wage: Some Pooled Time-Series Estimates from Canadian Provincial Data.	Canadian Journal of Economics
1984	McKee and West	Minimum Wage Effects on Part-Time Employment.	Economic Inquiry
1985	Mercier	Les effets du salarie minimum sur l'emploi des jeunes au Québec.	Industrial Relations
1992	Cousineau, Tessier, and Vaillancourt	The Impact of the Ontario Minimum Wage on the Unemployment of Women and the Young in Ontario: A Note.	Industrial Relations
1996	Kan and Sharir	Minimum-Wage and Probability-of-Getting-a-Job Effects in a Simultaneous Equations Model of Employment and Participation: Canada 1975–1991.	Canadian Journal of Economics
1999	Baker, Benjamin, and Stanger	The Highs and Lows of the Minimum Wage Effect: A Time-Series Cross-Section Study of the Canadian Law.	Journal of Labor Economics
2003	Yuen	The Effect of Minimum Wages on Youth Employment in Canada: A Panel Study.	The Journal of Human Resources
2005	Campolieti, Fang, and Gunderson	How Minimum Wages Affect Schooling-Employment Outcomes in Canada, 1993–1999.	Journal of Labor Research
2005	Campolieti, Fang, and Gunderson	Minimum Wage Impacts on Youth Employment Transitions, 1993–1999.	Canadian Journal of Economics
2006	Campolieti, Gunderson, and Riddell	Minimum Wage Impacts from a Prespecified Research Design: Canada 1981–1997.	Industrial Relations
2009	Fang and Gunderson	Minimum Wage Impacts on Older Workers: Longitudinal Estimates from Canada.	British Journal of Industrial Relations
2010	Myatt and McDonald	The Robustness of Provincial Panel-Data Studies of Minimum Wages in Canada.	Canadian Journal of Regional Science
2011	Sen, Rybczynski, van de Waal	Teen Employment, Poverty, and the Minimum Wage: Evidence from Canada.	Labour Economics
2013	Brochu and Green	The Impact of Minimum Wages on Labour Market Transitions.	Economic Journal
2014	Campolieti, Gunderson, and Lee	Minimum Wage Effects on Permanent versus Temporary Minimum Wage Employment.	Contemporary Economic Policy
2017	Rybczynski and Sen	Employment Effects of the Minimum Wage: Panel Data Evidence from Canadian Provinces.	Contemporary Economic Policy

in providing its products and services (Lordan and Neumark, 2018). Finally, businesses may pass costs on to customers through higher prices.¹¹ Perversely, this most negatively affects low-income customers who have less disposable income to afford price increases (Macurdy, 2015).

A more effective policy to help the working poor—a work-based subsidy

Fortunately, another policy option is available to help the working poor that provides targeted benefits to those in need without producing the same negative economic consequences. A workbased subsidy, which is a cash transfer directly from governments to low-income workers, is worthy of consideration.¹²

An example of such a program in Canada is the federal government's Canada Workers Benefit (CWB)—formerly the Working Income Tax Benefit. This program, first created in 2007, was recently enhanced in the 2018 federal budget. With the enhancements announced in the budget, couples or single parents with family incomes below \$36,483 will receive a maximum benefit of \$2,335 while single workers making less than \$24,111 will receive a maximum of \$1,355 (Canada, Department of Finance, 2018). Since the program is based on family income, it is more efficient than a minimum wage in directing benefits to lower-income Canadians who are in need of assistance.

Moreover, unlike the minimum wage, a work-based subsidy does not artificially increase the cost of employing low-skilled workers. While raising the minimum wage reduces job opportunities, a work-based subsidy encourages employment. This is because a potential recipient must have some employment income to receive any benefits from the CWB and so are encouraged to enter the work force. Empirical evidence on similar programs in the United States and the United Kingdom has found that this type of program does indeed encourage employment, particularly among single mothers (Chan and Moffitt, 2018).

Conclusion

In an effort to alleviate poverty among workers, the government of British Columbia is raising the minimum wage to \$15.20 per hour by 2021. However, this is not an efficient strategy for assisting the working poor for two reasons. First, it poorly targets those in need of help. Second, the minimum wage produces unintended economic consequences that harm young and inexperienced workers, including fewer job opportunities, decreased hours, reduced benefits, more automation, and higher prices. Instead of pursuing the flawed policy of raising the minimum wage, the government of British Columbia should consider more effective alternatives such as a work-based subsidy.

¹¹ A review of almost 30 studies shows that, on balance, increasing the minimum wage raises prices (Lemos, 2008).

¹² For a fuller discussion of work-based subsidies, see Lammam and MacIntyre, 2015.

Appendix 1: Characteristics of workers earning minimum wage, British Columbia, 2017

	Total employees		Minimum wage		
	Total (000s)	Share (%)	Total (000s)	Incidence (%)	Share (%
otal	2028.6	100.0	104.0	5.1	100.0
lge					
15–19	116.5	5.7	34.7	29.8	33.4
20–24	226.4	11.2	23.2	10.2	22.3
25–34	467.0	23.0	11.5	2.5	11.1
35–44	414.9	20.5	10.5	2.5	10.1
45–54	420.1	20.7	10.2	2.4	9.8
55–64	314.9	15.5	8.3	2.6	8.0
ducational attainment					
Less than a highschool diploma	150.9	7.4	25.4	16.8	24.4
Highschool diploma	439.7	21.7	31.2	7.1	30.0
At least some post-secondary	1438.0	70.9	47.3	3.3	45.5
Some post-secondary	177.3	8.7	16.5	9.3	15.9
Post-secondary diploma or certificate	665.4	32.8	16.6	2.5	16.0
University degree	595.4	29.4	14.2	2.4	13.7
ob status					
Full-time	1624.0	80.1	43.1	2.7	41.4
Part-time	404.6	19.9	60.8	15.0	58.5
lousehold status					
Member of a couple [1]	1089.1	53.7	28.2	2.6	27.1
Spouse not employed	210.1	10.4	5.1	2.4	4.9
Youngest child is less than 18 years	80.1	3.9	1.6	2.0	1.5
No children or youngest child 18 or older	130.0	6.4	3.4	2.6	3.3
Spouse employed	875.3	43.1	23.1	2.6	22.2
Spouse making minimum wage or less	17.9	0.9	1.6	8.9	1.5
Spouse making greater than minimum wage	718.5	35.4	16.3	2.3	15.7
Spouse self-employed	138.9	6.8	5.2	3.7	5.0
Head of household, no spouse	147.8	7.3	6.9	4.7	6.6
Youngest child is less than 18 years	61.2	3.0	_	_	_
No children or youngest child 18 or older	86.6	4.3	5.5	6.4	5.3
Son, daughter, or other relative living with family	409.0	20.2	52.3	12.8	50.3
15–19 in school	60.4	3.0	21.5	35.6	20.7
15–19 not in school	43.6	2.1	10.2	23.4	9.8
20–24 in school	33.5	1.7	5.5	16.4	5.3
20–24 not in school	88.2	4.3	7.9	9.0	7.6
25 or over in school	8.8	0.4	_	_	_
25 or over not in school	174.5	8.6	6.6	3.8	6.3
Single	379.4	18.7	16.2	4.3	15.6
Living alone	243.1	12.0	8.0	3.3	7.7
15–24	19.1	0.9	_	_	_
25–54	154.3	7.6	3.1	2.0	3.0
55 and over	69.6	3.4	4.0	5.7	3.8
Living with non-relatives	136.3	6.7	8.2	6.0	7.9
15–24	41.6	2.1	5.1	12.3	4.9
25–54	86.3	4.3	3.0	3.5	2.9
55 and over	8.4	0.4	J.0 —	J.J	
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Notes: [1] The sum of persons with a working or non-working spouse does not add up to the total number of persons with spouses since certain spouses may have been outside the target group. This happens when one of the spouses is a member of the armed forces or is in an institution (and there may be other reasons). The Labour Force Survey only collects information on the spouse not out of scope. [2] A low-income household is defined as being below the Low Income Cut-Off (after taxes and government transfers). The low income data come from the Canadian Income Survey (CIS). The latest year available at the time of writing was 2015. [3] "—" indicates that data are not available.

Sources: Statistics Canada, 2018b, c.

Appendix 2: Characteristics of workers earning minimum wage, Canada, 2017

	Total employees			Minimum wage	/age
	Total (000)s	Share (%)	Total (000)s	Incidence (%)	Share (%)
Total	15609.6	100.0	1018.1	6.5	100.0
Age					
15–19	806.5	5.2	369.4	45.8	36.3
20–24	1577.1	10.1	219.3	13.9	21.5
25–34	3642.6	23.3	130.9	3.6	12.9
35–44	3374.8	21.6	87.3	2.6	8.6
45–54	3314.8	21.2	90.3	2.7	8.9
55–64	2426.8	15.5	84.1	3.5	8.3
Education attainment					
Less than a highschool diploma	1332.3	8.5	272.6	20.5	26.8
Highschool diploma	3014.7	19.3	268.9	8.9	26.4
At least some post-secondary	11262.6	72.2	476.6	4.2	46.8
Some post-secondary	1042.7	6.7	149.9	14.4	14.7
Post-secondary diploma or certificate	5566.9	35.7	202.8	3.6	19.9
University degree	4653.0	29.8	123.9	2.7	12.2
Job status				· · · · · · · · · · · · · · · · · · ·	·
Full-time	12770.4	81.8	414.4	3.2	40.7
Part-time	2839.3	18.2	603.6	21.3	59.3
Household status	2007.0		000.0	2.13	37.0
Member of a couple [1]	8942.0	57.3	256.5	2.9	25.2
Spouse not employed	1634.7	10.5	58.8	3.6	5.8
Youngest child is less than 18 years	620.3	4.0	19.2	3.1	1.9
No children or youngest child 18 or older	1014.5	6.5	39.6	3.9	3.9
Spouse employed	7271.2	46.6	196.7	2.7	19.3
Spouse making minimum wage or less	162.7	1.0	14.6	9.0	1.4
Spouse making greater than minimum wage	6129.7	39.3	148.0	2.4	14.5
Spouse self-employed	978.8	6.3	34.0	3.5	3.3
Head of household, no spouse	1144.3	7.3	63.2	5.5	6.2
•	515.1	7.5 3.3	20.2	3.9	2.0
Youngest child is less than 18 years	629.1	3.3 4.0	43.0	5.9 6.8	4.2
No children or youngest child 18 or older					
Son, daughter, or other relative living with family	2920.1	18.7	573.2	19.6	56.3
15–19 in school	449.5	2.9	235.8	52.5	23.2
15–19 not in school	300.0	1.9	113.1	37.7	11.1
20–24 in school	270.5	1.7	60.8	22.5	6.0
20–24 not in school	680.9	4.4	88.2	13.0	8.7
25 or over in school	60.9	0.4	6.4	10.5	0.6
25 or over not in school	1158.2	7.4	69.0	6.0	6.8
Single	2576.4	16.5	121.7	4.7	12.0
Living alone	1812.2	11.6	66.4	3.7	6.5
15–24	120.7	0.8	10.7	8.9	1.1
25–54	1211.0	7.8	33.3	2.7	3.3
55 and over	480.6	3.1	22.3	4.6	2.2
Living with non-relatives	764.2	4.9	55.3	7.2	5.4
15–24	206.3	1.3	29.0	14.1	2.8
25–54	496.2	3.2	23.8	4.8	2.3
55 and over	61.7	0.4	2.5	4.1	0.2
Member of a low-income household (2015) [2]	608	4.2	115	18.9	11.2

Notes: [1] The sum of persons with a working or non-working spouse does not add up to the total number of persons with spouses since certain spouses may have been outside the target group. This happens when one of the spouses is a member of the armed forces or is in an institution (and there may be other reasons). The Labour Force Survey only collects information on the spouse not out of scope. [2] A low-income household is defined as being below the Low Income Cut-Off (after taxes and government transfers). The low income data come from the Canadian Income Survey (CIS). The latest year available at the time of writing was 2015.

Source: Statistics Canada, 2018b, c.

References

Baker, Michael, Dwayne Benjamin, and Shuchita Stanger (1999). The Highs and Lows of the Minimum Wage Effect: A Time-Series Cross-Section Study of the Canadian Law. Journal of Labor Economics 17, 2: 318-350.

Battle, Ken (2003). Minimum Wages in Canada: A Statistical Portrait with Policy Implications. Caledon Institute of Social Policy.

British Columbia, Ministry of Finance (2018). Budget 2018: Working for You. Government of British Columbia. http://bcbudget.gov.bc.ca/2018/default.htm.

British Columbia, Office of the Premier (2018). Help Is on the Way for B.C.'s Lowest-Paid Workers. Government of British Columbia. https://news.gov.bc.ca/releases/2018PREM0017-000178.

Brochu, Pierre, and David A. Green (2013). The Impact of Minimum Wages on Labour Market Transitions. Economic Journal 123: 1,203-1,235.

Campolieti, Michele, Morley Gunderson, and Byron Lee (2012). The (Non) Impact of Minimum Wages on Poverty: Regression and Simulation Evidence for Canada. Journal of Labor Research 33, 3: 287-302. http://econpapers.repec.org/article/sprjlabre/v_3a33_3ay_3a2012_3ai_3a3_3ap_3a287-302.htm.

Campolieti, Michele, Tony Fang, and Morley Gunderson (2005a). How Minimum Wages Affect Schooling-Employment Outcomes in Canada, 1993-1999. Journal of Labor Research 26, 3: 533-545.

Campolieti, Michele, Tony Fang, and Morley Gunderson (2005b). Minimum Wage Impacts on Youth Employment Transitions, 1993-1999. Canadian Journal of Economics 38, 1: 81-104.

Campolieti, Michele, Morley Gunderson, Byron Lee (2014). Minimum Wage Effects on Permanent versus Temporary Minimum Wage Employment. Contemporary Economic Policy 32, 3: 578-591.

Campolieti, Michele, Morley Gunderson, Chris Riddell (2006). Minimum Wage Impacts from a Prespecified Research Design: Canada 1981–1997. Industrial Relations 45, 2: 195–216.

Canada.ca (2017). Hourly Minimum Wages in Canada for Adult Workers. Government of Canada. http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx?lang=eng&dec=5">http://srv116.services.gc.ca/dimt-wid/sm-mw/rpt2.aspx.gc.ca/dimt-wid/sm-mw/rpt2.aspx.gc.ca/dimt-wid/sm-mw/rpt2.aspx.gc.ca/dimt-wid/sm-mw/rpt2.aspx.gc.ca/dimt-wid/sm-mw/rpt2.aspx.gc.ca/dimt-wid/sm-mw/rpt2.aspx.gc.ca/dimt-wid/sm-mw/rpt2.aspx.gc.ca/dimt-wid/sm-mw/rpt2.aspx.gc.ca/dimt-wid/s

Canada, Department of Finance (2018). Equality and Growth: A Strong Middle Class [Budget 2018]. Government of Canada. https://www.budget.gc.ca/2018/home-accueil-en.html.

Chan, Marc K., and Robert A. Moffitt (2018). Welfare Reform and the Labor Market. NBER Working Paper 24385. http://www.nber.org/papers/w24385>.

Cousineau, Jean-Michel (1979). Impact du salaire minimum sur le chômage des jeunes et des femmes au Québec. Industrial Relations 34, 3: 403-417.

Cousineau, Jean-Michel, David Tessier, and François Vaillancourt (1992). The Impact of the Ontarian Minimum Wage on the Unemployment of Women and the Young in Ontario: A Note. Industrial Relations 47, 3: 559-566.

Eisen, Ben, Charles Lammam, and David Watson (2017). Ontario Enters Uncharted Waters with a \$15 Minimum Wage. Fraser Institute. https://www.fraserinstitute.org/studies/ ontario-enters-uncharted-waters-with-a-15-dollar-minimum-wage>.

Fang, Tony, and Morley Gunderson (2009). Minimum Wage Impacts on Older Workers: Longitudinal Estimates from Canada. British Journal of Industrial Relations 47, 2: 371–387.

Fortin, Pierre (1979). L'effet du salaire minimum sur les prix, l'emploi et la répartition des revenus: le cas du Québec. Industrial Relations 34, 4: 660-673.

Godin, Keith, and Niels Veldhuis (2009). The Economic Effects of Increasing British Columbia's Minimum Wage. Fraser Institute. https://www.fraserinstitute.org/studies/ economic-effects-of-increasing-british-columbias-minimum-wage>.

Gunderson, Morley (2007). Minimum Wages: Issues and Options for Ontario. Ontario Ministry of Finance. https://www.fin.gov.on.ca/en/publications/2007/Gunderson/Gunderson.pdf>.

Gunderson, Morley (2014). Minimum Wages: Good Politics, Bad Economics? Northern Policy Institute. Institute. <a hr wage-en.pdf>.

Jardin, Ekaterina, Mark C. Long, Robert Plotnick, Emma van Inwegen, Jacob Vigdor, and Hilary Wething (2017). Minimum Wage Increases, Wages, and Low-Wage Employment: Evidence from Seattle. NBER Working Paper No. 23432. http://www.nber.org/papers/w23532.

Kan, Janice Shuk-Lin, and Shmuel Sharir (1996). Minimum-Wage and Probability-of-Getting-a-Job Effects in a Simultaneous Equations Model of Employment and Participation: Canada 1975-1991. Canadian Journal of Economics 29, Special Issue Part 1: S53-S56.

Lammam, Charles, and Hugh MacIntyre (2015) The Practical Challenges of Creating a Guaranteed Annual Income in Canada. Fraser Institute. https://www.fraserinstitute.org/studies/ idea-guaranteed-annual-income-appealing-implausible-canada>.

Lammam, Charles, and Hugh MacIntyre (2016). An Introduction to the State of Poverty in Canada. Fraser Institute. https://www.fraserinstitute.org/studies/an-introduction-to-the-state-of-poverty-in-canada>.

Lammam, Charles, Hugh MacIntyre, and David Hunt (2017). Seattle's Higher Minimum Wage Has Lowered Earnings for Low-Wage Workers. Fraser Forum (June 26). https://www.fraserinstitute.org/blogs/ seattle-s-higher-minimum-wage-has-lowered-earnings-for-low-wage-workers>.

Lemos, Sara (2008). A Survey of the Effects of the Minimum Wage on Prices. Journal of Economic Surveys 22, 1: 187-212.

Long, James E. (1999). Updated Estimates of Wage Mobility of Minimum Wage Workers. Journal of Labor Research 20, 4: 493-503.

Lordan, Grace, and David Neumark (2018). People Versus Machines: The Impact of Minimum Wages on Automatable Jobs. NBER Working Paper No. 23667. http://www.nber.org/papers/ w23667?utm_campaign=ntw&utm_medium=email&utm_source=ntw>.

Maki, Dennis R. (1979). The Effect of Changes in Minimum Wage Rates on Provincial Unemployment Rates, 1970-77. Industrial Relations 34, 3: 418-430.

Macurdy, Thomas (2015). How Effective Is the Minimum Wage at Supporting the Poor? Journal of Political Economy 123, 2: 497-545.

McKee, Michael, and Edwin G. West (1984). Minimum Wage Effects on Part-Time Employment. Economic Inquiry 22: 421-428.

Mercier, Jacques (1985). Les effets du salaire minimum sur l'emploi des jeunes au Québec. Industrial Relations 40, 3: 431-457.

Murphy, Robert P., Charles Lammam, and Hugh MacIntyre (2016). Raising the Minimum Wage: Misquided Policy, Unintended Consequences. Fraser Institute. https://www.fraserinstitute.org/studies/ raising-the-minimum-wage-misguided-policy-unintended-consequences>.

Myatt, Tony, and James Ted McDonald (2010). The Robustness of Provincial Panel-Data Studies of Minimum Wage in Canada. Canadian Journal of Regional Science 33, 3: 77-88.

Ontario, Ministry of Labour (2014). 2014 Minimum Wage Advisory Panel Report and Recommendations to the Minister of Labour. https://www.labour.gov.on.ca/english/es/advisorypanel.php.

Rybczynski, Kate, and Anindya Sen (2017). Employment Effects of the Minimum Wage: Panel Data Evidence from Canadian Provinces. Contemporary Economic Policy 36, 3: 1–20.

Schaafsma, Joseph, and William D. Walsh (1983). Employment and Labour Supply Effects of the Minimum Wage: Some Pooled Time-Series Estimates from Canadian Provincial Data. Canadian Journal of Economics 16, 1: 86-97.

Sen, Anindya, Kathleen Rybczynski, and Corey van de Waal. (2011). Teen Employment, Poverty, and the Minimum Wage: Evidence from Canada. Labour Economics 18, 1 (January): 36-47. .

Statistics Canada (2018a). CANSIM table 326-0021. Consumer Price Index (CPI). http://www5.statcan.gc.ca/ can sim/a 26? lang=eng&retrLang=eng&id=3260021&pattern=&stByVal=1&p1=1&p2=50&tabMode=dataTable&csid=>.

Statistics Canada (2018b). Special Request from Income Statistics Division using data from the Canadian Income Survey. Received March 8, 2018.

Statistics Canada. (2018c). Special Request from Income Statistics Division using data from the Labour Force Survey. Received March 9, 2018.

Swidinsky, Robert (1980). Minimum Wages and Teenage Unemployment. Canadian Journal of Economics 13, 1: 158–171.

Van Santvoort, Albert (2017). B.C. Leads Country for Underemployment. Business in Vancouver (September 5). https://biv.com/article/2017/09/bc-leads-country-underemployment>.

Yuen, Terence (2003). The Effect of Minimum Wages on Youth Employment in Canada: A Panel Study. Journal of Human Resources 38, 3: 647-672.

Zussman, Richard (2018). B.C. to Raise Minimum Wage to \$15.20 an Hour by June 2021. Global News. https://globalnews.ca/news/4014200/b-c-to-raise-minimum-wage-to-15-20-an-hour-by-june-2021/>.

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