

The Case for Increasing the Minimum Wage

What does the academic literature tell us?

SUMMARY

THIS PAPER REVIEWS the significant body of academic research about the economic impacts of minimum wages to assess the likely costs and benefits of an increase in BC's minimum wage to \$15 per hour. It was completed shortly before the provincial government announced a near-inconsequential 20-cent increase to \$10.45 per hour. Among the paper's key findings:

- The benefits of raising BC's minimum wage to \$15 through a series of pre-announced staged increases far outweigh the likely costs. Claims that such an increase will lead to massive job losses in low-wage sectors of the economy are not credible.
- An increase to \$15 would result in some job losses. However, the likely impact is less than a 1 per cent reduction in the overall provincial employment rate, and a 7.6 per cent reduction in the employment rate for those currently making between \$10.25 and \$15 per hour.
- The large job loss impacts predicted by some opponents of minimum wages misrepresent the existing economic research. In reading and using that research, it is important to recognize that estimates showing job loss effects of minimum wage increases apply only to teenagers. Estimated effects for young adult and adult workers range from insignificant to non-existent.
- Focusing on teenage workers plays up an inaccurate stereotype about who earns very low wages in BC and leads to exaggerated claims about job losses. Only 26 per cent of those currently making between \$10.25 and \$12 are teenagers, and only 5 per cent of those making between \$12 and \$15 are teenagers.
 - As an example, prior to the last significant increase in the minimum wage in 2011, when it was raised from \$8 to \$10.25 over a year, the Fraser Institute claimed the increase would result in a staggering loss of over 52,000 jobs. In reality, between 2010 and 2013, employment for 15–24-year

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olds declined by 1.6 per cent, one tenth of the Fraser Institute’s projections. Their projections were based on old estimates and erroneously applied estimates for teenagers to young adults.


- The evidence for Canada suggests that higher minimum wages lead to lower turn-over rates, meaning workers are more likely to have higher-paying and more stable jobs. This may be because a higher minimum wage reduces the incentive for firms to operate on a low-wage, high-turnover model.
- The minimum wage can be an important tool for reducing poverty and income inequality.
 - Critics frequently dismiss the minimum wage as a useful poverty reduction measure because past increases have not led to a reduction in the poverty rate. However, this is because the minimum wage has been set so far below the poverty line that past increases have not been large enough to lift full-time workers out of poverty. Even at the new rate of \$10.45 per hour, a person working full-time, full-year in Metro Vancouver remains \$5,441 below the poverty line—and that’s for a single person, not someone trying to support a family. An increase to \$15 would lift that worker over the poverty line.
 - Prior studies examining minimum wage increases where the largest group affected is teenagers do find small effects on reducing poverty. However, an increase to \$15 would primarily affect non-teenagers and is therefore likely to have a greater impact on working poverty.
 - A key way to tackle the problem of growing inequality is to raise the incomes of those at the very bottom of the income scale.

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Who benefits if BC raises the minimum wage to \$15?


STEREOTYPE

- Teenager
- Works part-time after school
- Lives with parents
- Earning extra spending money
- Works in small mom-and-pop business



REALITY

- 82%** are not teenagers, they are 20 or older
- 39%** are 35 or older
- 60%** are women
- 58%** work full-time
- 68%** do not live at home with their parents
- 51%** work for large corporations (100+ employees)



Raising the minimum wage to \$15 will put money in the pockets of workers who really need it and reduce inequality. tinyurl.com/increasemw

INTRODUCTION

The lack of success in reversing persistent, high inequality has led labour groups across North America to call for a \$15 minimum wage. The BC Federation of Labour is leading a new campaign, calling for the minimum wage in British Columbia to be raised from \$10.25 to \$15 per hour, with the goal of reducing the numbers of the working poor and increasing the fairness of the wage structure. However, some business lobby groups and associated think tanks oppose this idea, arguing that economics research points to increases in the minimum wage having large negative effects on employment levels and little impact on poverty.

With income-inequality levels stuck well above where they were two decades ago and BC being a national laggard in terms of poverty levels, it is important that we discuss what raising a minimum wage does and does not do to affect employment, inequality, poverty and other labour market outcomes. My goal is to present what is known from the considerable body of academic research on minimum wages in order to contribute to that discussion.

ARE MINIMUM WAGE INCREASES “JOB SLAYERS?”

Were the minimum wage to jump immediately to \$15, it would take us outside the range used by past academic studies to estimate the effects of a change. That makes predictions about the impact of a \$15 minimum wage less certain. Moreover, it would be reasonable to expect (and demand) that the move to \$15 would happen in pre-announced steps, but little is known about the optimal timing of such steps or how they would affect employment.

In spite of this uncertainty, the best estimates available for prediction do allow us to draw three main conclusions:

1. There will be a negative employment effect (i.e. job losses) for those currently earning between \$10.25 and \$15, but that effect will be a fraction of the kinds of predictions made by business think tanks. It helps in putting this in perspective to realize that only about 5 per cent of workers currently earn the minimum wage and thus would experience the full \$4.75 increase from \$10.25 to \$15;
2. The total amount of wages going to the set of people directly affected by the minimum wage (those currently earning between \$10.25 and \$15) will increase; and
3. Given the high rate of turnover in this part of the labour market, both the employment costs (i.e. job losses) and the wage benefits will be widely shared among workers.

In May 2011, after nine-and-a-half years of freezing the minimum wage, the BC government implemented the first of a planned set of increases to take the hourly wage from \$8 to \$10.25 over the course of a year. A month earlier, the Fraser Institute had put out a report in which it made the dramatic claim: “Our estimates suggest that an increase in BC’s minimum wage to \$10.25 an hour could lead to over 52,000 job losses” (Veldhuis and Karabegovic, 2011). The institute reached this conclusion based on estimates from academic research applied to workers aged 15 to 24. Their prediction amounts to approximately a 16 per cent decline in employment for this age group.¹

¹ This number represents the upper end of the Fraser Institute’s predicted range but is the only number reported in its conclusions.

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In a similar vein, in an op-ed discussing the BC Federation of Labour's 2014 call for an increase in the minimum wage, the Fraser Institute concluded that it "will impose enormous costs" (Lammam and Macintyre, 2014). These statements are not specific to the Fraser Institute. Any proposal for an increase in the minimum wage garners near-hysterical predictions of calamity. If true, these predictions and conclusions should give us serious pause in proceeding with any minimum wage increases. However, neither history nor research has borne out these dire warnings.

The large negative employment effect from the 2011 minimum wage hike predicted by the Fraser Institute did not materialize. Between 2010 and 2013, employment rates for 15- to 24-year-olds in BC declined by 1.6 per cent (one-tenth of the Fraser Institute prediction). At the same time, employment rates for teenagers and young adults for Canada as a whole remained essentially unchanged. In fact, over the same period the proportion of 15- to 24-year-olds who were students increased by 1.1 per cent for BC while remaining unchanged for Canada as a whole. Thus, even the small relative decline in employment in BC might have had more to do with decisions about school than with reduced employer demand.

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The reasons why the Fraser Institute's predictions are so far off help us to understand what we do and do not know from existing research on minimum wages. The institute's estimated impact is based on a study that finds that a 10 per cent increase in the minimum wage will generate a 6 per cent decline in employment for teenagers (Baker et al., 1999).² That study was published in a high-quality, peer-reviewed journal. Moreover, estimates in a somewhat similar range (a 10 per cent increase in the minimum wage generating between a 3 per cent and 5 per cent decline in employment for teenagers) were found in other papers (e.g. Campolieti et al., 2006). Thus, these estimates should be taken seriously (although emphasizing the extreme end of the range is not called for).

A first point in considering these estimates is that they are based on provincial data from the late 1990s and earlier. Using the same methodology as in Campolieti et al., Brochu and Green (2013) show that when the data are updated to 2012, the estimated effect of a 10 per cent increase in the minimum wage is a more modest 2.5 per cent decline in employment for teenagers. Other researchers have observed the same results, which may have to do with the earlier estimates being for a period of high and persistent unemployment. In other words, in the period since the mid-1990s—when unemployment rates have been lower—the minimum wage effects are smaller. Thus, using the most recent available evidence, we can predict effects below the range found in the Fraser Institute study and less than half of their emphasized, upper bound effect.

More importantly, however, any sizeable employment effect estimate in the existing literature applies only to teenagers. In contrast, Brochu and Green's estimate of the effect of a 10 per cent minimum wage increase for young adults aged 20 to 24 is only a 0.5 per cent decline in their employment rate. And estimates for workers over age 25 imply essentially zero effects on employment. This is such a common finding in the literature that most studies don't bother to present estimates for adults. The Fraser Institute gets its large prediction because it mistakenly applies estimated effects for teenagers to both teenagers and young adults.

2 It is common in this literature to summarize the size of minimum wage effects by talking about the impact of a 10 per cent increase in the minimum wage. The effects of other size changes can be obtained by just scaling these values up or down, e.g. dividing this number in half for a 5 per cent change in the minimum wage. As mentioned earlier, it is unclear whether the effects of a 50 per cent wage increase that is gradually introduced in stages can be obtained by simply multiplying this number by five.

Putting aside the Fraser Institute’s misinterpretation of the economics literature, the fact that impacts of any size have only been found for teenagers is of central importance in any discussion of minimum wage impacts on employment. It implies, first and foremost, that minimum wage increases of the kind we have seen historically in Canada (including BC’s 28 per cent hike in 2011–12) cannot be seen as huge job slayers that imply “enormous” efficiency costs for the economy.³

However, it also suggests that estimates from the existing literature on minimum wages (with its focus on teenagers) may only be of limited use in assessing a move to a \$15 minimum wage. Historically, increases in Canada have tended to keep the minimum wage at between 40 and 50 per cent of the average wage. For example, in 2010 the proposed \$10.25 minimum wage corresponded to 46 per cent of the average hourly wage in BC. In comparison, a \$15 minimum wage would correspond to approximately 60 per cent of the current average hourly wage. Not surprisingly, who gets affected when the minimum wage moves so much further up the wage scale changes. In 2010, 36 per cent of workers in BC earning less than \$10.25 per hour were teenagers and a further 21 per cent were aged 20 to 24. In comparison, in November 2014, 26 per cent of those earning between \$10.25 and \$12 per hour were teenagers, with another 26 per cent being young adults. For workers earning between \$12 and \$15 per hour, only 5 per cent were teenagers and 21 per cent were young adults. In other words, once we look beyond \$2 above the current minimum wage (or above the historic ratio of the minimum wage to the average wage), the workers affected will predominantly not be teenagers. Three-quarters of those with wages close to but below the new minimum will be over age 25.

This observation implies, firstly, that estimates based on teenagers may be of limited use in guiding our predictions of the employment effects of an increase in the minimum wage to \$15 per hour. Secondly, we can’t necessarily assume that earlier estimates for workers over age 25, which show essentially zero minimum wage employment effects, will hold. Historically, we might have seen zero employment effects for adults because employers truly don’t lay off older workers in response to minimum wage increases, or because only a small proportion of such workers were directly affected by the change in the minimum wage.

Instead, we should turn to the research on the effects of *general* wage changes on employment. Beaudry et al. (2012) estimate that a 10 per cent increase in the average wage in an industry implies a 3 per cent decline in the employment rate. To make predictions about the employment impacts of increasing the minimum wage to \$15, we need to take account of how much of a wage increase this implies for the affected workers. In particular, only about 5 per cent of all workers would actually experience a full increase in the minimum wage from \$10.25 to \$15. Approximately 18 per cent of workers with wages between \$10.25 and \$15 per hour (i.e. the directly affected workers) earn between \$14 and \$15, which means they would experience less than a \$1 increase in their wage.⁴ Taking this into account, an increase to \$15 could imply a 7.6 per cent decline in

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3 “Efficiency costs” refers to losses of income and profits that stem from constraining the economy to run less efficiently. Opponents of the minimum wage often argue that minimum wages generate these types of costs because they interfere with the price mechanism.

4 Estimates of minimum wage effects take into account the fact that not everyone directly affected by the minimum wage experiences the full extent of the increase. Here, we are using data that estimate what happens to the employment of workers whose wages are raised a certain amount, not data that records what happens to employment in general in an economy when the minimum wage increases.

employment for those with wages between \$10.25 and \$15 per hour.⁵ Since workers in this range make up about 13 per cent of all workers, the overall implied effect is about a 0.98 per cent decline in the employment rate, which fits with earlier results showing limited effects of minimum wage increases on older workers.

Is the 7.6 per cent estimated employment effect for workers currently earning between \$10.25 and \$15 large or small? It is worth noting that the total wages paid to these workers would increase substantially, even after taking into account the employment effect. That is, if we define the wage bill as wages times number of workers, the hourly wage among this group goes up so much more than the employment rate declines that the total wage bill will increase. So low-wage workers would still be better off as a group, even assuming the worst with respect to employment impacts. Further, there is enough turnover in this part of the labour market that one would expect that the employment effects and the wage benefits will be shared broadly, in the sense that we would not expect to see one group of workers permanently laid off and another group permanently getting higher wages.

A \$15 MINIMUM WAGE WOULD LIKELY REDUCE WORKING POVERTY, BUT THE EXTENT OF THE REDUCTION IS UNKNOWN

The main reason that past increases in the minimum wage did not significantly lower the poverty rate is that they were too small.

Prior studies examining minimum wage increases, where the largest group affected is teenagers, find small effects in terms of reducing poverty rates. However, an increase to \$15 would affect more non-teenagers and is therefore likely to have a greater impact on working poverty.

Little academic literature addresses this question. For Canada, the number of credible papers estimating poverty reduction effects can be counted on one hand. A common conclusion from those studies is that minimum wage increases have had essentially zero impact on provincial poverty rates (Shannon and Beach, 1995; Mascella et al., 2009; Campolieti et al., 2012). This is true because at the levels where minimum wages have been set historically, a majority of minimum wage earners have not lived in poor households (Mascella et al., 2009). However, these conclusions will necessarily be altered if we move to a minimum wage that is 60 per cent of the average wage, since more non-teenagers will be affected. It seems likely that the increase would have some effect in reducing working poverty, though the exact size is uncertain.

Importantly too, the main reason that past increases in the minimum wage did not significantly lower the poverty rate is that they were too small. At \$10.25 per hour, for example, a single person working full time still remained below the poverty line, so the last increase from \$8.00 to \$10.25 would be unlikely to have much effect on the poverty rate (though it may have reduced the depth of poverty for some). But a boost to \$15 (provided it didn't take too long) would indeed take many more people over the poverty line.

5 This result has an interesting parallel in a set of papers that examine the effect of a minimum wage increase on employment by tracking what happens to workers earning between the old and the new minimum wage just before the minimum wage hike (e.g. Campolieti et al, 2005)). While one might predict that most of these workers would be laid off when the wage hike occurs, in fact the estimated effects on employment are similar to those found in papers that estimate the impact of minimum wages on overall employment.

MINIMUM WAGES REDUCE INEQUALITY

Even if minimum wages have weak effects on *poverty*, as long as they are enforced, they will reduce the extent of *inequality* among wage earners. Recent research by Fortin and Lemieux (forthcoming) shows exactly this result for Canada. Further, if (as I have argued) job losses are not overly large and the minimum wage affects more households with full-time workers, it will reduce overall income inequality as well.

Wage and pre-tax and transfer income inequality in Canada grew through the 1980s and 1990s before leveling off in recent years. A less equal wage distribution raises serious concerns about fairness in a society, as even people working full time find themselves having trouble making ends meet. In Green (2014) I argue that a minimum wage is a useful tool for moving toward a more just, more equal society—particularly taking account of its impacts on the labour market discussed here.

For minimum wages to reduce inequality, firms must comply with the law. In other words, it must be rare to see wage below the minimum. Calculations from the 2014 Labour Force Survey show that less than 0.5 per cent of workers in BC were working at less than \$10 an hour. As long as this continues to be true, when the minimum wage is increased, such an increase must, by definition, compress the distribution of wages in the economy. In addition, Fortin and Lemieux (forthcoming) found that reductions in inequality at the low end of the wage distribution in the Atlantic provinces since 2005 has been almost entirely due to the roughly \$3 increases in the minimum wages in those provinces over that time. If reducing wage inequality is a goal, the minimum wage works to achieve it.

HIGHER MINIMUM WAGES ARE ASSOCIATED WITH MORE STABLE JOBS

Minimum wage increases raise the costs for firms that operate on a low-wage, high-turnover model. Evidence for Canada shows that when minimum wages are higher, it takes workers longer to find jobs, but, once found, those jobs last longer and pay more (Brochu and Green, 2013).

One argument for increasing minimum wages is that doing so effectively forces firms to move toward more job stability by investing in better employee training. Any worker knows that there are good firms and bad firms. The former pay relatively high wages, offer benefits and tend to include training. The latter pay low wages, offer few or no benefits and provide little training. Both types of firms can co-exist in the same industry. There are, for example, fast-food chains operating under both models and competing directly with each other. So why don't the firms with lower wages and fewer benefits push their high-paying competitors out of the market? After all, their labour costs are lower. The answer is that firms that pay lower wages have high worker turnover, and turnover is costly because the firms have to spend money and time finding new workers, and because the workers they do have are not there long enough to build up expertise. Part of what a higher minimum wage could do is force firms to stop using low wages as a cost-saving measure because the higher minimum wage eliminates that advantage.

Are increases in the minimum wage really associated with lower turnover and more training? On the first point, the answer is yes. Using Canadian data, Brochu and Green (2013) found that when the minimum wage goes up, workers of all ages are less likely to be laid off in the first year of a job. At the same time, firms reduce their hiring to some extent. So, with higher minimum wages, workers take longer to find a job, but once they find one, it is both more stable and higher paid.

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As we have seen, the net effect of reduced terminations combined with reduced hiring is that the proportion of adults who are employed at any given time is the same when the minimum wage is higher or lower. But the nature of the work relationship is changed. In fact, unlike most other anti-poverty policies, increasing the minimum wage reduces any tendency to offer low-wage, high-turnover jobs.

Wage subsidies, such as the federal Working Income Tax Benefit (WITB), for example, deliver money directly to the working poor and could be seen as a competing policy to minimum wage increases. But such subsidies paid directly to workers do not increase labour costs for firms—which is the catalyst for them to abandon their low-wage practices—and may even encourage them to continue paying low wages if they are able to capture part of the subsidy.

One potential side effect of reducing job turnover is that firms may train their minimum wage workers more. The very fact that these workers are likely to stay connected to a firm for longer suggests that firms are more likely to invest in training. Data showing the extent to which this effect is true are weak at best. Acemoglu and Pischke (1999) argued that minimum wages in the United States should have this effect and provided estimates that there are small positive effects. In contrast, Neumark and Wascher (2001) found large negative effects of higher minimum wages on training for teenagers. The only study I know of that investigates this effect for Canada is Baker (2005), and it concludes that the data are too poor to provide a definitive answer.

The minimum wage increase is unlikely to imply widespread efficiency costs for the economy as a whole.

SO WHERE DOES THIS LEAVE US?

Gathering these strands from the academic literature leads me to the following conclusions:

Claims that increases in the minimum wage will generate huge efficiency costs for the economy and mass unemployment are not credible. While estimates of employment losses from minimum wage increases for teenagers in Canada exist, the estimated effects on adult employment are minimal at best. Those results cannot be translated into big costs for the economy.

When measured against the average wage in the economy, the proposed \$15 per hour minimum wage is outside the range of increases we have historically seen in British Columbia. In that sense, estimates obtained from observing the effects on employment of teenagers as a result of previous changes to the minimum wage are likely to be of limited use in guiding our deliberations. I have argued that given previous studies on the effects of wage increases on employment, increasing the minimum wage to \$15 would likely reduce the employment rate for those directly affected (those with wages currently between \$10 and \$15) by about 7.6 per cent, if nothing else changed in the economy. But, of course, things are always changing in the economy, and what the economic literature is most clear on is that the minimum wage plays only a bit part in determining overall employment. With sound economic growth, the observed changes in employment would not likely reflect such a decline. Moreover, taking account of the size of the directly affected group, the estimated effect on the overall employment rate is 0.98 per cent, which is small relative to the never-ending swings in the economy. Once again, the minimum wage increase is unlikely to imply widespread efficiency costs for the economy as a whole. Of course, since an increase in the minimum wage would likely come with job losses for workers, including young people, we would want this policy to be part of a package that includes effective access to education. Any employment costs that do arise are likely to be broadly shared, given the tendency of workers in lower-wage jobs to rotate through

those jobs, and could be even more broadly shared if we make sure we have a well-functioning employment insurance program to support workers of all ages in a variety of industries.

If there are some job loss effects, should we abandon a higher minimum wage in favour of other income equity and poverty reduction tools? I would argue not. All policies involve trade-offs. The relevant question is how do the benefits on the other side of the ledger compare with these costs? To me, the evidence indicates that higher minimum wages reduce wage inequality and push the economy toward more stable employment.

There is a sense in which the functioning of the labour market represents an important social contract to which we are all signatories. Part of that contract says that if people work, and work hard, they should expect that their share of the final product will allow them to live a life of dignity. A wage structure with substantial inequality that includes people working full time but still ending up in poverty breaks that contract. The result is a society that does not function well, that turns on itself and breaks into groups, that is not as good a place to live, for anyone. The minimum wage can play a role in addressing the inequity of low wages.

Even if minimum wages can have such an impact, opponents often argue that other policies would be better—policies such as increasing the wage subsidies delivered through the WITB. There is no reason to distort the discussion by acting as if we are stuck on a desert island where we are allowed only one policy tool. That isn't the relevant question. The relevant question is whether a \$15 minimum wage should be part of *the set of tools* we use to address inequality and poverty. The minimum wage has effects that differ from the WITB. In particular, it shifts the set of jobs on offer toward more stable ones, which is a potential benefit in and of itself. Moreover, a higher minimum wage acts as a very public signal of a society's standard of fairness. To paraphrase an old saying: Justice must not only be done, it must be seen to be done for there to be a general feeling of a society that works for all. The minimum wage fulfills that role in a way that a wage subsidy added to a paycheck does not.

Even if you grant me these arguments, why consider such a large increase? Why go so far outside the bounds within which we have usually operated with the minimum wage? After all, in its 2013 *BC Agenda for Shared Prosperity* the Business Council of British Columbia called for "modest increases in BC's statutory minimum wage that are tied to inflation" as part of making sure that low-income families get a share of BC's prosperity (Business Council of British Columbia, 2013), and the BC government has recently implemented this policy. This is certainly a good goal. But working with minimum wages in the standard, modest range has not undone the substantial increases in inequality we have witnessed since the 1980s. It is time to take bolder action to achieve the goal of sharing prosperity.

A reasonable reading of the evidence behind these conclusions is that there is considerable uncertainty underlying them. Both estimates of employment and of poverty impacts call for predictions outside the range of variation we have seen before. My reading of the evidence, nonetheless, is that a higher minimum wage has the potential to have sizeable impacts on inequality and working poverty with modest employment costs.

Still, I think that given the uncertainty, it would be wise to move toward the higher minimum wage in clear, pre-announced steps. This is only fair to the firms that will be affected. It will also allow us time to assess the actual impacts and make adjustments as we proceed. But proceed we must, if we are to preserve the social contract and build a just society.

There is a sense in which the functioning of the labour market represents an important social contract to which we are all signatories. Part of that contract says that if people work, and work hard, they should expect that their share of the final product will allow them to live a life of dignity.

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