



WILL A HIGHER MINIMUM WAGE DECREASE POVERTY IN NEW BRUNSWICK?

A REVIEW OF THE EVIDENCE ON MINIMUM WAGES
AND OTHER POLICY ALTERNATIVES

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Will a higher minimum wage decrease poverty in New Brunswick? A review of the evidence on minimum wages and other policy alternatives

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ABSTRACT

This report reviews the evidence surrounding minimum wage increases, living wage policies, taxes and transfers (including rebates, subsidies, and in-kind transfers), and Universal Guaranteed Basic Income to assess how these instruments would impact poverty levels in New Brunswick. The review prioritises evidence-based studies from Canada, and also considers several key studies from the United States. We find that a higher minimum wage is unlikely to significantly reduce poverty. Some studies indicate that an accelerated minimum wage increase would reduce employment and hiring rates, particularly for teens and youth, though others suggest that there would be no significant change in employment rates for low-skilled workers. Canadian studies and reports on living wages are not supported by any substantive evidence or data about how these calculations impact poverty, though some American studies suggest that resultant government transfer reductions and increased taxes could negate the initial

benefits. Canadian studies on taxes and transfers indicate that these programs have a significant effect on poverty, though the degree to which people at risk for poverty benefit from transfers also varies by year, province, family composition, work status and history, ability, and age. Tax transfers especially help seniors and families with children. Government-funded rebates, subsidies, and in-kind transfers can improve the material well-being of those living in poverty, and there is evidence that subsidized child care can stimulate workforce participation, but evidence on the poverty outcomes of subsidies and in-kind transfers is lacking. The limited evidence we have about the potential impacts of a Guaranteed Basic Income on poverty suggests that a GBI might be effective as a poverty reduction strategy, as it would help the groups who benefit less from the current tax and transfer system. A modified, negative income tax version of GBI would be most feasible on a funding level.

INTRODUCTION

Poverty is a complex social and economic condition. There are numerous ways of defining and measuring it, which renders the task of identifying the best strategies for reducing poverty in New Brunswick difficult. However, by looking at the current body of research on policy levers targeted to helping those living in poverty, we can better assess which courses of action would be more impactful for reducing poverty in New Brunswick. Several policy alternatives for addressing poverty are considered in this report: minimum wage increases, living wage policies, taxes and transfers (including government-funded rebates, subsidies, and in-kind transfers), and a Universal Guaranteed Basic Income.

In recent years, there has been much public debate and advocacy surrounding the demand for, and potential impacts of, accelerated minimum wage increases in Canada. A week after Ontario raised its minimum wage from \$11.60 to \$14 on Jan 1, 2018, a CBC article captured the prevailing attitude of uncertainty (from both press and public) that tends to greet major changes in Canadian minimum wage policy, with the statement “We’re the guinea pigs in a real-life research project, and no one can be sure how it will turn out” (Pittis, 2018). In light of the unprecedented nature of such a steep hike in Ontario, and the paucity of recent, evidence-based research on minimum wages in Canada, it is hard to say how this new, much higher rate will impact workers in Ontario, and in the larger economy. Ontario is not the only province participating in this “experiment.” Alberta is set to raise its minimum wage to \$15 per hour on October 1, 2018, and will soon have the highest minimum wage in the country. Alberta’s new minimum wage will be matched by Ontario on January 1, 2019, and then by British Columbia on June 1st, 2021. And while these provinces are the only ones currently committed to reaching the \$15 per hour rate within a concrete timeline, it is possible that other provinces may decide to pursue a steep increase as well, depending on the outcome of Ontario’s experiment.

Debates about minimum wage reform in Canada and the United States tend to refer specifically to the \$15 per hour figure. This is likely related to the influential “Fight for 15” movement, which was initiated in 2012 with a protest staged by New York City fast-food workers, setting in motion debates that led to an increasing number of American cities announcing plans for a \$15 per hour minimum wage. Notably, in 2016, New York’s Governor Cuomo signed a plan for a statewide \$15 per hour minimum wage to be implemented by the end of 2018, indicating that the strong media presence of the “Fight for 15” movement had made an impact. Given the current trend in increasing minimum wage rates across Canada, and in light of vocal proponents of adopting similar measures in NB (e.g. “Fight for 15 Fredericton”), it is important to gather evidence that predicts the impact of an increase to the minimum wage in New Brunswick and the Atlantic provinces. Would an increase similar to those of Ontario, Alberta, and British Columbia produce positive or negative results for the region? More specifically, what outcomes would this kind of increase have on the rate and depth of poverty in New Brunswick?

Historically, advocates of raising minimum wages in Canada have pushed for these hikes as an important tool for alleviating poverty (Battle & Torjman, 2008; Black & Gonick, 2005; Black & Silver, 2005; DeGroot, 2005; Jacobs, 2005a, 2005b). More recent anti-poverty advocacy increasingly proposes going beyond the current incremental indexed rates for provincial minimum wage rates and alleviating poverty by embracing – specifically – a \$15 per hour minimum wage (Stevens, 2017; Klein & Ivanova, 2017). Current debates in New Brunswick echo this trend: the province has seen a steady (but cautious) series of minimum wage increases aligned with annual increases in the consumer price index, with the most recent 25 cent jump bringing the provincial minimum wage to \$11.25 as of April 1, 2018 (“Minimum Wage to

Increase,” 2018). However, some advocates of a \$15 per hour minimum wage are calling this “too little, much too late” (Keefe, 2018).

This report reviews the existing literature to predict what impacts a significant minimum wage increase would have in New Brunswick. We have chosen to prioritize evidence-based studies that draw conclusions from real data. We have also approached this task with a focus, specifically, on what impacts a higher minimum wage would have on poverty rates, as advocacy for an increased minimum wage focuses on poverty reduction as the desired outcome (though, interestingly, empirical studies of minimum wage outcomes tend to focus on labour market reactions rather than poverty outcomes). Because the minimum wage in NB has not yet undergone any hikes as steep as those in Ontario, and because few studies to date have focused primarily on the Atlantic provinces, this review analyzes the assumptions and outcomes of reports on minimum wage hikes and various other anti-poverty policies across a diverse North American geography and timeframe, while prioritizing Canadian studies. Two questions guide this work: First, is there any empirical evidence to suggest that raising the minimum wage would significantly reduce poverty? Second, would other policies (such as living wage legislation, improved tax transfers, or Guaranteed Basic Income) have a greater impact on poverty reduction in New Brunswick?

SUMMARY OF FINDINGS

I. MINIMUM WAGE INCREASES

While writing that is critical of higher minimum wages tends to focus on employment rates and labour market impacts, studies and commentaries that advocate for an increased minimum wage are more likely to frame their arguments around the goal of decreasing poverty. Critics of minimum wage hikes that do address poverty tend to cite Gunderson's statement that minimum wages are a "blunt instrument" to curb poverty (2008), due to being poorly targeted to people actually living in poverty. Other arguments for raising the minimum wages at an accelerated rate address gender inequality in the workforce, since more women work minimum wage jobs (56% of minimum wage workers in New Brunswick in 2016 were women, according to the Department of Post-Secondary Training, Education, and Labour's 2016 Statutory Review). The literature also contains arguments based on concerns about rising market income inequality (Fortin & Lemieux, 2016), and theories of distributive justice (Green, 2014). In comparison to works that base advocacy for an increased minimum wage on the belief that a higher wage will have a positive impact on poverty levels, reports that use existing data to draw conclusions and make predictions regarding the impact of an accelerated minimum wage increase tend to be pessimistic about the results— we should note, though, that many studies on the minimum wage measure the success of minimum wage increases in terms of employment rates and job tenure, rather than impacts on poverty (Jardim et al., 2017; Lau & Navarro-Génie, 2017; Murphy, Lammam & MacIntyre, 2016; Brennan & Stafford, 2014; Brochu & Green, 2013; Sen, Rybczynski & Van De Waal, 2011; Godin, Keith & Veldhuis, 2009; Mascella, Teji & Thompson, 2009; Gunderson, 2008; Gunderson, 2007; Campolieti, Gunderson & Riddell, 2006; Yuen, 2003). Of the limited studies that do address impacts on poverty, some maintain that any correlation between minimum wage hikes and poverty rates cannot be substantiated, as changes in poverty rates

occurring shortly after a minimum wage increase are not necessarily proof of causality (Shannon & Beach, 1995). Other studies conclude that raising the minimum wage has no significant impact on poverty reduction (Neumark, 2015; Sen, Rybczynski, & Van De Waal, 2011; Burkhauser & Sabia, 2007; Green, 2015; Godin & Veldhuis, 2009), while some find that minimum wage increases have negative outcomes, raising, rather than reducing, poverty rates (Campolieti, Gunderson, & Riddell, 2006; Neumark, Schweitzer, & Wascher, 1998; Neumark & Wascher, 1997).

II. LIVING WAGE POLICIES

We believe that it is also important to discuss the possibility of "living wage" policies like the one adopted by the City of New Westminster, BC, in 2011. This alternative is increasingly entering public discourse as a poverty-reduction strategy that promotes basic human dignity by allowing a standard of living that permits social and civic engagement. Cities across the country are releasing living wage calculations as the first step toward implementing living wage policies. These calculations are important because they inform policy-makers and the public about the gap between the minimum wage and a living wage that ensures a reasonable quality of life and social inclusion. They also give us insight into how poverty lines can vary significantly within different regions of a province (insights that are lost when we try to define a province-wide minimum wage that will cover basic living costs). However, it is worth noting that the sample family used by the Living Wage Framework in wage calculations does not closely resemble typical minimum wage or low wage employees. The Living Wage Framework uses a sample family of 4 (2 adults, 2 children), where both adults are working full time, while minimum wage workers tend to be young, part-time workers. Moreover, the majority of living wage policies currently in place throughout Canada have been implemented by employers that typically demand high-skilled workers and previously paid wages higher than the minimum wage.

The question of what we should do with living wage calculations is complicated. The majority of research surrounding possible living wage policy in Canada is rooted in theory rather than evidence (Johnston & Saulnier, 2015; “Calculating” 2015; Ivanova & Klein, 2015; Tiessen, 2015). While we have uncovered a few sources that use data to interrogate the impacts of living wage laws in the United States, the findings of these studies are marked as inconclusive, or show no significant correlation with poverty reduction (Lammam, 2014; Toikka, Yelowitz, & Neveu, 2005).

III. TAXES AND TRANSFERS

The literature on the tax and transfer system in Canada tends to have more relevant, evidence-based studies that give insight into impacts on poverty. This likely has to do with the fact that these policies are specifically targeted to reduce poverty in select demographic groups (i.e. seniors, those with disabilities, families with children). Therefore, studies evaluating these instruments are primarily interested in the impact they have on poverty. Reports on the Earned Income Tax Credit (US) and Working Income Tax Benefit (Canada) suggest these methods would have a significant impact on poverty reduction in North America (Neumark, 2015; Torjman, 2014; Burkhauser & Sabia, 2007); similarly, many studies on child care subsidies, social assistance, and old age security and income supplements show that these policies have a significant impact on poverty (Burton & Phipps, 2017; Angyridis & Thompson, 2016; Corak, 2016; Frank, 2016; Heisz & Murphy, 2016; Saulnier, Johnson & Johnston 2016; Torjman, 2014; Schirle, 2013; Sharpe & Capeluk 2012; Battle, Torjman, & Mendelson, 2011; Hunter, Douglas, & Pederson 2008; HRSDC, 2006; Jackson, 2006), though some studies state that more could be done, particularly where social assistance programs for adults living with disabilities are concerned (Torjman, 2017; Battle et al., 2010; Battle, Torjman & Mendelson, 2010; Veall, 2008).

Evidence surrounding rebates, subsidies, and in-kind transfers generally evaluates the success

of these programs through metrics related to (but not synonymous with) poverty (e.g. food insecurity) and are generally not positioned to reduce the overall poverty rate. The literature surrounding subsidized child care programs focuses on Quebec and shows increases in maternal labour supply (Baker et al., 2008; Lefebvre & Merrigan, 2008), as well as significant improvements in cognitive development among children from disadvantaged households attending provincial child care centres (Lefebvre et al., 2008). There is evidence that “energy poverty” is a pertinent issue in Atlantic Canada (Green et al., 2016b; Green, 2016), which could be addressed through improved energy rebates and subsidies, but no evidence on how energy rebates impact poverty generally. Food insecurity is higher in the Maritimes, particularly among children (Tarasuk, Mitchell, & Dachner, 2016), and government food/nutrition programs targeted to children (such as school meal programs) could be impactful – but, again, there are no studies tracing the impacts these programs have on poverty. There is limited Canadian evidence on the impacts of housing subsidies and social housing programs on poverty.

IV. UNIVERSAL GUARANTEED BASIC INCOME

A basic income based on a negative income tax model or a refundable tax credit model could be a logical addition to the existing tax and transfer system, as it would address the gap in support experienced by those who do not qualify for Old Age Security/Guaranteed Income Supplements and the Child Tax Benefit. However, studies on a Universal Guaranteed Basic Income (UGBI) are often inconclusive, and proposals for implementing a form of Basic Income in Canada and the provinces rely, of necessity, on conjecture. One source suggests that if existing benefits were reduced by 24.8% (largely through the elimination of non-refundable tax credits) to accommodate the increased spending, a guaranteed income issued in the form of a refundable tax credit would decrease poverty by up to 70% in New Brunswick, and, if

implemented nationally, it would significantly reduce poverty for most of the Canadian population (Stevens and Simpson, 2017, p. 134). However, this conclusion is based on simulated evidence rather than historical data. Other simulation-based research suggests that a true UGBI, where everyone receives equal benefits regardless of other income, would dramatically increase poverty in at-risk groups (such as seniors and low-income families) because it would likely replace existing tax and transfer programs that benefit those groups. An income-based model that supplements existing programs, however, could significantly reduce poverty (Macdonald, 2016). There is also evidence that a UGBI could decrease labour force participation due to built-in disincentives to work (Clavet, Duclos & Lacroix, 2013).

CONCLUSION

We conclude that there is a need for more evidence-based Canadian studies on these policies. In particular, we need more studies with a focus on the Atlantic provinces. There is also a need for more studies that evaluate the effectiveness of these policies in terms of their impact on poverty. In addition, we note a problematic disconnect between the advocacy-focused and evidence-focused literature on these policies. While advocacy work is more likely to address the poverty outcomes of specific policy instruments, it often does so by relying on broad, general assumptions about the effectiveness of these instruments, rather than drawing on existing data. Meanwhile, empirical studies, though data-driven, are more likely to track labour market reactions than poverty outcomes. This complicates the task of making informed policy decisions aimed at reducing poverty.

The evidence we reviewed suggests that an accelerated increase in the minimum wage would not be the best recourse for reducing the rate and depth of poverty in New Brunswick. Living wage policies would be even less impactful. There is evidence that tax and transfer programs are the most effectively targeted strategy we currently have for reducing poverty. Therefore, adding a modified Universal Guaranteed Basic Income to the existing system of transfers could lift a larger group of people out of poverty.

METHOD AND SCOPE

The goal of this review is to identify if there is compelling evidence based on real data that will allow us to predict the outcomes of policies aimed at reducing poverty in New Brunswick. Because our aim is to isolate policies that will have the highest impact on reducing poverty in New Brunswick, we are focusing not only on what the data tells us about the possible outcomes of an accelerated minimum wage increase, but also on what the existing literature says about the impacts of living wage legislation, taxes and transfers, and universal basic guaranteed income.

LIMITATIONS

This review's task of identifying poverty outcomes for various policy instruments is complex, not least of all because poverty itself as a socio-economic condition can be hard to quantify. Mendelson and Notten (2016) point out some of these problems: for instance, a household that is technically above the income-defined poverty line could be saddled with debt or face increased expenses due to special needs or living in an area with high cost of living. Further, existing poverty measures do not "take into account the availability or the quality of public services" (p. 3). There is also a technical problem with measurements based on annual income that might not fully account for periods of wage deprivation. Lastly, there are also social dynamics of inequality related to gender, indigeneity, race, immigrant status, and ability that must be considered in a more comprehensive measurement of poverty.

Most of the recent studies and reports use existing data to make simulations that predict labour market responses to changes in wage and subsidy policies, but these predictions are, of necessity, imperfect: they must rely, to some extent, on theories and assumptions about how the labour market works. Moreover, few studies focus on policy outcomes in the Atlantic provinces, an economically and demographically-distinct region. For example, New Brunswick is one of the "oldest" provinces with an estimated median age of 45.3, which is quite high compared to the national median age of 40.6 and Alberta's median age of 36.7 (StatCan, "Annual Demographic Data," 2017, p. 26). New Brunswick also loses a higher proportion of its skilled human capital to provinces that offer better job opportunities and wages – and this is likely the reason New Brunswick was the only province with a shrinking population according to the 2016 Census (Fraser, 2017).

While we attempt to compensate for this gap in the research by including studies focused on different regions, we are cautious about applying

these results and recommendations to a New Brunswick context, due to large discrepancies between provinces in terms of labour market demographics and economies (Townson, 2009; Loopstra, 2015). We should also be conscious of the impact of possible biases: not only do sensationalist results tend to get published more easily, but an author's (conscious or unconscious) personal bias may influence their research design and the frameworks they use to measure the success of a policy instrument (Campoliteti, Gunderson & Riddell, 2006).

Below, we further breakdown the limitations we encountered in the literature by individual policy:

I. MINIMUM WAGE INCREASES

Previous reviews of the literature on minimum wages in Canada have noted that there is simply not a lot of credible evidence "estimating poverty reduction effects" of minimum wage hikes (Green, 2015, p. 6). We have found that few studies in Canada are able to say anything substantive about how higher minimum wages affect poverty levels (either positively or negatively). Even fewer studies limit their scope to the Atlantic provinces. Therefore, we include what evidence is available from other provinces about the impacts of minimum wage policies on poverty, as well as select evidence from the United States. There are limitations to this approach, however. Many of the studies with the most reliable data are no longer recent, and a large portion focus on minimum wages in the United States. Studies that use historical data to simulate minimum wage outcomes need to go far back in time to get their data sets, which raises questions about whether a 2018 labour market will behave the same way as a 1998 market. Meanwhile, reports on minimum wage impacts in the United States may be more recent, but they are not an accurate representation of poverty outcomes in Canada. This lack of relevant Canadian evidence suggests the need

for more comprehensive research on the impacts of minimum wage increases in Canada, and specifically in the Atlantic provinces.

Lastly, the literature on minimum wages in Canada tends to focus on employment rates rather than poverty. Even if we could infallibly predict labour market reactions to policy changes, data on employment rates (often cited for minimum wage studies) does not tell the whole story about poverty. It is true that poverty is inextricably tied to labour market forces beyond the government's control, especially where minimum wage policy is concerned (for instance, whether a wage hike will result in reduced hours and/or fewer jobs, or, conversely, whether such changes could lead to greater job security). However, to get an accurate picture of poverty in a particular geographic region, we have to consider more factors than employment rates.

II. LIVING WAGE POLICIES

We have found no Canadian studies that advocate for establishing living wage policies that substantiate their recommendations with data. This policy alternative has grown in popularity over recent years and has been trending since 2015, with the CCPA publishing several articles that meticulously map out reasonable living wages for many major Canadian cities. While nearly every study concludes that a living wage would increase the quality of life within low-income households, it is difficult to separate a living wage from other policies, as living wage calculations factor in pre-existing tax transfers and benefits, and vary year-to-year depending on what kind of government assistance is available.

There is more data available regarding the outcomes of living wage policies in the United States (Lammam, 2014; Toikka, Yelowitz & Neveu, 2005), and some Canadian studies use this information to draw conclusions about the policy's potential effectiveness in reducing Canadian poverty rates (Lammam, 2014; Brennan, 2012). However, due to the different labour markets, demographics,

and forms of governance between American states and Canadian provinces, the conclusions of these reports cannot accurately predict the outcomes of living wage policies in a Canadian context.

III. TAXES AND TRANSFERS

Because various tax and transfer policies have been implemented throughout Canada over many years, reports have been able to draw on a sizeable pool of data for evidence regarding the outcomes of these policies (e.g., Burton & Phipps, 2017). It is difficult, however, to estimate the impact of each policy on poverty in New Brunswick, as the forms, rates, and benefits of tax and transfer policies vary over time and by location. Province-specific reports tend to focus on tax and transfer policies outside the Atlantic provinces (Torjman, 2014; Hunter, Douglas & Pederson, 2008), and those that encompass New Brunswick (because they are national in scope) quickly become dated as changes in government result in changes in tax and transfer policies (see Battle, Torjman & Mendelson, 2011). Moreover, the simultaneous existence of many federal and provincial tax and transfer policies within a single province at any given time makes it nearly impossible to separate and determine the impact of each policy on poverty rates. Even when historical data shows that the introduction or improvement of a tax transfer program is followed by lowered poverty rates in a specific demographic, this correlation can be influenced by other factors, such as a change in the labour market (see again Burton & Phipps, 2017). On the other hand, reports that show no correlation between tax transfer programs and reduced poverty rates do not necessarily prove that these policies are ineffective. Rather, we must take into consideration outside forces, like economic recessions, when interpreting results that show no significant change in response to tax transfers because, during economic downturns, even maintaining the "status quo" for poverty statistics could be a sign of an effective anti-poverty policy (e.g. Heisz & Murphy, 2016). Government-funded rebates, subsidies, and in-kind transfers

are targeted to improve the material well-being of at-risk groups and low-income households, but the effectiveness of these programs tends to be measured in terms factors associated with – but not synonymous with – poverty. Therefore, while it is likely that improvements in existing energy rebates and subsidies, food and housing subsidies and social programs, and subsidized child care would impact poverty rates both immediately and long-term, the impacts are indirect and difficult to quantify.

IV. UNIVERSAL GUARANTEED BASIC INCOME

To date, little research has been done on the potential impacts of a Universal Guaranteed Basic Income (UGBI) in Canada. One report in particular estimates the effectiveness of UGBI as a poverty reduction strategy for Canada, both nationally and provincially (Stevens & Simpson, 2017). However, this report draws on data simulations, rather than historical evidence, and is based on theory and speculation. Even though Canada previously implemented a pilot program for UGBI in Dauphin, Manitoba, during the 1970s (CBC, “Mincome,” 2010), the data produced by this project was never analyzed (Forget, 2011), although the results of the experiment do indicate improvements in the overall health of the test group (CBC, “Mincome,” 2010; Forget, 2011). Therefore, while data exists, no strong evidence regarding the effectiveness of this policy is currently available. An ongoing pilot study implementing a UGBI program in 3 Ontario cities promises to shed some light on the outcomes of UGBI policy in a Canadian context. That being said, its findings may not be easily applied to a New Brunswick context.

REVIEW OF LITERATURE

I. MINIMUM WAGE INCREASES

Minimum wage refers to the base hourly wage employers are legally required to pay their employees. Minimum wage rates are determined at the provincial level, and minimum wage legislation is frequently revisited, as rising inflation leads to higher costs of living, putting pressure on provincial governments to increase hourly rates of pay. Because minimum wage laws dictate the lowest amount of income a worker can receive, it is commonly assumed that raising the minimum wage will result in higher annual incomes for those most in need, thereby reducing rates of poverty (Battle & Torjman, 2008; Black & Gonick, 2005; Black & Silver, 2005; DeGroot, 2005; Jacobs, 2005a; Jacobs, 2005b). However, research shows that the relationship between poverty and minimum wages is much more complex, as not everyone living in poverty earns a minimum wage, and not everyone who earns a minimum wage is poor. Moreover, attempts to determine whether there is a correlation between minimum wage and poverty levels are further complicated by other factors, such as the impact of wage hikes on employment rates and job security. The majority of empirical studies on poverty rates are unable to reach a conclusion about the effectiveness of minimum wage increases as a poverty reduction tool and remain cautious about assuming a correlation between minimum wage rates and poverty rates.

POVERTY AMONG MINIMUM WAGE EARNERS

New Brunswick's Department of Post-Secondary Education, Training, and Labour released a 2016 Statutory Review of the Minimum Wage using 2014 data from the service industry, where the largest number of minimum wage workers are employed. The review finds that the expected income of minimum wage earners placed them below the low-income line according to three commonly-used poverty measures (Market Basket Measure, Low Income Cut-Off, and Low Income Measure), at \$16,891 per year before

taxes (p. 5). However, this review is cautious about forwarding a higher minimum wage as the best solution for eradicating poverty, noting that not all minimum wage earners rely solely or primarily on this income to support themselves and their families (p. 6).

In the absence of a sizeable pool of recent data that could be used to analyze the impacts of accelerated minimum wage increases in Canada's present economy, many studies turn to overviews of the current demographic breakdown of minimum wage earners to show that minimum wage policy is not effectively targeted to reduce poverty. Reports arguing against an accelerated minimum wage increase tend to refer to the fact that a large number of individuals and families living in poverty do not directly benefit from minimum wage hikes. While reasons for this vary, one recurring explanation is that not everyone living in poverty earns a minimum wage, and many of those who do earn a minimum wage are typically supported within the safety net of families with higher incomes. For example, publications from The Atlantic Institute for Market Studies (whose contributors are emphatically against minimum wage hikes) tend to use demographic data to indicate that far more minimum wage earners are teens living with family than single heads of households (e.g. Gunderson, 2008).

There is limited evidence that accelerated minimum wage increases have a significant impact on poverty levels, though, if we focus on the impacts of minimum wage increases on the working poor (instead of on poverty levels broadly), there is evidence that accelerated increases would benefit those who still live in poverty despite participating in the labour force. One 2012 Metcalf study of Ontario's working poor (full-time employees whose earnings do not exceed the poverty line) observes that large increases in working poverty in Ontario between 2000 and 2005 were followed by a moderating

trend between 2006 and 2012. A 2016 CCPA publication cites the Metcalf study and attributes this improvement both to increases in the minimum wage and to changes in available income supplements bringing some workers above the low-income measure (“OnPolicy” p. 6). A parallel fall in employment rates is noted, though this is not attributed to the minimum wage increases, but rather to complex forces in the labour market.

In an American study that draws on March Current Population Survey (CPS) data from 1990-2014 (Lundstrom, 2017), the scenario of a 12% increase in the minimum wage results in 16.8% of benefits flowing to the working poor—a statistic that falls just below the peak of a 25-year period (p. 29). However, this report suggests that this improved target efficiency is likely due to external forces, such as teen unemployment and increasing poverty rates. According to Lundstrom (2017), the employment rates for teens (aged 16-19) dropped from 42% in 1999 to 26% in 2014 (p. 29); and “[s]ince teens make up a significant share of low-wage workers, and a larger share of non-poor low-wage workers,” Lundstrom argues, “a reduction in teen employment could improve minimum wage target efficiency” (2017, p. 29). Further, this report shows that the poverty rate among low-skilled individuals has significantly increased from 2001 (when 19.1% of low-skilled individuals, such as those with less than a grade 12 education, lived in poor households) to 2014 (when it reached 23.1%) (p. 29). This suggests that the minimum wage has not increased its target efficiency, but rather that more low-skilled workers are currently poor than was previously the case.

A Canadian study by Campolieti, Gunderson and Lee (2012) serves as an example of how higher minimum wages might be a poorly targeted policy. After analyzing trends from 1997-2007 national data, the authors make simulations based on 2008 data and find that “only about 30% of the net earnings gain from minimum

wage increases goes to the poor while about 70% ‘spill over’ into the hands of the non-poor” (p. 287), with the poor disproportionately impacted by job losses. Based on their analysis of Canadian data from 1981-2004, Sen, Rybczynski, & Van De Waal (2011) observe that a 10% rise in the minimum wage is “significantly associated with” a 4-6% increase in families (single- or two-parent) living below the poverty level (LICO) (p. 36). Only among the elderly was there no significant correlation between minimum wage rates and poverty rates.

Though few Canadian studies focus on the poverty outcomes of minimum wage increases, this phenomenon is well-documented in the United States. Neumark (2015), for example, finds that minimum wage increases do not significantly reduce poverty in the United States (though there is no indication that they significantly increase poverty, either). Neumark attributes this finding to the imprecise targeting of minimum wages: because minimum wages problematically focus on low wage work, rather than low family incomes, many of the benefits of higher minimum wages go to high-income families and do not significantly impact the poor. Neumark offers various reasons for this. Based on 2014 data from the Current Population Survey (CPS), his calculations show that 57% of poor families with heads of household between the ages of 18 and 64 have no workers (p. 2). Meanwhile, some workers are poor because of low hours rather than low wages (CPS data shows that “46% of poor workers have hourly wages above \$10.10, and 36% have hourly wages above \$12” [p. 2]). Finally, many low-wage workers are not poor because they are in families with higher incomes (this applies particularly to teenagers).

Burkhauser and Sabia (2007) similarly find that minimum wage hikes in the United States have no significant impact on poverty. Focusing specifically on the working poor and single mothers, they find that raising the minimum wage is an ineffective anti-poverty policy because

most minimum wage workers live in non-poor families and most workers living in poor families earn wage rates higher than proposed increases. Using data from the March CPS and simulating the 1996-1997 federal minimum wage increase, Burkhauser and Sabia acknowledge that although 53.4% of the single mothers who would gain from a minimum wage hike are poor (p. 263), they find no evidence that such increases would decrease poverty rates. Instead, their calculations show that 87% of workers who benefit from a minimum wage increase live in non-poor families, and poor single mothers receive only 3.8% of all benefits (p. 262).

These findings are consistent with the conclusions of older studies, which indicates that there has been little change in the targeting and outcomes of minimum wages in Canada and the United States over the past few decades. Law (1999), Neumark, Schweitzer, and Wascher (1998), Neumark and Wascher (1997), and Shannon and Beach (1995) all conclude that increases in minimum wages rates in Canada (Law, 1999; Shannon & Beach, 1995) and the United States (Neumark, Schweitzer, & Wascher, 1998; Neumark & Wascher, 1997) have no significant correlation with reductions in poverty and, in some cases, wage hikes produce regressive, or negative, outcomes. Like more recent studies, these works conclude that most low-paid workers are not in low-income families (Law, 1999; Shannon & Beach, 1995) and that wage hikes have perverse impacts on the distribution of incomes across households (Law, 1999; Neumark & Wascher, 1997; Shannon & Beach, 1995), even to the extent that the resultant inflation increases—rather than reduces—the proportion of families that are poor and near-poor (Neumark, Schweitzer, & Wascher, 1998; Neumark & Wascher, 1997).

EMPLOYMENT RATES

In the media coverage surrounding planned incremental minimum wage increases to \$15 per hour in Ontario, Alberta, and British Columbia, the most commonly-cited concern is that such

increases will result in significant decreases in employment rates, especially if implemented on an accelerated scale, as with Alberta's plan for \$15 by late 2018, and Ontario's plan for early 2019. When minimum wage jumps are announced, the business community, think tanks, and watchdogs are quick to offer projections for the scale of impact in terms of the total number of jobs affected. Last year in Ontario, those numbers ranged from 50,000 to 185,000 (CBC, "Ontario's Minimum Wage," 2017). Since the implementation of the \$14/hr minimum wage in Ontario, media outlets have also been flooded by controversial human interest stories depicting the negative effects of the recently changed policy—the most infamous, perhaps, being the Tim Hortons' franchise owners' resultant decision to cut certain employee benefits (see Saltzman, 2018).

Recently in the US, a working paper (Jardim et al., 2017) examining the impacts of minimum wage increases in Seattle attracted media attention, as the paper offers some of the first evidence of how the roll-out of \$15 per hour minimum wage plans will affect the American labour market. The study analyses data following the second phase-in of the Seattle Minimum Wage Ordinance, which encompasses two minimum wage jumps: \$9.47 to \$11 per hour in 2015, and another jump to \$13 per hour in 2016. The authors conclude that the second jump resulted in a 9% reduction in hours worked in low-wage jobs. They estimate that "the minimum wage ordinance lowered low-wage employees' earnings by an average of \$125 per month in 2016" (p. 1).

Not all studies find negative employment impacts following a steep minimum wage increase. A frequently-cited 1994 US study analyzes the impacts of a significant minimum wage increase in New Jersey in 1992 (Card & Krueger). Using a case study of fast food restaurants in the region before and after the increase, with reference to a control group in Pennsylvania, the authors find no evidence of a significant decrease in employment rates for fast food workers (p. 780).

Instead, the fraction of full-time workers relative to part-time increased by 2.64%, while Pennsylvania saw a decrease (-4.65%) in the ratio during the same period (p. 785). They also note one market reaction that tends to be overlooked in the literature on minimum wages: namely, that the increase resulted in higher fast food prices in New Jersey relative to Pennsylvania (p. 787). The authors also state that the wage increase in question occurred during an economic recession, and therefore it is “unlikely that the effects of the higher minimum wage were obscured by a rising tide of general economic conditions” (p. 773).

To return to Lundstrom’s scenario of a 12% increase in the minimum wage (2017), his calculations imply that “as the real federal minimum wage increases, the employment of poor minimum wage workers rises relative to the employment of non-poor minimum wage workers. And, conversely, as the real minimum wage falls, the employment of poor minimum wage workers falls relative to the employment of non-poor minimum wage workers” (2017, p. 36). Though surprising, and arguably “counterintuitive” (Lundstrom, 2017, p. 40), this positive relationship between an increased minimum wage and its target efficiency (i.e., the extent to which it benefits the poor) suggests that an increased minimum wage does not result in increased unemployment among low-skilled, poor individuals. However, Lundstrom advises caution in using these statistics as advocacy for steep hikes to the minimum wage, as the range of the federal minimum wage over the 25-year study period was very narrow (between \$6.23 and \$7.55 in 2014 dollars based on 5-year moving averages), and the minimum wage might not benefit such a high percentage of poor workers if the rate was raised to a level beyond this range (Lundstrom, 2017, p. 42).

As discussions about a \$15 per hour minimum wage begin to unfold in Atlantic Canada (e.g. Harding, 2018), it is imperative that we carefully consider what the evidence tells us about

the possible implications of such a policy for New Brunswick. Unfortunately, to date, most projections of minimum wage impacts focus on other provinces. For example, Godin, Keith, and Veldhuis (2009) find that an increase in British Columbia’s minimum wage from \$8 per hour to \$10 per hour would decrease employment rates, potentially harming, instead of helping, low-wage workers. Similarly, Mascella, Teja, and Thompson (2009) simulate a raise in Ontario’s minimum wage in their study and find a risk of increased unemployment (p. 377).

Conversely, in a study performing a series of 70 econometric regressions using data from 1983-2012, 90% of the regressions show no statistically significant correlation between a higher minimum wage and unemployment levels; and of the 7 statistically significant regressions, the results are mixed, with 4 suggesting a reduction in employment, and 3 suggesting an increase (Brennan & Stanford, 2014, p.6).

YOUTH AND YOUNG ADULT EMPLOYMENT

Arguments against minimum wage increases are often founded on the assumption that “the objective of public policy is to reduce unemployment” (Lau & Navarro-Génie, 2017, p. 10), and evidence suggests that those who stand to lose the most are youth and young adults. This raises questions about how concerned we should be about teen employment rates, and whether the frequently-cited 3-6% decline in teen employment is truly a cause for worry. In poverty reduction strategies, the target demographic is not likely to be the teenage population, but rather single-income families or simply low-income earners (Godin, Keith, & Veldhuis 2009).

Youth employment has been a key topic in the minimum wage debate for over a decade, with the argument always returning to the point that high minimum wages decrease youth employment. In a 2007 review of the evidence surrounding the effects of minimum wage increases on employment, Gunderson

summarizes the findings of Canadian evidence from the early 2000s, suggesting that a “10 percent increase in the minimum wage would lead to a 3 to 6 percent reduction in the employment of teens” (p. 11). This conclusion is based on several Canadian studies (Baker, Benjamin & Stanger, 1999; Campolieti, Fang & Gunderson, 2005a, b; Campolieti, Gunderson & Riddell, 2006; Yuen, 2003). Gunderson’s summary of the Canadian evidence has been repeated several times since, in publications arguing against minimum wage increases (Godin & Veldhuis, 2009; Murphy, Lammam, & MacIntyre, 2016; Lau & Navarro-Génie, 2017).

In a study on the minimum wage effects on teen (un)employment and family poverty in Canada, Sen, Rybczynski, & Van De Waal (2011) use provincial data from 1981 to 2004 to estimate the impacts of minimum wage hikes on teen unemployment levels. Their calculations—which rely on Instrumental Variables (IV) estimation—show that when the minimum wage is raised by 10%, employment is significantly affected. Specifically, they find that a higher minimum wage reduces employment among teenagers aged 15-19 by 4.6% (p. 40) and among adults aged 25-44 by 1.4% (p. 44). Drawing on evidence from the Survey of Consumer Finances (SCF), which shows that teens below the LICO are more likely to earn significant portions of their households’ income, they argue that it is “quite possible that a higher minimum wage may actually lead to higher poverty rates through increased teen unemployment, resulting in a significant negative shock to the household income of low-income families” (37). Using a pre-specified research design to try to eliminate bias, Campolieti, Gunderson & Riddell (2006) use 1981-1997 Canadian data to find that the adverse effect of higher minimum wages on youth and young adults (16-24) is statistically significant, with an elasticity of -0.256 (p. 205). These changes take some time to occur: in the Campolieti, Gunderson, and Riddell study, a “lagged” minimum wage elasticity (-0.163) is

larger than the “contemporaneous elasticity” of -0.093 (p. 205). When distinguishing between skilled and less-skilled (no postsecondary education) youths, the impact is greater and more immediate for the less-skilled youths, with a higher contemporaneous elasticity: “Based on the separate age groups, the largest adverse employment effect is for part-time teens (-0.449) and full-time young adults (-0.286)” (p. 206).

Teen employment rates should not be overlooked in considerations of the poverty outcomes of minimum wage increases, but we should also be cautious about characterizing the typical minimum wage worker as a low-skilled teenager gaining work experience while living with family. A 2016 review of the minimum wage in New Brunswick found that 54% of minimum wage workers were between ages 15 and 24, suggesting that the remaining 46% of minimum wage workers are aged 25+ (p. 2), which is hardly insignificant. The study also found that “[a]lthough the majority (59%) of minimum wage earners had a high school diploma or less, 28% of minimum wage earners had completed post-secondary education” (“Statutory Review,” 2016, p. 2).

JOB SECURITY

While most of the discourse surrounding minimum wages has tended to focus on overall employment rates, it may also be valuable to think in terms of job security. Some commentaries predict that a higher minimum wage translates to greater job stability, possibly by discouraging “high-turnover” employment models (Green, 2015, p. 2). Based on their analysis of data from 1979-2008 on employee transition rates (quits, layoffs, and hires) after significant minimum wage hikes, Brochu and Green (2013) find that minimum wage increases result in greater job security but lower hiring rates for workers of all ages, especially youth. The data shows a significant decrease in separation rates for low-skilled workers (aged 15-59 years with a high school diploma or less) who have been employed for under a year following

a minimum wage increase. They show that a “10% increase in the real minimum wage is associated with approximately a 5% decline in the probability a worker separates from his or her job in the next year” (p. 4). The same 10% results in a 0.76% decline in the overall employment rate, and 1.7% decline for teenagers. Although the separation rate for teenagers is higher, it is still a marginal difference.

Much of the literature on minimum wage impacts in Canada focuses on how wage increases alter the labour market equilibrium. Specifically, many studies are concerned about job losses or decreased hours for low-skilled workers in response to minimum wage increases. The literature suggests that increased minimum wages are associated with lower hiring rates, especially for teenagers – this does not, however, tell us much about how minimum wages impact poverty. The majority of empirical studies that mention poverty rates are cautious about recommending accelerated minimum wage increases as an effective anti-poverty tool. Many are unable to reach a conclusion regarding the relationship between minimum wages and poverty levels. A more indicative metric for measuring the impacts of minimum wages on poverty might be looking at the “working poor” population as distinct from the overall population living below the poverty line (e.g. Stapleton, Murphy & Xing, 2012), but this approach is not common.

II. LIVING WAGE POLICIES

One argument for raising the minimum wage is that the minimum wage is not a living wage. In other words, the minimum wage does not provide a family with enough income to rise out of poverty.

However, certain anti-poverty advocates use this information, not to propose raising the minimum wage, but rather to implement local living wage policies and programs as a poverty reduction strategy. A living wage, according to Living Wage

Canada, is “not the same as the minimum wage, which is the legal minimum all employers must pay” (“What,” para. 1). Rather, “a living wage reflects what earners in a family need to bring home based on the actual costs of living in a specific community” (“What,” para. 1). Unlike a minimum wage, which is applied consistently across a province, a living wage is calculated according to the cost of living and the programs/ services available in a particular community; it consists of the “hourly rate at which a household can meet its basic needs once government transfers have been added to the family’s income and deductions have been subtracted” (“What,” para. 2).

Living wages are being proposed as a more helpful metric than minimum wages because they are determined regionally or municipally rather than provincially, taking into account the significant variation in poverty levels that we find within each province: for example, in a recent study based on 2014 data, child poverty levels were found to be 18.8% in Halifax but an alarming 32.8% in Cape Breton (Frank, 2016, p. 11). Measuring poverty rates at a federal or even provincial level can omit these significant disparities, painting an inaccurate picture. The Canadian Centre for Policy Alternatives has recently published numerous reports calculating the living wages for various communities in Canada (Fernandez, Hajer, & Langridge, 2017; Ivanova, Klein, & Reaño, 2017; Bruijns & Butcher, 2014; Gingrich, Enoch, & Banks, 2014; Kingston Community Roundtable, 2011; Mackenzie & Stanford, 2008), all of which are consistently several dollars higher than provincial minimum wages. In 2011, the City of New Westminster, British Columbia, became the first “Living Wage Employer” in Canada, and it has since been joined by multiple other cities and businesses across the country, all of which pay employees an hourly rate much higher than the current minimum wage. For example, the living wage for employees of the City of Vancouver, BC, was raised to \$20.64/hr in June of 2017 (Matheson,

para. 2), whereas the current minimum wage for the province of British Columbia (as of April 1, 2018) is only \$11.35.

The CCPA has not yet calculated a living wage for any communities in NB and tends to focus primarily on producing living wage calculations for Central and Western Canada, where living wage policy is increasingly being explored. However, a CCPA report released in 2015 finally turned its attention to the Atlantic region and calculated a living wage for Halifax, NS; and in 2016 this amount was updated alongside the additional calculation of a living wage for Antigonish, NS (Saulnier, Johnson, & Johnston, 2016). According to the most recent report (2016), the living wage for Halifax is \$19.17, and the living wage for Antigonish is \$17.30 (p. 5). Meanwhile, the Human Development Council has since announced its plans to calculate a living wage for Saint John, NB (Donovan, 2017).

New Brunswick's Economic and Social Inclusion Corporation/Société d'inclusion économique et sociale (ESIC) commissioned a mandate in April 2017 to explore the concept of a living wage in New Brunswick, with a report and recommendations of the advisory committee forthcoming in June 2018 (Government of New Brunswick [GNB], 2018b, p. 42). This mandate comes as part of the ESIC's poverty reduction strategy called "Overcoming Poverty Together/ Ensemble pour vaincre la pauvreté: The New Brunswick Economic and Social Inclusion Plan 2014-2019." With policy makers and advocacy groups increasingly prioritizing living wage possibilities for the Atlantic provinces, it is important to ask what would be done with such calculations in New Brunswick. After a living wage is calculated, the next logical step is to develop a plan for bringing low wage workers up to the living wage (which, again, is higher than the minimum wage). One possibility is for "small businesses in the low-wage sectors [to] receive government support in making the transition to paying a living wage" (Jacobs, 2007, para. 16).

OUTCOMES

There is currently little evidence-based research on living wage programs in Canada, and therefore our study relies on reports focusing on the outcomes of living wages in the United States. The literature suggests that the the initial roll-out of this strategy would have a small impact on poverty. A living wage is not a minimum wage, and is determined at a regional level; it is also not legally required to be implemented by all employers. Rather, living wages might be implemented by select employers in the region—often private businesses, municipal governments, and firms providing services connected to local government. Living wage advocates also encourage employers to adopt living wage policies for their businesses as a voluntary best practice.

A study using 1996-1999 data from seven American cities with living wage programs finds that nearly 75% of those affected by the living wage were not initially in poverty, and more than 40% had initial incomes at least twice the poverty line (Toikka, Yelowitz, & Neveu, 2005, pp. 69-70). This report concludes that many households living below the poverty line take advantage of tax transfer programs, and that additional earnings from living wages largely disappear through benefit reduction and increased taxation. Canadian economist Charles Lammam (2014) analyzes American studies of living wage outcomes and concludes, based on his overview of multiple reports, that findings on the ineffectiveness of living wages in the United States should make Canadian cities cautious about implementing their own living wage policies. While the majority of these studies focus on the impact of a living wage on employment rates (Neumark & Wascher, 2007; Yelowitz 2005; Fairris 2005; Reich Hall, & Jacobs, 2007; Buss & Franceschi, 2003), those that are concerned primarily with the correlation between living wage policies and rates of poverty find that living wage programs have, at best, only a small impact on poverty reduction (Neumark & Wascher, 2008; Neumark & Adams, 2003a; Neumark & Adams,

2003b; Clain, 2008; Thompson et al., 2011). Living wage calculations are useful advocacy tools, as they help us understand the regional variability of poverty, as well as the depth of poverty not captured by other common metrics. However, there is no compelling evidence that supports living wage programs and policies as effective anti-poverty tools.

III. TAXES AND TRANSFERS (INCLUDING REBATES, SUBSIDIES, AND IN-KIND TRANSFERS)

Tax and transfer policies are primarily concerned with the redistribution of wealth, and they have a significant impact on inequality, mainly through the effects of transfers that boost incomes on the lower end of the wealth spectrum. We use “Taxes and Transfers” as an umbrella term that encompasses multiple poverty-reduction policies at both the federal and provincial levels (the Canada Pension Plan is federal, for instance, whereas the Quebec Pension Plan is provincial). As a whole, the function of tax and transfer policies is to reduce inequality by bringing in revenue (often through the increased taxation of the wealthy) and redistributing that revenue to those most in need. We have also included research on government-funded subsidies, rebates, and in-kind transfers of goods and services that could impact low-income households.

Much research has been done on taxes and transfers as a poverty reduction strategy, but conclusions about the overall effectiveness on income inequality are complex and diverse, and should be considered at the level of individual programs.

A. TAXES AND TRANSFERS

Inequality

Inequality is a common metric used to evaluate the efficacy of the tax and transfer system. While not a measurement of absolute poverty, extreme disparity in wealth distribution tends to align with higher poverty levels, and rises in inequality are usually regarded as signs of increased social ills. Measuring the impact of tax transfers in terms of inequality can help us understand the role of

this kind of policy as a stabilizing force that can mitigate the negative impacts of fluctuations in the labour market.

Market income inequality is on the rise in Canada: according to census data, between 1980-2005, the Gini coefficient (a tool to measure inequality) for Canadian pre-tax income rose from 0.352 to 0.404, and after-tax income rose from 0.312 to 0.349 (Milligan, 2013, p. 18). Sharpe and Capeluck’s 2012 study based on 1981-2010 data shows an overall increase in market income inequality, which rose 19.4% during that period. However, the data also shows the mitigating impact of tax transfers: Canada’s after-tax income Gini coefficient was 0.395 in 2010, which was 0.123 points or 23.7% lower than the market income Gini of 0.518. Of this reduction, most of the impact was from transfers to lower income earners (70.7%) rather than taxation of high earners (29.3%) (Sharpe & Capeluck, 2012, p.2). It is important to note, however, that the Statistics Canada data referenced in the Sharpe and Capeluck study is no longer up-to-date, and the table they reference has been replaced with newer calculations – still, the rate of increase and the difference between market and after-tax income is the same, or only negligibly different, across the adjusted Statistics Canada numbers, although the Gini coefficients are consistently lower according to the new data. More recent Statistics Canada data (2018a) shows a pre-tax Gini coefficient of 0.432 in 2016, and an after-tax Gini coefficient of 0.306, compared to 0.369 and 0.286 in 1981. New Brunswick fares somewhat better than the national average in terms of inequality, especially with regards to after-tax inequality. In 2016, it had a pre-tax Gini coefficient of 0.428, and 0.278 after-tax (CANSIM table 206-0033), indicating that the combined federal and provincial transfer system in New Brunswick is more redistributive than the Canadian average. However, less inequality does not necessarily equate less poverty – it could just mean that there are fewer high incomes skewing the distribution.

The Milligan study referenced earlier shows that, while tax transfers mitigate some of the impact of rising income inequality, they have not been able to keep pace with rising incomes on the top end of the wealth spectrum (Milligan 2013). Green, Riddell, and St-Hilaire also suggest that rising inequality in Canada primarily has to do with skyrocketing incomes among top-earners over the last 30 years (p. 25). A study of 1976-2014 Statistics Canada data (Corak 2016) suggests that Canada's tax-transfer system neutralized income inequality in the 1980s and early 1990s and has muted its effects since then. However, looking at income share by group (top 10%, bottom 40%, and middle 50%) shows an increase in inequality over time, with a growing share of total wealth accruing to the top 1%.

There is evidence that, rather than keeping pace with rising inequality, tax transfers have become less redistributive over time: Heisz and Murphy (2016) observe a steady increase in the overall redistributive impact of tax transfers from 1976 to the mid-1990s, followed by decreases in the mid-90s, and a slight increase in 2009-2010 (where the data ends). The authors attribute the decrease in the redistributive impact of government transfers to a decline in the effectiveness of the transfers themselves, beginning in 1994. This decline partly had to do with the improving economy following the 1990-1992 recession, though changes unrelated to the recession also have contributed to this decline (p. 445). Specifically, the fall in transfer redistribution in the mid-90s appears to be related to less redistributive EI and Social Assistance programs (p. 450). This study concludes that taxes and transfers significantly offset increases in market income inequality during recessions. They observe that the redistributive impact of tax transfer policies is directly connected to how progressive (i.e., targeted to low income) they are, and to the size of the individual transfer.

Individual Transfer Programs

It is elucidating to look at the different outcomes of specific policies, as it is apparent that some tax transfers have a greater impact on poverty than others. Heisz and Murphy (2016), for example, find that Old Age Security, General Income Supplement, Canada Pension Plan and Quebec Pension Plan have the greatest redistributive impact on reducing inequality, while social assistance is the most targeted to helping those in need. Comparing data from the 1970s, 1990s, and 2000s, one national study (Shirle 2013) shows that retirement income policy remains an important determinant of senior poverty in Canada, reducing absolute poverty without alleviating relative poverty. Other transfer programs like Employment Insurance (EI), however, have been deemed far less redistributive. According to Finne and Irvine (2011), "EI is strongly redistributive on the contribution side but regressive in its payment structure. The effects on each side reduced inequality by about three-quarters of a percentage point in 1992, but this effect declined over time until, by 2002, the impact on each side of the ledger was about one-fifth of a percentage point" (203).

Meanwhile, other policies (such as social assistance) are found to be insufficient. Tiessen (2016) shows that the "poverty gap" (the gap between an individual or family's total benefit income and the poverty line) has widened over time for people receiving social assistance in Ontario, as the transfers became less generous. This is especially true for single people who, in 1989, saw a poverty gap of just under 40%, followed by a narrowing to the gap to 20% in 1993, and widening again, dramatically, to 59% in 2014 (p. 5). We have not found any recent studies evaluating the effectiveness of social assistance programs in New Brunswick.

Some American studies that focus primarily on the impact of minimum wage as a poverty reduction strategy find that while minimum wages may not be the most effective way to lower poverty rates, working tax credits are much

more likely to produce positive results (Neumark, 2015; Burkhauser & Sabia, 2007). In America, the earned income tax credit (EITC)—which is very similar to the Canadian Working Income Tax Credit (WITC)—provides a subsidy to low-income families, and particularly those with children, that phases out as incomes increase. Like previous work by Burkhauser and Sabia (2007), Neumark (2015) argues that in comparison to the minimum wage, the EITC more accurately targets low-income families, as it is based on family structure and household income, rather than individual income (p. 3). Moreover, the subsidization of earnings induces individuals to enter the labour market—the “pro-work incentives” increasing the likelihood that families can “earn their way out of poverty” (p. 3). Using data from the Tax Policy Centre, Neumark’s calculations show that a 10% increase in the EITC for a worker earning the average minimum wage leads to an estimated 1.6% reduction in poverty (pp. 3-4). He also shows that poverty is reduced by 3.4% percent when the same increase in EITC is accompanied by a minimum wage increase of 25%—however, Neumark suggests that while a combination of both policies would be most effective, increasing the EITC alone would be more effective than only raising the minimum wage (p. 4).

Because the majority of tax transfer programs are determined at a federal level and are supplemented by provincial “add-ons,” it can be difficult to predict which policies are most effective at reducing poverty at the level of individual provinces. For instance, research on provincial poverty reduction strategies shows poverty outcomes, but it does not specify the extent to which each provincial and/or federal tax transfer policy contributed to the change in poverty rates. Overall, however, many provincial tax transfer policies appear to produce positive outcomes. A study on the Ontario Poverty Reduction Strategy of 2008-2013 (Torjman, 2014) shows that child poverty in Ontario was reduced by 12.6% from 2008-2011, during which time Ontario implemented the Ontario

Child Benefit (provincial) and the Universal Child Care Benefit (UCCB) (federal), which were accompanied by an increase in the Working Income Tax Benefit (WITB) (federal) (pp. 1-2). Similarly, a report on the Building Independence poverty payment program in Saskatchewan (Hunter, Douglas, & Pederson, 2008) focuses on the outcomes of two different welfare programs: Transitional Employment Allowance (TEA) and the Saskatchewan Assistance Plan (SAP). Hunter, Douglas, and Pederson (2008) show that from 1998-2006, poverty dropped from 17.5% to 15.5% under this payment program (p. 2), though the report does not specify the extent to which each program contributed to this change.

Tax Transfers and Child Poverty

Burton and Phipps (2017) provide a broad overview of various federal and provincial tax transfer policies of the last 100 years in Canada and calculate the possibly related changes in the economic well-being of Canadian children—federally and provincially—between 1987 and 2014. Using equivalent income (where historical income data is re-calculated to reflect current inflation levels) as a poverty measure, and 50% of median income as the poverty line, they find that more transfers were available to the majority of children in all deciles in 2010 than in 1987; though they hesitate to claim causality, they also note that equivalent incomes for Atlantic Canadian children have consistently increased since 1987 (p. 324). While the post-tax and transfer poverty rate for Canadian children living in two-parent households has not significantly changed for decades, their calculations show that as of 2014 there has been a 10% reduction in the rate of poverty for children in lone-mother families, bringing poverty rates down (pp. 324-325). Using data from Statistics Canada, they compare child poverty rates before and after-tax transfers in all provinces. Their results show a significant decrease in poverty post-tax and transfer, suggesting—though not claiming—a positive correlation between tax transfer policies and poverty reduction.

In 2016, the new Canada Child Benefit (CCB) replaced the Universal Child Care Benefit (UCCB) and Canada Child Tax Benefit (CCTB) transfers. This replacement results in a significant change: whereas the UCCB offered a set amount per child regardless of family income, the CCB is income-dependent, with low-income families receiving the maximum amount (as much as \$6,400 per child, per year) and high-income families receiving nothing. At the CCB program's launch, the Liberal government predicted that the new benefits would result in a national drop in child poverty rates, from 11.2% to 6.7% (Saltzman, 2016). The CCB is expected to change in July 2018, when it will be indexed to inflation (Department of Finance, Canada, 2017). Individual provinces top up the federal CCB with their own programs. In New Brunswick, the CCB is accompanied by the New Brunswick Child Tax Benefit (NBCTB), which is paid to low-income households with children under 18, and the New Brunswick Working Income Supplement (NBWIS), which is paid to households with earned income within a specified range and children under 18.

Because these changes to the benefits available to low-income households with children are still recent, there are no evidence-based studies evaluating the outcomes of these programs on poverty, either nationally or provincially. The Liberal government has offered estimates for the impacts of the CCB so far – in 2017, Justin Trudeau announced that the program had lifted 300,000 Canadian children out of poverty. Critics of the press coverage surrounding the CCB point out that the numbers cited are based on modelling that uses old data, and that some of the decline in child poverty comes from the years preceding the 2016 policy changes (Press, 2017). The true impact the benefit will not be apparent until 2019, when 2017 data becomes available.

B. REBATES, SUBSIDIES, AND IN-KIND TRANSFERS

Rebates, subsidies, and in-kind transfers could also be viable strategies for reducing poverty and improving quality of life for low-income populations. Some possibilities include energy rebate programs and subsidized goods and services, such as housing and child care. For many of these rebates and subsidies, however, no evidence of their effectiveness is available, as no studies on the poverty outcomes of these policies have been published.

Subsidized Child Care

Child care policy is currently a salient topic in New Brunswick, as the provincial government announced in January 2018 that it will be rolling out free child care for low-income families and daycare support for the middle class (New Brunswick Liberal Association [NBLA], 2018a; NBLA, 2018b). These programs are part of the provincial government's "Early Learning and Child Care Action Plan" (GNB, 2016), which aims to transform New Brunswick's early learning and child care system by 2030, "with a particular focus on families more in need" (p. 3). As of March 2019, all New Brunswick parents who are working or attending school and earn a household income of less than \$37,500 will receive free daycare for children aged five and under at a designated New Brunswick Early Learning Centre (NBLA, 2018a, para. 1-3). Meanwhile, a "Designated Centre - Parent Subsidy" comprised of a subsidized fee grid (GNB, 2018b) is available for middle class families earning up to \$80,000 (GNB, 2016, p. 4)—an estimated 71% of New Brunswick households (NBLA, 2018b, para. 7)—to ensure that New Brunswick families with children aged 0-5 do not pay more than 20% of their household income for child care (NBLA, 2018b, para. 1).

Described as a strategy to boost New Brunswick's workforce and reduce generational poverty (NBLA, 2018a, para. 4, 8), this three-year agreement between the federal and provincial

governments commits a combined \$71 million to “improving early learning and child care for preschool-aged children in the province” (NBLA, 2018a, para. 24). While it is impossible to predict the effects these subsidies will have on poverty rates in New Brunswick until after the program has been in place long enough to generate data, the provincial government has outlined target goals. For the province to reach its goal of making quality child care available for low- to middle-income families (\$55,000 and under), 3,890 (approximately 65%) low- and middle-income children must be registered in a designated New Brunswick Early Learning Centre (GNB, 2016, p. 11). However, while the “Early Learning and Child Care Action Plan” (GNB, 2016) identifies metrics that will determine whether the policy is effective in making child care accessible for low-income families, it does not outline metrics to determine whether it is effective in lowering rates of poverty.

Although a fairly large body of literature analyzes the outcomes of provincially subsidized daycare programs in Canada (primarily Quebec’s \$7.75 a day program) (Kottelenberg & Lehrer, 2018; Kottelenberg & Lehrer, 2014; Baker, 2011; Baker, Gruber, & Milligan, 2008; Lefebvre & Merrigan, 2008; Lefebvre, Merrigan, & Verstraete, 2008), these studies measure impacts on labour force participation and children’s cognitive development, rather than poverty rates. New Brunswick’s plan for free and subsidized child care programs most resembles Quebec’s system, which began to offer a \$5 per day universal daycare program in 1997, which was eventually extended to all children up to and including age 5 (the amount has increased since the program was first implemented and is currently \$7.75 per day). While the literature on Quebec’s universal child care program does not calculate its impact on poverty rates, it does conclude that, as a result of this policy, maternal labour supply increased significantly (Baker et al., 2008, p. 709; Lefebvre & Merrigan, 2008, p. 542), and children from disadvantaged, single-parent, and

low-income families experienced significant positive cognitive development by attending provincial child care centres (Kottelenberg & Lehrer, 2014, pp. 14-15, 24-25; Lefebvre et al., 2008, p. 9). However, the outcomes of Quebec’s subsidized daycare program do not necessarily foreshadow the outcomes of New Brunswick’s newly implemented program. For instance, researchers point out that Quebec’s increased labor force participation may be linked to other circumstances; after all, “[t]he policy was implemented during a period (1997-2002) of strong GDP growth for Quebec (22%) and for the whole of Canada (23.1%), associated with increased aggregate labor demand” (Lefebvre & Merrigan, 2008, p. 544; Lefebvre et al., 2008, pp. 24-25). Moreover, Quebec’s child care program is universal, whereas New Brunswick’s program offers different levels of subsidization, which are determined by various factors, including household income. Until evidence for the outcome of New Brunswick’s new subsidized child care program is available, one can only speculate what impact the policy will have on poverty rates. In the meantime, there is a need for more focused research on whether Quebec’s universal child care program has effectively reduced provincial poverty rates.

Energy Rebates and Subsidies

Energy rebate programs are implemented at provincial levels with the goal of alleviating “energy poverty,” which occurs when a household spends more than 10% of its income on utilities and consequently lacks funds for other necessities, often leading to adverse effects on health, and/or the inability to maintain a healthy temperature in the home (National Energy Board [NEB], 2018; GOC, 2008, pp. 1, 6; Green et al., 2016b, p. iii). The effectiveness of these programs has yet to be determined through evidence-based research. Although energy poverty is measured differently from common measures of poverty like the Low Income Cut-Off (LICO) or the Low Income Measure (LIM), studies show that low-income families comprise the largest

percentage of households living in energy poverty, and therefore, theoretically, tax transfers aimed at reducing energy poverty also target poverty rates. On average, an estimated 8% of Canadian families experience fuel poverty (NEB, 2018), whereas according to 2013 data, 16% of households earning \$27,000 or less, and 17% of households earning between \$27,000 and \$47,700, experienced fuel poverty (Green, Taylor, & Herzog, 2016a, para. 3). According to one government study (GOC, 2008), in 2003, the lowest-income quintile of households spent more than 4 times the percentage of its income on energy (9.1%) than the 3rd quintile (2.1%) and nearly 9 times the top quintile (1.1%); families below the LICO spent, on average, 20.3% of their total expendable income on energy, whereas those above the LICO spent 7% (GOC, 2008, p. iii). Meanwhile, more current data shows that energy prices continue to rise; from 2005 to 2015, electricity prices increased by 38% (Green et al., 2016a, para. 6), and from February 2017 to February 2018, the cost of energy increased by 5.3%, more than double the average CPI increase of 2.2% (StatCan, 2018b).

According to Green et. al (2016b), energy prices in Canada have been rising faster than income (p. 6), and while richer households tend to consume more energy, low-income families often pay more for their energy consumption. This may be because of their living situations—for example, they may inhabit older, drafty houses or rent from landlords who are not motivated to provide upgrades that lower heating costs—or the high cost of efficient energy upgrades (GOC, 2008, pp. 5, iii). This situation is particularly bad in Atlantic Canada, where energy poverty increased by 20% from 2010 to 2013 (Green et. al. 2016b, p. 14). More current data from the 2015 survey of household spending shows that of the Canadian provinces, the Atlantic region has by far the highest amount of energy poverty (13%, compared to 10% in SK, 7% in QC, ON, MB, and BC, and 6% in AB); moreover, Atlantic Canadian households were estimated to spend on average over \$500 more per year on energy than the Canadian average of \$2,105.

As Canada increasingly moves toward cleaner sources of energy, the existing literature calls for increased government rebates, subsidies for low-income households (including those living in multi-unit buildings, as these families do not qualify for certain subsidized energy efficient upgrades), or a cap on electricity expenditures as a share of income, as green power programs are expensive to implement, and low-income families in particular are deemed to bear the brunt of this expense (Lee, Kung, & Owen, 2011, pp. 6-7, 28-29; McEachern & Vivian, 2010). At the moment, provincial programs offer various forms of assistance that differ according to province: these include either one-time or monthly rebates for low-income households, as well as subsidized upgrades to more energy efficient renovations and/or appliances. New Brunswick's energy rebate and subsidy programs consist of the Home Energy Assistance Plan (HEAP) and the Low-Income Energy Savings Program (LIESP), which provide an annual \$100 payment to families with incomes of \$30,000 or less, and subsidized "energy efficient retrofits," or upgrades, respectively (GNB, 2018c; Énergie NB Power, 2017, para. 3). The other Atlantic provinces have similar policies in place. While it is theorized that energy efficiency can eliminate energy poverty and improve the well-being of families at risk (GOC, 2008, p.13), no data is currently available to specify the extent to which these programs reduce poverty and/or energy poverty. There is a need for more research to determine the effectiveness of each policy and, moreover, there is a need for these studies to be province-specific, or at the very least region-specific, given the disparity between energy poverty levels, and the varying sources and costs of energy between the provinces, especially where Atlantic Canada shows much higher percentages of energy poverty than the rest of Canada (see Green, 2016; Green et. al., 2016b, p. 20).

Housing Subsidies and Social Housing Programs

Housing subsidies and programs (such as public housing, rent subsidies, and rent supplements) are another government-funded alternative that could be impactful in reducing poverty, whether by increasing income through rent supplementation, or by reducing some of the conditions associated with poverty that negatively impact well-being (e.g. homelessness or sub-standard housing). Government-subsidized housing in Canada is managed at all 3 levels of government. These programs are administered according to household income, with criteria and availability varying greatly between jurisdictions. Because affordable housing programs cannot support all low-income households, priority is usually given to certain households based on composition and the identification of priority groups, such as seniors and people with disabilities (Fafard St-Germain & Tarasuk, 2017, p. 129). Social housing programs peaked in Canada from the mid-1960s to the mid-1990s (Suttor, 2016, p. 3), and were primarily a federal issue during this time (after the mid-1990s, federal funding for new units ceased, and program management fell to individual provinces) (p. 9). Currently, affordable housing programs vary considerably from province to province: New Brunswick's current affordable housing programs include incentives to increase the supply of affordable housing (loans and financial assistance to landlords), and programs to increase the affordability of existing housing (rent supplement program). Other financial assistance is available to undertake necessary repairs to improve the conditions of low-cost housing. It appears that affordable housing will become a national priority once again, this time in the form of Canada's 10-year National Housing Strategy (unveiled in November 2017), which includes a new Canada Housing Benefit to be launched in 2020 (providing an average \$2,500 per year to each recipient), as well as plans to build new affordable housing and repair existing housing. Importantly, the strategy

includes "committing \$241 million over 10 years to enhance housing research, data and demonstrations" (Canada's National Housing Strategy, p. 20).

To date, no recent, evidence-based research exists that examines the impacts of subsidized housing on poverty levels. There is limited evidence indicating that subsidized housing on its own (without other income supplements) does not eradicate the barriers to well-being (like food insecurity) associated with poverty. A 2017 study using survey data and interviews finds that the overall presence of food insecurity in government-subsidized housing was 50.8% across the 10 Canadian provinces (Fafard St-Germain & Tarasuk, 2017, p. 131). The study finds that, even within the at-risk population addressed by subsidized housing, income is a strong predictor of food insecurity, with households at the bottom end of the income distribution represented by the sample being twice as likely to experience food insecurity (p. 132). The result of the study indicate that subsidized housing alone does not mitigate poverty's impacts on material well-being. Interestingly, "the odds of food insecurity were approximately five times lower among households that included a senior compared to households without one" (p. 131). It may be that the guaranteed income received by seniors in the form of OAS and GIS (which is greater than the income other demographics receive from government transfers) has a tangible impact on household well-being (133). The data used in this study does not differentiate between types of subsidized housing, so it is possible that some programs are more effective than others. The authors conclude that "income-based interventions" are needed to further support the groups targeted by housing subsidies (p. 133).

Because there is no research specific to New Brunswick or the Atlantic provinces, and because affordable housing is again becoming a national priority, increasing provincial housing

subsidies is unlikely to be the most impactful policy alternative for reducing poverty in New Brunswick. However, the policy-makers should keep a close watch on the research that emerges from the National Housing Strategy over the next several years.

Food/Nutrition Subsidies and Programs

Subsidized food and nutrition programs (like retail subsidies, school meal programs, and income supplements for groups at increased health risk, like prenatal women) are meant to counter some of the public health risks associated with food insecurity. Food insecurity is a marker of material deprivation that is strongly correlated with poverty. It occurs when a household must compromise the amount and quality of the food they consume in order to make ends meet.

Food insecurity occurs at much higher levels in the northern territories, and especially in Nunavut. The maritime provinces also consistently show higher rates of food insecurity compared to the other provinces. A 2016 study (based on 2014 data from the Canadian Community Health Survey administered by Statistics Canada) finds that 15.2% of New Brunswickers experienced food insecurity during that period, and 21% of children under the age of 18 (Tarasuk, Mitchell, & Dachner, 2016, p. 2). The prevalence of food insecurity was highly correlated with qualifying for social assistance, with 73% of households relying primarily on social assistance income reporting food insecurity. The study also found that food insecurity was more common in lone-parent families led by women, at 33.5% prevalence (p. 11).

Government-funded food subsidies can come in the form of retail subsidies, where retailers get a government transfer that permits them to offer food to consumers at a lower price. Canada's primary example of this kind of program is a retail subsidy program called Nutrition North Canada, which is designed to reduce the cost of

nutritious food for residents of remote northern communities. The subsidy is paid directly to retailers, and is meant to drive down the cost of nutritious food in these communities. A 2017 study (Galloway) using data from 2011-2015 finds that this program has inadequate accountability standards (e.g. no price caps to ensure food is affordable, inadequate food cost reporting, and no annual adjustments to program administration following feedback). The author suggests that different policy measures should be taken to ensure food security in at-risk northern communities. There is no strong evidence examining the potential impacts of retail food subsidies in New Brunswick or the maritime provinces.

Public school programs that make nutritious food available at reduced cost to the students could address the elevated levels of food insecurity faced by children. The impacts of these kinds of programs are hard to quantify, however, largely due to the fact that they are not federally legislated, but fall under the mandate of provincial government (some groups are advocating for a national school food program like those found in many wealthy countries, see e.g. Food Secure Canada, "Healthy School Food.") School meal programs vary from school to school, and receive funding from different sources, including "provincial and municipal governments, parents, corporate donations, fundraising, and nonprofit nongovernment organizations" (Godin et al., 2017, p. 92). Formal assessments of these programs and their impacts often focus on school meal programs as interventions for poor nutrition and obesity (see of example Moffat & Thrasher, 2016; Gougeon et al. 2011). A provincial government-funded pilot program rolled out in select schools during the 2016/2017 school year in Alberta was considered successful, and was expanded the following year to include all school boards in the province. The program ensured that public schools provided students with a healthy meal or snack each day (Government of Alberta, 2017). However, the

precise measurements used to determine the success of the program are not available.

Evidence-based studies and program-evaluations tend to focus on nutritional and health outcomes of food subsidy programs, particularly where at-risk groups (i.e. low-income families, at tend to be at a greater health risk due to reduced access to nutritious food). A 2012 systematic review of the evidence on the nutritional impacts of food subsidy programs for disadvantaged families in high income countries found that most of the literature reporting in outcomes in terms of health impacts were about the Special Supplemental Nutrition Program for Women, Infants and Children in the USA. The reviewed evidence shows that this federally-funded, state-administered food subsidy program, which is targeted to help pregnant or postnatal women in low-income households, resulted in a 10-20% increased intake of specified foods or nutrients. Two of the studies reviewed also found a “a small but clinically relevant increase in mean birthweight (23-29g)” (Black et al. 2012, p. 1).

Currently, there is no evidence on the impacts of food subsidy programs on poverty in general. These kinds of programs are aimed to improve the quality of life and overall health of those impacted by poverty, and are likely not positioned to significantly reduce poverty itself. These kinds of programs – particularly school meal programs that give children from food-insecure households access to nutritious food – could have long term positive impacts on poverty, based on improved health and school performance during early years.

The majority of studies suggest positive correlations between provincial tax and transfer policies and poverty outcomes. However, because provincial supplemental policies are developed to meet regional specifications and needs, it is difficult to predict whether a tax transfer policy designed for one province will produce similar outcomes for another. In-kind

transfers (like subsidized services and consumer goods) could ameliorate certain symptoms of poverty, such food insecurity and inadequate housing. There is little evidence to show what impact these in-kind transfers have on poverty levels, as their impact is typically measured in terms of the specific material deprivations or negative social conditions they try to address. Based on the evidence examined, New Brunswick shows elevated rates for energy poverty and child food insecurity, so programs targeting those issues could be most impactful. The current tax and transfer system also provides better protections for some groups – namely, seniors and families with children – than for others. When considering the possibility of reducing poverty in New Brunswick through an improved tax transfer system, we must explore what kinds of additional or expanded transfer programs would be best targeted to addressing poverty in this province. This task is difficult because, as is the case with the other policies studied in this report, there is a lack of evidence-based literature on the impacts of taxes and transfers on poverty in New Brunswick and the other Atlantic Canadian provinces.

IV. UNIVERSAL GUARANTEED BASIC INCOME

In its purest form, a Universal Guaranteed Basic Income (UGBI) is a set amount of money that the government offers to all citizens, regardless of their household composition, work status, and other sources of income. Modified versions of this system might involve a basic income calculated by a negative income tax, where people with less earned income receive more of the benefit (up to a predetermined level), and higher earners receive no benefit. UGBI schemes seek to expand the boundaries of who qualifies for assistance, though the parameters vary: truly universal GIS models propose a basic income for all Canadians, though these models have fewer advocates (and would be most costly to pull off), while negative income tax versions give a top-up to the lowest earners to bring them up to a prespecified income level. What this might

mean, then, is that we can turn to the literature on tax transfers in Canada to help us predict the impacts of a UGBI.

Some subsets of the Canadian population already receive a form of basic income (though under different names) in the form of tax transfers like OAS/GIS and Child Tax Benefit. For instance, in the case of Old Age Security, adults over 65 receive a guaranteed amount of income from the federal government, regardless of family and work status or other sources of income. Canadian seniors receive additional assistance in the form of the Guaranteed Income Supplement, which functions as a type of “negative income tax” because it is prorated according to the individuals’ other sources of income.

There is no consensus in the literature as to whether basic income is primarily a federal issue, or a provincial one. While many of the recommendations addressing a minimum basic income suggest that this policy should be implemented federally in hopes of freeing up provincial tax revenue for other targeted programs and social services (e.g. Battle et al., 2010), Stevens and Simpson (2017) suggest a combination of both federal and provincial support—a basic amount that is distributed federally to all citizens but is supplemented at varying degrees by province.

Certain Canadian provinces are beginning to consider a Universal Guaranteed Basic Income’s potential as an anti-poverty policy at a provincial level. Ontario, for example, has recently announced the beginning of a three-year “pilot study” in which 4,000 low-income earners will be given a guaranteed basic income (Carey, 2017, para. 2). This pilot is based on a negative income-tax model, where individuals receive a prorated amount or “top-up” to hit a certain income level, and the amount of basic income they receive will decrease by \$0.50 for every dollar they earn from working (Carey, 2017, para. 4). Furthermore, Quebec has also recently made a commitment

to offer a basic income to those unable to work due to physical and intellectual disabilities, as one component of a \$3 billion anti-poverty plan announced in late 2017 (Shingler, 2017, CBC). A recent committee report (“Final Report,” 2017) describes a comprehensive UGBI as a “Utopian” goal that the province of Quebec should work towards cautiously, in incremental steps consisting of gradual improvements to the existing income support system. In the same report, the committee suggests that moving towards a Universal Guaranteed Basic Income would also require improved incentivization for labour market participation (for example, work premiums that offer better tax rates), recognizing not only that long-term employment is a more sustainable solution to poverty, but that high labour force participation is also essential to fund government income supports.

In addition to concerns about labour force participation, critics of UGBI voice worries about funding. There are concerns about a coming “fiscal crunch” (Davies, 2013, p.1) resulting from an aging baby boomer generation (e.g., increased health care concerns and OAS/GIS). It is argued that it will be difficult to maintain the status quo, let alone introduce such a new and large-scale transfer program. In fact, a recent report estimated that a national UGBI program (modelled off the Ontario negative income tax model) could cost the federal government upwards of \$43 billion (“Budget Watchdog,” CBC, 2018).

This increased spending would require additional revenue, which would ultimately fall on taxpayers’ shoulders, unless other government transfer programs are cut to free up additional funding. Increased taxation at a provincial level might not be effective, however. In a study using simulations based on 2000-2015 data, Milligan and Smart (2016) try to predict the results of a hypothetical increased tax rate (additional 10%) for the top 1% of income earners (broken down by province). They predict that such a change

would “shrink the base of the taxable income for this group by 6.64 percent” (p. 480) due to a subsequent decline in reported income (this elasticity of reported earnings is determined based on previous studies on tax-filer response). It is worth noting the large discrepancy between provinces in the effects this policy change would have: for example, in a hypothetical scenario where the top 1% incomes are given a 5% higher tax rate, this change would raise tax revenue by an average of \$2 per filer in PEI, and an extra \$131 per filer in Alberta (p. 480). The per-filer average number comes from increased revenue from the top 1% incomes, not the additional taxation of lower incomes. The difference between provinces indicates that increased taxes for the top 1% would be most effective in provinces like Alberta, where income is skewed towards the top end. To return to the example above, PEI’s top 1% of earners is the lowest amongst the provinces (at approximately 6%), while Alberta is the highest (at approximately 12%). Ultimately, any plan for introducing a GBI program on a provincial level would likely require redirecting funding from other programs, or “topping up” the income provided by existing programs to a certain level.

No evidence-based studies recommend a true UGBI, where everyone benefits equally regardless of other income, and it is easy to see how the results of an abrupt roll-out of such a scheme could be disastrous. The Quebec government’s 2017 committee report on basic income recommends beginning cautiously, with a threshold of 50%-60% of Market Basket Measure (p. 116). A series of simulations based on several potential basic income models, with a focus on the impacts these models have on poverty, concludes that a model where existing tax transfer programs are replaced by a universal basic income would result in “dramatically higher levels of poverty” in seniors and children (Macdonald, 2016, p. 8). It instead suggests implementing a targeted basic income policy on top of the existing tax transfers, consisting

of a “\$10,000 negative income tax on top of all 33 existing programs” in which “a family would receive a \$10,000 basic income (per person, adjusted for family size, and family income) or what present basic income programs offer—whichever is more” (p. 25).

A recent report by Angyridis and Thompson (2016) runs a simulation of a Negative Income Tax (NIT) system—the model on which Ontario’s UGBI system is based. Angyridis and Scott analyze the redistributive effects of a NIT system, which combines “a flat rate tax with a fully refundable credit (‘demogrant’)” (p. 1016). Using a Lorenz curve to depict income inequality, they analyze the changes in relative poverty (below 50% of the median income) and absolute poverty that result from the system’s implementation. Their simulation (2016) shows that increases between 0 and 20% in the demogrant-to-output ratio significantly reduce the level of inequality and both relative and absolute poverty, whereas a ratio greater than or equal to 19.7% eliminates relative poverty entirely (pp. 1032-1033, 1017). However, reaching the tax credit-to-output ratio that would eliminate poverty would require implementing a flat tax rate of 50.9% (p. 1017). In light of this, Angyridis and Thompson acknowledge that such a high tax rate “severely distorts the labour-leisure choice and discourages investment” (p. 1017). In the end, they acknowledge that their model simulation is incomplete, and they call for further research that could account for other factors such as policy changes on the growth rate, differential taxation between capital and labour, and progressive income tax schedules.

Stevens and Simpson (2017) take a different approach, however, and suggest that while UGBI programs would require funding from both federal and provincial governments, this would not necessarily require the steep tax hikes mentioned by Angyridis and Thompson (2016). Instead, they propose overcoming funding obstacles by replacing the existing Non-

Refundable Tax Credits (NRTC) and the Goods and Services Tax Credit (GSTC) in Canada with a UGBI designed as a refundable tax credit. They calculate that eliminating NRTCs and the GSTC at the federal level would provide a budget of \$51 billion, and removing them at the provincial level would provide an additional \$33 billion (p. 136). However, they acknowledge, the net cost of a UGBI beyond the budget produced by eliminating tax credits would be approximately \$8.09 billion (p. 137).

Furthermore, their simulation of a benefit reduction of 15% concludes that the combined federal and provincial components of their proposed UGBI would reduce the national after-tax LICO poverty rate by 57% (from 12% to 5.2%); the after-tax LICO depth of poverty by 29% (from 34.7% to 24.8%); and the degree of income inequality measured by the Gini index by 6.8% (from 41.3% to 38.5%) (p. 136). They also estimate that “[o]nly single non-elderly persons continue to be touched by poverty after the introduction of a federal and provincial UGBI, with 19 percent of them still having low incomes” (pp. 136-137). While the UGBI would result in an estimated reduction in earnings of 10.2% for adults in low-income families and 1.8% overall, they ultimately argue that those who experience the highest earnings reductions also benefit the most from the UGBI (p. 136).

This study also addresses the impacts of the proposed UGBI on a provincial level. While the amount of UGBI funding varies according to province, they calculate that if New Brunswick ran a 24.8% benefit reduction rate in 2015, the combined federal and provincial UGBI programs would guarantee a single adult \$10,733, with a disability top-up of \$2,275 and a caregiver top-up of \$1,200 (p. 134). In this scenario, they estimate that New Brunswick would see a 70% reduction in the poverty rate, a 19.5% reduction in a depth of poverty, and a 6.5% reduction in inequality (p. 134). According to their calculations, the predicted reduction in

poverty rates between the provinces varies from 44.4% (Ontario) and 77.6% (Quebec), with New Brunswick experiencing a much higher reduction of poverty rates than many other provinces, being surpassed only by Quebec (77.6%) and PEI (71.9%) (p. 134). Nonetheless, every province is projected to see a significant reduction in poverty. Although Stevens and Simpson (2017) base their calculations on fairly recent data, their proposal is nonetheless based on a simulation model rather than observed rates of change. More data taken from actual observed impacts of UGBI should become available as Ontario’s pilot study on UGBI proceeds.

We have some evidence that a Universal Guaranteed Basic Income could de-incentivize labour force participation, but this evidence is, once again, based on simulations. A 2013 study (Clavet, Duclos & Lacroix) on the possibility of a UGBI in Quebec uses simulations to predict that a guaranteed minimum income of 80% of the Market Basket Measure might lead to significant decreases in workforce participation: they simulate changes in participation by demographic group, finding a 13.77% increase in single men working 0-4 hours/week, and a 12.64% increase in single women (p. 13) percentage points.

Simulated evidence suggests that a UGBI in the form of an income-based refundable tax credit could significantly reduce poverty, whether introduced at a federal or provincial level. However, in order to conclusively say whether a UGBI would be effective for reducing poverty, we need to analyze the results of experiments like the one in process in Ontario, as well as long-term strategies for gradually implementing a basic income, like Quebec is proposing. Although it seems likely that a UGBI program would be better targeted to reducing poverty than an accelerated minimum wage increase or living wage ordinances, this is ultimately conjecture.

CONCLUDING STATEMENTS

For all of the potential policy instruments reviewed in this paper, there is currently a gap in evidence for New Brunswick and Atlantic Canada. In order to make informed policy decisions for reducing poverty in New Brunswick, there needs to be more evidence-based evaluations of the impacts of various policies on poverty in a region that is, economically and socially, distinct from other parts of Canada.

Each instrument examined in this report has staunch supporters who can voice compelling arguments for its suitability as an anti-poverty tool. Each instrument also raises some problems. The most contentious of these policies appears to be an accelerated minimum wage increase, although there are many vocal opponents of a Universal Guaranteed Basic Income and living wages as well. The literature on minimum wages in Canada warns against assuming that a higher minimum wage will automatically lift a significant portion of the population out of poverty, largely because minimum wage workers are not necessarily living in poverty to begin with. Some studies also conclude that an increase in wages will only reduce employment rates and create a lower hiring rate in spite of greater job security, though others indicate no significant changes in employment rates. While a \$15 (or higher) minimum wage is appealing on an ethical level—because it seems fair that an individual working full time should always be able to purchase an acceptable living standard with those earnings—it is likely not the best policy solution for reducing poverty.

Calculations about living wages in different communities do not currently seem to be a pressing policy issue. Rather, these calculations serve as an advocacy tool to promote business practices that contribute to a higher quality of life for employees and more vibrant, inclusive communities. Studies and reports on living wages are not supported by any substantive

evidence or data about how these calculations impact poverty in the Canadian communities that factor them into employment practices. The data we do have is primarily American, which has questionable relevance for the Canadian economy. Overall, the American literature suggests that government transfer reductions and increased taxation resulting from living wage projects can mute or negate the initial benefit.

The long history of tax transfers in Canada has resulted in a much larger pool of evidence than is available for the other policies we consider, and the literature consistently shows that these programs have a significant effect on poverty, though the size of this effect can vary greatly, depending on the transfer. The degree to which people at risk for poverty benefit from transfers also varies by year, province, family composition, work status and history, ability, and age. The cumulative effect is that the transfer system does not offer an equitable or reliable safety net for many, as it is prone to change, and offers different levels of protection for different demographic groups. The literature also suggests that, while tax transfers do make a difference (particularly for seniors and families with children), they have nonetheless been unable to keep up with rising inequality. Government-funded rebates, subsidies and in-kind transfers can improve the health and material-well being of those living in poverty, but the extent to which they impact the extent and depth of poverty is unclear, due to the fact that the success of these programs is measured by other factors. Based on New Brunswick's unique profile with regards to energy poverty and child food insecurity, rebates, subsidies, and government-funded school programs targeted to addressing needs in these areas could have a substantial impact on symptoms of poverty.

The limited evidence we have about the potential impacts of a Universal Guaranteed Basic Income

on poverty suggests that a UGBI might be a promising poverty reduction strategy. Moreover, there are options for implementing modified basic income programs that would be feasible on a funding level, though this might require some re-direction of resources. A UGBI framework could also be rolled out gradually, through incremental improvements and/or additions to the existing tax and transfer system that address gaps in the current safety net. Based on the evidence reviewed in this report, tax and transfer policies significantly reduce poverty levels in some groups more than others, and an income-based prorated UGBI could further reduce poverty.

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- ⁱThis phenomenon has been documented in other provinces as well: see DeGroot (2005) on Manitoba.
- ⁱⁱLiving Wage Canada provides a detailed method for calculating a living wage, and urges that Canadian municipalities follow the same method for the sake of consistency. See *Canadian Living Wage Framework: A National Methodology for Calculating the Living Wage in Your Community*, Living Wage Canada. http://www.livingwagecanada.ca/files/7813/8243/8036/living_wage_full_document.pdf
- ⁱⁱⁱStevens and Simpson (2017) propose the following: “The UGBI would thereby replace three fixed-amount NRTC’s—the basic, age, and pension income credits—and several smaller variable-amount NRTC’s, including the fitness, transit, education, and family tax cut credits. The remaining NRTC’s would be left in place, including the credits for married and married equivalents, caregiver, disability, charitable donations, medical expenses, Employment Insurance and Canada Pension Plan contributions, and employment” (p. 125)
- ^{iv}For example, Corak’s (2016) study pooling data from 1976 to 2014 suggests that Canada’s tax transfer system neutralized income inequality in the 1980s and early 1990s and has muted its effects since then (p. 379). However, an analysis of income share by group (top 10%, bottom 40%, and middle 50%) shows an increase in inequality (p. 380). Corak’s “two stories” using the same data emphasizes how a study’s framework for defining/measuring concepts like poverty and inequality can skew results to present the desired outcome.
- ^vFernandez, Hajer & Langridge 2017; Ivanova, Klein & Reaño, 2017; Saulnier, Johnson & Johnston, 2016; Johnston & Saulnier, 2015; “Calculating,” 2015; Ivanova & Klein, 2015; Tiessen, 2015; Bruijns & Butcher, 2014; Gingrich, Enoch & Banks, 2014; Jarosiewicz, 2013; White, 2012; Kingston Community Roundtable, 2011; Mackenzie & Stanford, 2008.
- ^{vi}According to Lundstrom (2017), this suggests that the supply of poor low-skilled workers is possibly more elastic than the supply of non-poor low-skilled workers (p. 40).
- ^{vii}Sen, Rybczynski, and Van De Waal (2011) do not include a percentage for employment reduction among the 20-24 age group because, they argue, “OLS and IV estimates with respect to 20-24 year olds are statistically imprecise” (p. 44).
- ^{viii}For example, Fernandez, Hajer, & Langridge (2017) calculate the 2016-2017 living wages for Winnipeg, Brandon, and Thompson, MB, as \$14.54, \$14.55, and \$15.28 respectively (p. 1); the 2017 minimum wage for Manitoba (as of October 1, 2017) was \$11.15. Similarly, Ivanova, Klein, & Reaño (2017) calculate the 2017 living wage for Vancouver, BC, as \$20.62 (p. 1); the 2017 minimum wage for British Columbia (as of September 15, 2017), was \$11.35 (Government of Canada [GOC]).
- ^{ix}Toikka, Yelowitz, and Neveu (2005) analyze data for Baltimore, Boston, Chicago, Detroit, Los Angeles, New York, and San Francisco.
- ^xResearch by Battle, Torjman, and Mendelson (2008) similarly finds these policies extremely effective. Their study (2008) on poverty among the elderly in Canada from 1976-2007 shows that poverty rates dropped from 29% to 2.7% over this period (p. 1). However, they also argue that not all tax transfer policies aimed toward helping the elderly produce such positive outcomes. For instance, after the Harper government introduced pension income-splitting for 2008, poverty rates among the elderly rose from 2.7% to 5.8% over one year (Battle, Torjman, and Mendelson, 2008, p. 1). They suggest that this policy ineffectively targeted the poor, as it only benefited elderly couples in which one partner had a large private pension and offered no benefits to poor seniors, single seniors, or seniors who do not pay taxes. While Battle, Torjman, and Mendelson’s research does not prove causality or account for external factors that may have contributed to this increase in poverty, it nonetheless suggests the potential for tax transfer policies to negatively impact targeted demographics.
- ^{xi}The amount of the subsidy offered by EITC varies according to family size and income. Neumark (2015) shows that in 2015, “families with two children would receive a 40% subsidy to their labor market earnings, up to a maximum of \$5,548, which phases out as incomes rise” (p. 3).
- ^{xii}Though it may be tempting to draw conclusions about possible correlations between changes in tax transfer policies and simultaneous changes in child poverty rates, Burton and Phipps (2017) “make no attempt to estimate causal links between changes and differences in specific programs and particular child outcomes” (p. 325).

^{xiii} More specifically, Burton and Phipps (2017) use data from Statistics Canada's Survey of Consumer Finance (1971, 1975, 1981, 1987, 1997) and Statistics Canada's Canadian Income Survey (2012, 2014).

^{xiv} Burton and Phipps (2017) present various graphs detailing the poverty rates pre- and post-tax and transfer in all Canadian provinces in 1987 and 2014 (pp. 317-320). In every scenario, poverty rates are lower post-tax and transfer. Although they do not specify the exact percentages for every province, they point out, for example, that in 2014 the poverty rate in Quebec was 18.6% before taxes and transfers; after accounting for tax transfers, however, it was reduced to 8.3% (p. 317).

^{xv} A subsidy calculator for this program is available at GNB, 2018a: http://www2.gnb.ca/content/gnb/en/corporate/promo/improved_early_learning_and_child_care/dcs_info.html

^{xvi} The "Early Learning and Child Care Action Plan" (GNB, 2016) breaks down the costs of implementing these programs and shows that the costs for the initial three years of the program will be provided by \$29,185,283 federal funding and \$41,245,800 provincial funding (p. 9).

^{xvii} Paradoxically, however, studies show that subsidized child care has a negative impact on the cognitive development of children who come from more advantaged households, such as two-parent households between the 10th and 50th quintiles (Kottelenberg & Luhner, 2014, p. 3; Lefebvre et al., 2008, p. 6). It is assumed that this negative outcome results from changes in parents' child-rearing practices, rather than exposure to child care centres (Kottelenberg & Luhner, 2014, p. 18).

^{xviii} This variation from Quebec's universal model could prove positive. Baker (2011) shows that while there is a lack of evidence, or mixed results, regarding the effectiveness of universal child care programs, "the evidence base for targeted early childhood interventions... offers strong guidance" (p. 1069). Moreover, as more provinces, such as Ontario and British Columbia, begin to consider implementing "Quebec-style" child care programs (Yakabuski, 2017, para. 3), media sources explore the downfalls of universality. Yakabuski (2017), for one, argues,

There is mounting evidence that the \$2.4-billion-a-year Quebec model is not the way to go. Despite its popularity - which makes reforming the program politically perilous for any government - Quebec's public daycares are plagued by long waiting lists. Typically, well-off parents have learned how to game the system to snag limited spots, often to the detriment of less well-connected low-income families. Despite the \$7.75-a-day that parents pay upfront, many families are no better off on an after-tax basis, especially since they are unable to maximize federal deductions. (para. 1)

More recently, the CBC released an article claiming that "Ontario is poised to repeat Quebec's daycare mistakes" (Mrozek, 2018)—citing both behavioural declines and unequal access due to long waiting lists as problems resulting from the universality of the practice.

^{xix} The National Energy Board's "Market Snapshot" (2018) does not provide the data for the individual Atlantic provinces but groups the region together.

^{xx} See Lee, Kung, & Owen (2011) pp. 25-26. For example, New Brunswick's LIESP is only available to homeowners with a household income below the HIL whose property taxes are not in arrears (Energie NB Power para. 5).

^{xxi} For example, Lee, Kung, & Owen (2011) comment that from 2008/09 to 2013/14, households with incomes under \$20,000 would see energy costs rise from 3.6% of their income to 4.3%, whereas households with incomes over \$150,000 would see an increase from 0.4% of their income to 0.5% (p. 6).

^{xxii} For more information on the upgrades provided by LIESP, see Énergie NB Power (2017) para. 3-5 and GOC (2017).

^{xxiii} Nova Scotia's "Your Energy Rebate" program provides customers with a rebate equivalent to the provincial portion of the HST (Government of Nova Scotia, 2018); Newfoundland and Labrador's "Home Energy Savings Program (HESP) provides low-income households with grants of up to \$5,000 for energy efficient upgrades (Government of Newfoundland and Labrador, 2017); and Prince Edward Island's "Home Energy Low-Income Program (HELP) provides free air-sealing and energy efficient upgrades to low-income households (Government of Prince Edward Island, 2016).

^{xxiv}Of course, food security is a very different matter in isolated northern regions compared to the rest of Canada: in regions where food has to be brought in as air freight, causing retail prices to skyrocket, implementing policies targeted to improving food security is of key importance. In the same study mentioned above, the prevalence of food insecurity in northern regions ranged from 24.1% in the Northwest Territories and 46.8% in Nunavut (p. 2).

^{xxv}In producing their calculations, Stevens and Simpson (2017) use data from Statistics Canada's (2016a) Social Policy Simulation Database and Model (SPSD/M), 1997-2021 (Version 22.1); Statistics Canada's (2016b) annual Low Income Statistics by Economic Family Type, Canada, Provinces and Census Metropolitan Areas; and 2015 tax and transfer parameters.