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A Policymaker's Guide to Basic Income

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Executive summary

THERE HAS BEEN a resurgence of political interest in Canada in the rather old idea of a universal basic income, sometimes called a guaranteed annual income. Essentially, a basic income is a "no strings attached" transfer from government to individuals or families that can be simpler to administer and provide more dignity to recipients than welfare payments and other forms of social assistance. This report simulates various potential basic income models to determine which ones do better at reducing poverty in a cost-effective way.

Canada presently has 33 income support programs (disbursed by either the federal or provincial governments) that we should consider forms of basic income. They include sales tax credits, and transfers like the Canada Child Benefit or Guaranteed Income Supplement for seniors. Social Assistance and EI should not be considered basic incomes and are not part of that 33 program count. Isolating provincial basic income programs, benefit levels vary considerably across provinces, with single seniors in Saskatchewan receiving the most ($3,486) and single adults in Alberta receiving nothing, i.e. the least.

When we include both federal and provincial support programs, the highest combined basic income is disbursed, again, to single seniors in Saskatchewan ($19,891) while in PEI this same group receives $16,515 (the lowest provincial amount for single seniors). Families with children also receive large basic income supplements depending on where they live, with the highest transfer of $5,737 per person in Quebec for a single parent with two chil-

dren. In other words, income floors already exist in Canada — no one will fall below a certain income level, though it varies by province and family type.

Other income support programs also exist but with more conditions attached, which moves them further away from the basic income approach. These include Earned Income Tax Credits (EITCs), social assistance (SA) and employment insurance (EI). The administrative costs for social assistance and EI can be close to 10% of the amounts distributed through these programs. Cancelling all 33 of Canada's basic income programs would yield up to $108.7 billion, which could be reinvested in a new universal basic income.

There are a number of potential basic income models governments in Canada might consider. This paper assesses two broad approaches: (1) the one-size-fits-all (universal) basic income, where all Canadians receive an identical cheque in the mail at regular intervals (probably annually); and (2) a negative income tax approach that is geared to income, i.e., the richest Canadians receive nothing and the poorest receive the maximum income supplement. Neither of these options adjusts payments for the recipient's age.

These approaches were selected because they represent the two extremes of how one might construct a basic income. The universal cheque to all would be the most expensive but administratively simplest option for any government. The negative income tax version, on the other hand, would be more complicated administratively, but comes with a far lower price tag due to it being phased out for the richest.

Various basic income scenarios under these two broad approaches are simulated utilizing Statistics Canada's Social Policy Simulation Database and Model (SPSD/M) in an attempt to determine their costs and likely impacts on poverty. Eight scenarios are considered.

In scenarios 1–3, existing basic income programs are cancelled along with EITCs, then social assistance, and finally EI, with savings going toward universal cheques to all Canadians worth between $2,655 and $3,565 annually. These scenarios would, naturally, be devastating for all age groups (children, adults or seniors), substantially increasing poverty rates from 11.7% to between 16.7% and 17.1%, and pushing between 1.8 million and 1.9 million Canadians into poverty. As the cost for the new basic income would exactly match the savings from cutting existing programs, there is no fiscal benefit to government, and likely considerable downstream costs related to poverty, from these scenarios. Existing basic income programs, EI, and social assistance, on the other hand, taper out at higher income levels, allowing more support to flow to lower-income families. That provides a better bang for the buck on poverty reduction.

Scenario 4 disburses a $1,000 identical cheque to all Canadians on top of all existing programs. This amount would be taxed back or clawed back from existing programs at year's end on tax returns, and unlike the first three scenarios it would require new government funding as nothing is cancelled to compensate for it. The result in this scenario would be a fall in poverty from 11.7% to 9.7%, lifting 713,000 Canadians out of poverty, with the most significant impact on child poverty. The downside of this approach is a substantial net cost of $29.2 billion a year, equivalent to 14% of federal revenues in 2016. To put that amount in perspective, the GST would have to be almost doubled, from 5% to 9%, to pay for the new basic income.

Scenario 5–7 (like scenarios 1–3) progressively cancel existing basic income programs, EITCs, social assistance and EI (and their administrative costs), but replaces them with a transfer geared to income rather than a universal cheque. A single basic income of between $15,765 to $18,008 is created, resulting in an aggregate poverty rate decline from 11.7% to at best 6.9% at no additional cost to governments. Unfortunately, where adult and child poverty declines substantially under these scenarios, seniors, and in particular single senior women, are much worse off after losing the Guaranteed Income Supplement, Old Age Security and other seniors targeted benefits. Transfers to middle-income seniors and families with children also decline to pay for the new basic income — a utilitarian success, perhaps, but almost certainly also a political disaster.

In the final scenario, a $10,000 negative income tax is created on top of all existing programs as a 34th basic income program — to plug the holes in the existing patchwork of federal and provincial supplements. Under this scenario, a family would receive a $10,000 basic income (per person, adjusted for family size and family income) *or* they would receive the present basic income package, whichever is higher. By design, there are no losers under this program.

Scenario 8 would reduce poverty from 11.7% to 9.3%, lifting 876,000 Canadians out of poverty at a cost of $14.5 billion. If, again, this were paid for out of GST revenue, the GST rate would need only increase from 5% to 7% (where it was until quite recently). Women in their 50s and men between 40 and 65 would see the largest proportional declines in poverty under this scenario. This is because women see large declines in existing basic incomes between when child benefits fall and seniors' benefits kick in. Middle-aged men see fewer benefits from existing basic income programs to begin with. For both genders, more than half of those with low incomes in those age groups have a disability, which likely limits their market incomes.

The $10,000 negative income tax would not help senior women or young Canadians aged 18–29. Single senior women tend to have high poverty rates but already receive much more than $10,000 through existing income supplements for seniors. Young Canadians in poverty tend to have higher market incomes, which get clawed back from the basic income.

Lifting all Canadians to at least the poverty line of $21,810 per person (LIM-AT 2016) via a negative income tax is possible but would cost between $49 billion and $177 billion in new spending depending on the clawback rate.

Broadly speaking, cancelling existing income transfer programs in favour of a single basic income results either in dramatically higher levels of poverty, or ethically and politically unsupportable compromises where seniors are pushed into poverty to lift up adults and children. The more acceptable and feasible approach would be to set up a new basic income on top of the 33 transfers that already exist, thus creating only winners, though the main beneficiaries would be middle-aged Canadians. To address poverty among other groups requires other strategies. For instance, policies that help increase wages and lower unemployment for youth, as well as better financial support for seniors, will likely be more effective at conquering poverty for those groups than a basic income approach.

Introduction

THE IDEA OF a universal basic income — an income level below which no one should fall — has been around for over a generation, but it has gained renewed interest in Canada recently. The Ontario government, for example, launched a basic income pilot project in June 2016, and the concept has been discussed in Quebec, Alberta, Prince Edward Island and federally.[1]

Explaining the need for a new basic income recently, former Conservative senator Hugh Segal, who is heading the Ontario pilot, said "70 per cent of the people who live beneath the poverty line in Ontario ... have jobs. They just don't earn enough through minimum wage to be above the poverty line."[2] In other words, a basic income can be framed, first and foremost, as tackling poverty in Canada, and perhaps working poverty in particular.

A basic income is ensured through direct cash transfers from government to individuals or families. In its simplest version, the annual transfer is a right of citizenship, available to everyone. Unlike some existing programs, such as welfare or disability payments, there are "no strings attached" to this money, i.e., no application process, no requirements on how to spend it, and no intrusive audits. The transfer happens automatically or as the result of another universal activity, like filing a tax return.

Beyond its simplicity, proponents of a basic income claim the following benefits: improved education, a reduction in health care costs,[3] the removal of intrusive welfare bureaucracy,[4] and removal of the stigma of welfare,[5] the creation of basic economic freedom[6], a reduction of poverty and food insecurity,[7] improved gender equality, a more flexible labour market

and higher levels of democratic citizen engagement.[8] Other considerations may include how a basic income could shift bargaining power from capital to labour, a reduction in work incentives,[9] protect people faced with a shrinking labour market, protect against precarious employment, going some way toward valuing unpaid work (often done by women) or as a replacement for full employment.[10]

This paper does not argue for or against any of these points. Rather, it seeks to contribute to the discussion about a basic income by assessing the costs and impacts on poverty of various reform options, assuming poverty reduction is the ultimate objective, although recognizing for some it may not be. Both the costs and potential benefits of these options are broken down demographically to determine who will be most affected and why that is the case. Finally, the paper determines the most likely implementation of a basic income and examines their effectiveness at reducing poverty.

Design considerations

THERE ARE A number of potential basic income models governments in Canada might consider. This paper assesses two broad approaches: (1) the one-size-fits-all (universal) basic income, where all Canadians receive an identical cheque in the mail at regular intervals (probably annually); and (2) a negative income tax approach that is geared to income, i.e., the richest Canadians receive nothing and the poorest receive the maximum income supplement. Neither of these options adjusts payments for the recipient's age.

These approaches were selected because they represent the two extremes of how one might construct a basic income. The universal cheque to all would be the most expensive but administratively simplest option for any government. The negative income tax version, on the other hand, would be more complicated administratively, but comes with a far lower price tag due to the phasing out of benefits for richer families.

Various basic income scenarios under these two broad approaches are simulated utilizing Statistics Canada's Social Policy Simulation Database and Model (SPSD/M) in an attempt to determine their costs and likely impacts on poverty. The following key questions are also addressed to more fully appreciate the complexities of each basic income scenario:

- How would a basic income change based on the recipient's other income sources, such as earned income through the labour market? In other words, does a person making $1 million annually get to keep the entire basic income amount? Or is a portion, or all of it, elimin-

ated at a certain income level? If a basic income is clawed back at a very high rate the cost to government shrinks, but at the risk of removing incentives to seek other income sources (assuming this is a priority). For example, a recipient hardly benefits from extra wages if they result in a comparable loss in benefits.

- Does a basic income change based on demographic features like age. For instance, do seniors receive more support because they are generally less able to work?
- Should family size be a determinant? The costs incurred by larger families are naturally higher, but larger families may gain economies of scale.
- How will government pay for the basic income — through increased taxes, redirection of existing program funds or by cancelling some (or all) existing programs and services?

Existing basic income programs in Canada

Any discussion of a basic income must take into account the many existing government transfers that serve a similar purpose. As of July 1, 2016, there were 30 federal and provincial income support programs, all of which involve a cheque or direct bank transfer. In every case, transfer amounts decline as family income rises, although at varying rates, to better enable governments to target support to low-income households. Many of these transfers are adjusted for family size and frequently differ based on the age of the recipient. For example, the new Canada Child Benefit is for children, the Guaranteed Income Supplement is only available to seniors, and most sales tax credits are for working adults. However, with citizenship the only requirement to access these programs, they are basic incomes in all but name.

Another set of existing programs can be thought of as quasi–basic incomes. These are targeted to low-income households, but there are additional access requirements besides citizenship. Ontario, Manitoba and Quebec administer transfers to people who pay property taxes or rent, for example. While not universal, these quasi–basic income mechanisms are widespread. Other programs may be tied to disability, the costs of heating or care giving, etc., and are therefore further removed from the idea of a no-strings-attached basic income.

TABLE 1 Basic income programs per family detailed (annual)[11]

Program	Single senior	Single adult	Couple with two children	Single parent with one child
1. NFLD Income Supplement (sales tax credit)	$220	$220	$680	$420
2. NFLD Child Benefit	-	-	$781	$379
3. NFLD Seniors' Benefit	$1313	-	-	-
4. PEI Sales Tax Credit	$110	$110	$275	$165
5. Nova Scotia Child Benefit	-	-	$1,450	$625
6. Nova Scotia Affordable Living Tax Credit (sales tax credit)	$255	$255	$375	$315
7. NB Low-Income Seniors Benefit	$400	-	-	-
8. New Brunswick Child Tax Benefit + School Supplement	-	-	$700	$350
9. New Brunswick HST Credit	$300	$300	$800	$700
10. Quebec Solidarity Tax Credit	$418	$418	$566	$418
11. Quebec Child Assistance Credit (plus single-parent top-up)	-	-	$3,587	$3,231
12. Ontario GIS supplement (GAINS)	$996	-	-	-
13. Ontario Sales Tax Credit (included in "Trillium Benefit")	$291	$291	$1,164	$582
14. Ontario Child Benefit	-	-	$2,712	$1,356
15. Manitoba Child Benefit	-	-	$840	$420
16. Manitoba Personal Tax Credit (sales tax credit)	$308	$195	$442	$221
17. Manitoba 55 Plus Program	$647	-	-	-
18. Saskatchewan Low Income Tax Credit (sales tax credit)	$246	$246	$684	$342
19. Saskatchewan Seniors Income Plan	$3,240	-	-	-
20. Alberta Seniors Benefit	$3,360	-	-	-
21. Alberta Child Benefit	-	-	$1650	$1100
22. B.C. Sales Tax Credit	$75	$75	$150	$75
23. B.C. Low Income Climate Action Tax Credit	$115.50	$115.50	$300	$150
24. B.C. Family Bonus Program	-	-	- (contained in Canada Child Benefit)	- (contained in Canada Child Benefit)
25. B.C. Early Childhood Tax Benefit	-	-	$660	$660
26. B.C. Senior's Supplement	$592	-	-	-
27. Federal GST Credit	$276	$276	$842	$421
28. Federal Canada Child Benefit	-	-	$11,800	$6,400
29. Federal Guaranteed Income Supplement (GIS)	$10,277	-	-	-
30. Federal Old Age Security (OAS)	$6,880	-	-	-
Quasi–basic income (rent/property tax–dependent)				
31. Quebec Solidarity Tax Credit (housing component), evaluated at $1,000 a month	$548	$548	$899	$665
32. Ontario Property Tax Credit & Seniors Rent/Property Tax Grant, evaluated at rent of $1,000 a month (included in "Trillium Benefit")	$940	$520	$520	$520
33. Manitoba Education Property Tax Credit, evaluated at rent of $1,000 a month	$1,100	$700	$700	$700

Source SPSD/M and author's calculations. The child of the single parent is aged 2; the children of the couple are aged 2 and 10. Family income is assumed to be $0. Benefits are total for the family. Current as of July 1st, 2016.

TABLE 2 Provincial basic income per person (annual)

	NL	NB	NS	PEI	ON	QC	MB	SK	AB	BC
Single senior	$1,533	$700	$255	$110	$1,287	$418	$955	$3,486	$3,360	$782
Senior couple	$797	$500	$128	$83	$1,287	$283	$1,004	$3,066	$2,520	$914
Single adult	$220	$300	$255	$110	$291	$418	$195	$246	$0	$191
Single parent, one child	$400	$525	$470	$83	$969	$1,825	$321	$171	$550	$443
Single parent, two children	$467	$500	$608	$73	$1,195	$1,615	$362	$146	$550	$307
Couple w/ two children	$365	$375	$456	$69	$969	$1,038	$321	$171	$413	$278

Note Cross tabulation of Table 1 excluding all federal programs and divided by the number of people in each family type. The child of the single parent is aged 2. For families with two children, the children are aged 2 and 10. Evaluated at family income of $0. Current as of July 1st, 2016.

Table 1 lists the 30 Canadian basic income programs whose only requirement is citizenship and three quasi–basic income programs that depend on rent or property tax expenditures. Most provincial programs are integrated into their federal counterparts, simplifying the cheque or bank transfer process.

The fairest way to compare these programs is to calculate their per-person amounts. These can be vastly different based on family type and size, and by province, as shown in *Table 2*. In Newfoundland and Labrador, for instance, a couple with two children would receive $365 per person from that province's basic income programs, while a single senior would receive $1,533. senior single Senior receive $110 in Prince Edward Island but $3,486 in Saskatchewan (the highest amount across all provinces). Aa single adult in Alberta receives the lowest basic income of nothing at all.

Most provincial transfer programs are dwarfed by their much larger federal counterparts. *Table 3* provides a complete picture of what various family types receive on a per-person basis, including the combined federal and provincial basic income amounts. Put another way, the values in *Table 3* are the per-person income floors that already exist by province and family type. No Canadian citizen will have a lower income than these values in each province.

Seniors benefit the most, by far, from existing basic income programs, with single seniors in Saskatchewan receiving $19,891 per person if they have no other income. Most of that amount comes from the federal Old Age Security (OAS) and Guaranteed Income Supplement (GIS) programs.

TABLE 3 Combined federal and provincial basic income per person (annual)

Family type	NL	NB	NS	PEI	ON	QB	MB	SK	AB	BC
Single senior	$17,938	$17,105	$16,660	$16,515	$17,692	$16,823	$17,361	$19,891	$19,765	$17,188
Senior couple	$14,074	$13,778	$13,405	$13,360	$14,565	$13,561	$14,281	$16,344	$15,798	$14,191
Single adult	$496	$576	$531	$386	$567	$694	$471	$522	$276	$467
Single parent, one child	$3,810	$3,936	$3,881	$3,493	$4,380	$5,235	$3,731	$3,582	$3,961	$3,853
Single parent, two children	$4,589	$4,622	$4,730	$4,195	$5,317	$5,737	$4,484	$4,268	$4,672	$4,429
Couple w/ two children	$3,526	$3,536	$3,617	$3,229	$4,130	$4,199	$3,481	$3,332	$3,573	$3,438

Note: Cross tabulation of Table 1 divided by the number of people in each family type. The child of the single parent is aged 2. For families with two children, the children are aged 2 and 10. Evaluated at family income of $0. Current as of July 1st, 2016.

Basic incomes for families with children can also be substantial and increased when the Canada Child Benefit replaced previous programs. In Quebec, for instance, where child transfers are highest, a single-parent family with two children receives $5,317 per person, or $15,951 for the family, if it has no other income.

Families made up of only adults, either in a couple or living alone without children or seniors, receive much less from present basic income systems. Most of what they receive comes from sales tax credits or property tax/rent credits, but these programs do not amount to much. At most, a single adult would receive $694 per year in basic income in Quebec, or as little as $276 if they lived in Alberta and had no other income.

Other income transfer programs

There are several other important income transfer programs in Canada focused on alleviating poverty. These could not be rightly called basic income programs because of their important additional access requirements beyond citizenship and sometime requirements on how transfers are spent.

Earned Income Tax Credits

Earned income tax credits (EITCs) are structured so that benefits increase with earned income to a certain point, with the hope this will incentivize finding work. This is in contrast to almost every other type of income transfer program where the amount received stays constant or decreases as earned

income increases. Also unlike a basic income, if a family has no earned income it is not eligible for an EITC. Several Canadian EITCs include additional top-ups for people with disabilities.

As the EITC amount changes based on income, and is zero when earned income is zero, this program does not have a specific value but is related to family income. There is a federal EITC called the Working Income Tax Benefit (WITB). Alberta, Quebec, New Brunswick and British Columbia also have either explicit EITCs or EITC components built into their provincial child tax benefit programs.[12] The federal and provincial EITCs interact so that the value of the WITB changes depending on the value of provincial transfers.

Due to their formulaic nature, EITC credits are combined in this paper's simulations with existing basic incomes and cancelled in several scenarios in order to pay for a new basic income program.

Provincial social assistance

Unlike proposals for a universal basic income and existing basic income programs, there are substantial requirements attached to receiving provincial social assistance. These are not formulaic in nature, but often involve the ongoing subjective judgement of caseworkers tasked with scrutinizing and micromanaging household expenditures. In contrast, the basic income approach lets families decide how best to use their government-issued cheques. Micromanaging recipient family budgets comes with a high administrative cost, as examined in Appendix 2.

Social assistance generally helps support low-income families but does not count as a basic income. In several scenarios analyzed in this paper, social assistance benefit payments are cancelled in favour of a basic income. Total administrative costs (detailed in Appendix 2) are recovered in these cases, no matter how overly optimistic that is.

Employment insurance

Unlike the programs discussed above, employment insurance (EI) is not funded from the tax base but through the contributions of employers and employees, and except in extraordinary times it is run on a break-even basis. EI certainly acts to support certain low-income households, i.e., those where a member has lost their job through no fault of their own. However, receipt of EI benefits is based on a variety of important qualifications, most nota-

bly that a recipient must have worked a certain number of hours before losing their job.

This important restriction makes EI far from universal. Disturbingly, the high number of consecutive working hours required to qualify for EI eliminates benefits for most low-income households, where part-time and/or sporadic work periods are normal.[13] Even if they have paid into EI, the lowest-income families receive the least in benefits in the event of a layoff. Currently, less than 40% of unemployed workers in Canada receive EI benefits. Meanwhile, the system's need to rapidly respond to job losses, and its complicated requirements related to working hours, create high administrative costs, as examined in Appendix 2.

EI's eligibility requirements also make it not at all like a basic income. In several of the scenarios analyzed shortly EI benefits are cancelled and funnelled into a basic income program. Employer and employee contributions would be maintained in this case, but EI benefits would be eliminated in favour of a basic income. When EI is cancelled in ensuing simulations, the administrative costs are completely recovered in a similar way to social assistance.

Canada Pension Plan

Like EI, the Canada Pension Plan (CPP) is paid for entirely by Canadian employers and employees via payroll deductions with the goal to provide benefits upon retirement that are commensurate with a person's working-age contributions. The CPP is not a basic income, since it is contingent on contributions — a fairly substantial requirement over and above citizenship. It also does not provide more to lower-income families. In fact, those who have lower incomes during their working lives will have contributed less to CPP, and therefore receive less in retirement benefits. While the CPP has the effect of sustaining incomes in retirement, for lower-income seniors the more important support comes from the basic income provided by the Guaranteed Income Supplement (GIS) and Old Age Security (OAS).

Unlike the other programs listed so far in this paper, the CPP isn't funded on a short-term, break-even basis, nor is it funded out of the tax base. Instead, employer and employee contributions are invested so that adequate benefits will be available upon retirement. Given the complexities of actuarial benefits and liabilities, it would be difficult to cancel the CPP in the same way as other programs and have the benefits redirected to a basic in-

come. Due to this complication, the CPP is not included in the following simulations.

Cancelling the status quo

One approach to funding a basic income could entail cancelling a mix of existing programs that serve a similar purpose. It is therefore worth taking stock of the performance of our present low-income support systems. *Table 4* shows the relative impact of cancelling the programs discussed earlier — the existing 30 basic income–like programs, three quasi–basic income programs, federal and provincial EITCs, social assistance and EI — in various combinations.

Not surprisingly, cancelling existing basic income and quasi–basic income transfers along with the EITC would increase poverty in Canada. Poverty rates would triple for seniors, from 12.4% to 41.1%, more than double for children, from 10.9% to 24.3%, and increase from 11.8% to 16.6% among the adult population. If social assistance were also cancelled, all three poverty rates would further increase, with the biggest impact felt by adults. The effect of cancelling EI on top of these other changes would only result in still higher poverty rates.

Cancelling these programs would also recover quite a bit of money that could be reinvested in a new universal basic income. As shown in *Table 4*, the current system of basic income transfers and EITC programs will cost federal and provincial governments a projected $82.9 billion in 2016, rising to $108.7 billion if we count social assistance and EI. These amounts do not include administrative costs, which, as discussed above and in more detail in Appendix 2, would be substantial for EI and social assistance.

The simulations that ensue examine two broad approaches to what is sometimes called a universal basic income. The first is a one-size-fits-all, universal cheque/bank transfer for all Canadians, no matter their age, income or family size. The money is taxable at year's end, so those with higher incomes pay a higher tax rate. This approach is least efficient in reducing poverty since everyone — millionaires and the working poor alike — would receive the same amount. However, it is much easier to administer.

The second basic income approach is more rationalized and mirrors how present income transfers function. This approach sets a basic amount that a person would receive if they had no other income and lived alone, then reduces the benefit by 50 cents on every dollar of other income. At a cer-

TABLE 4 Estimated poverty rates absent Canadian low-income programs (LIM-AT 2016)

Age group	Status quo	Cancel existing basic income and EITC	Cancel existing basic income, EITC, and social assistance	Cancel existing basic income, EITC, social assistance and EI
Children (under 18)	10.9%	24.3%	25.0%	27.1%
Adults (18 to 64)	11.8%	16.6%	17.8%	19.2%
Seniors (Over 65)	12.4%	41.1%	42.0%	42.2%
Aggregate Savings (all governments)	$0	$82.9 billion	$95.7 billion	$108.7 billion

Source SPSD/M 22.1 glass box and author's calculations, includes federal & provincial EITC. Aggregate Savings includes savings across federal and provincial governments and includes losses in sales tax revenue. As with all other simulations, no behavioural response is assumed. Aggregate savings does not include savings in administrative costs which are low for present basic income programs, but high for social assistance and EI.

tain income level, a person would no longer receive any more money from the government. All family members would get the same amount irrespective of age, but as family size grew, the per-person benefit would decrease.

This second approach is more efficient in reducing poverty, as it would spend nothing on wealthier Canadians while focusing more funds on those with the lowest incomes. However, it does not respond quickly to changes in a recipient's circumstances, like job loss, and therefore likely entails higher administrative costs not examined in this paper.

One-size-fits-all approach to basic income

This section looks at the impact of a basic income approach that involves the federal government sending all Canadians of any age an equivalently valued cheque or bank transfer. This amount would be taxed back at the appropriate income tax rate for each recipient at year's end.[14] Four scenarios are considered to make this one-size-fits-all approach possible. The first three inject no new money into a basic income — funding is drawn from cancelled existing programs. Here we attempt to determine if there is a cost free way of reducing poverty merely by re-organizing existing spending, that is cancelling many programs to create a single basic income. The fourth scenario proposes an additional 34th basic income on top of existing programs and at additional cost to government. There is no potential for losers in the fourth scenario, unlike the first three.

In **Scenario 1**, the government cancels existing basic income programs and EITCs to make room for a new basic income of equivalent value, that is $82.9 billion. In this scenario, all Canadians would receive a cheque for $2,655 once a year. As you might expect, this low amount would push 1.8 million

TABLE 5 Identical cheques in the mail

Scenario	Programs cancelled	Basic income amount per person per year	Starting poverty count (000s)	Ending poverty count (000s)	Change in poverty count (000s)	Starting poverty rate	Ending poverty rate
1	BI/EITC	$2,655	4,206	5,992	1,787	11.7%	16.7%
2	BI/EITC and Social Assistance	$3,102	4,206	6,131	1,925	11.7%	17.1%
3	BI/EITC, Social Assistance and Employment Insurance	$3,565	4,206	6,152	1,946	11.7%	17.1%

Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016.

Canadians into poverty, many of them seniors who receive much more than this from existing programs. All three age groups (children, adults and seniors) would experience higher poverty rates under this scenario.

In **Scenarios 2 and 3**, existing basic income programs and EITC are cancelled alongside social assistance, in the first case, and social assistance and EI in the second. When we simulate these scenarios, i.e., redirect program and administrative spending to a single universal transfer to all Canadians, annual cheques would be worth either $3,102 or $3,565 per person. In both cases, an additional 1.9 million Canadians would fall below the poverty line — a worse outcome than in Scenario 1.

Clearly, if your goal is poverty reduction, Canada's existing programs carry a lot of bang per buck. EI and social assistance, by tapering out at higher income levels, allow governments to target more support to lower-income families, who are much better served than under a basic income amount that is identical for all. No matter which programs are cancelled to accommodate this type of new basic income the effects on poverty are devastating.

In **Scenario 4**, the government issues a $1,000 universal cheque in addition to offering all existing income support programs. In essence, this would be the 34th Canadian basic income program, and by providing support over and above what already exists, it would lower poverty rates across all age groups (see *Table 6*). An annual $1,000 cheque or bank transfer to all Canadians could either be taxed back at year's end, or clawed back from existing programs.

Under this scenario, the overall poverty rate would fall two percentage points — taking 713,000 people out of poverty. The biggest impact would affect child poverty, which would drop three percentage points, from 10.9% to 7.9%. Adult poverty would drop from 11.8% to 9.9%. Seniors would see the smallest, though by no means insignificant, benefit under this scenar-

TABLE 6 Universal $1,000 transfer on top of existing programs (Scenario 4)

Age	Starting poverty count (000)	Ending poverty count (000)	Change in poverty count (000)	Starting poverty rate	Ending poverty rate
Children Under 18	750	544	-206	10.9%	7.9%
Adults (18 to 64)	2,695	2,277	-418	11.8%	9.9%
Seniors (65+)	761	671	-90	12.4%	10.9%
All	4,206	3,492	-713	11.7%	9.7%

Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016.

io (the poverty rate would drop from 12.4% to 10.9%), in large part because they already receive the most from pre-existing basic income programs.

While sending all Canadians a $1,000 cheque would result in a positive impact on reducing poverty, after taxes and claw backs, this scenario would set the federal government back by $31.5 billion a year. This would save the provinces $2.3 billion, since they tax back and claw back a portion of each $1,000 disbursement. The net cost to all governments would be $29.2 billion. But to pay for this scenario, assuming no cuts elsewhere to government spending, federal revenues would need to be increased 14% through higher taxes. To put this in perspective, the government would have to nearly double the GST, from 5% to 9%, or increase income taxes by a fifth to pay for the relatively modest $1,000 universal basic income.

If the goal of a universal, one-size-fits-all basic income is to reduce poverty, none of the scenarios above appear to achieve it very efficiently, and the first three would make things worse. Only in Scenario 4 would the situation improve, lifting 713,000 people out of poverty, but at a cost of $29.2 billion, or $40,886 per person. Given that the poverty line in Canada is $21,810 per person, per year in 2016 for a one-person household, this last approach would be quite wasteful. The following scenarios consider a different approach to a basic income that targets support to those who need it most.

A negative income tax approach to basic income

This section examines the impact of cancelling and repurposing existing income support programs, but unlike the first set of scenarios, where all Canadians received an identical cheque, the next scenarios change the amount transferred based on a recipient's other sources of income and their family

TABLE 7 New basic income traded for existing basic income programs and EITCs

Maximum negative income tax (BI) amount: $15,765
Replaces existing basic income programs and EITC (Scenario 5)

Age	Starting poverty count (000)	Ending poverty count (000)	Change in poverty count (000)	Starting poverty rate	Ending poverty rate
Children (under 18)	750	460	-290	11%	7%
Adults (18 to 64)	2695	1067	-1628	12%	5%
Seniors (65 +)	761	1241	480	12%	20%
All	4206	2767	-1438	12%	8%

Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016

size. Specifically, the basic income is reduced by 50% for every other dollar of income a family earns (see Appendix 1 for more on this).

In **Scenario 5**, the government cancels existing basic income programs and EITCs. The $83 billion recuperated is then put into a much higher base basic income for those most in need. Those with no income, in this scenario, would receive a $15,765 annual cheque or bank transfer. As income and family size increased, the basic income amount would decrease and be completely eliminated at higher incomes.

The results under this scenario are more positive than the universal cheque approach, particularly for children and adults living in poverty. Under Canada's existing system, adults receive little in the way of income support. Here (see *Table 7*), the adult poverty rate would drop dramatically from 12% to 5%. Adults in their 50s and 60s, in particular, would benefit, primarily because they often cannot work as much (for a variety of reasons) but do not yet qualify for income assistance available to seniors. Poverty would also drop significantly among children, from 11% to 7%.

Across the entire population, the poverty rate would drop from 12% to 8%, lifting 1.4 million Canadians out of poverty. However, seniors would bear a terrible cost for this scenario, since existing basic income programs provide a base amount that is higher than the $15,765 they would receive here. An estimated 480,000 seniors would therefore be pushed into poverty under this basic income scheme, increasing the seniors' poverty rate from 12% to 20%.

In **Scenario 6**, social assistance is added to the list of existing basic income programs and EITCs that would be cancelled to make room for a slightly higher basic income worth $17,080 for those who need it most. While there

TABLE 8 New basic income traded for existing basic income, EITCs and social assistance

Maximum negative income tax (BI) amount: $17,080
Replaces basic income programs/EITC and social assistance (Scenario 6)

Age	Starting poverty count (000)	Ending poverty count (000)	Change in poverty count (000)	Starting poverty rate	Ending poverty rate
Children (under 18)	750	573	-176	11%	8%
Adults (18 to 64)	2,695	1,332	-1,363	12%	6%
Seniors (65 +)	761	905	144	12%	15%
All	4,206	2,810	-1,396	12%	8%

Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016

is no net cost increase to governments in this scenario, the federal government would need to assume the cost of all provincial social assistance programs. The total cost of administering these programs would be repurposed for this higher basic income.

While there would be improvements in the poverty rates for children, where it would drop 3%, and adults, where it is halved (see *Table 8*), the overall effect of this basic income approach on poverty would not as great as in Scenario 5. Not surprisingly, seniors would still be worse off, with their poverty rate increasing from 12% to 15%. Since the basic income in this case is universal, but social assistance is targeted to families under 65, cancelling the latter is more favourable to seniors than the previous scenario, but it counteracts the effectiveness of the new basic income for adults and children.

Scenario 7 cancels existing basic income programs, EITCs, social assistance and EI, with all funding and administrative costs redirected to benefits for the new basic income. At this point, an interesting event occurs: there is an across-the-board reduction in poverty in all three age groups, though it is fairly minor for seniors. Child poverty would be reduced from 11% to 8% in this scenario, while among the adult population the poverty rate would drop from 12% to 5%.

An interesting wrinkle is that if you're goal is reducing poverty among the adult/working population, you are better off keeping EI and social assistance as in Scenario 5. The general poverty rate in Scenario 7 would be reduced from 12% to 7%, lifting 1.7 million Canadians out of poverty. Unfortunately, despite this achievement, there would be no shortage of losers under this approach.

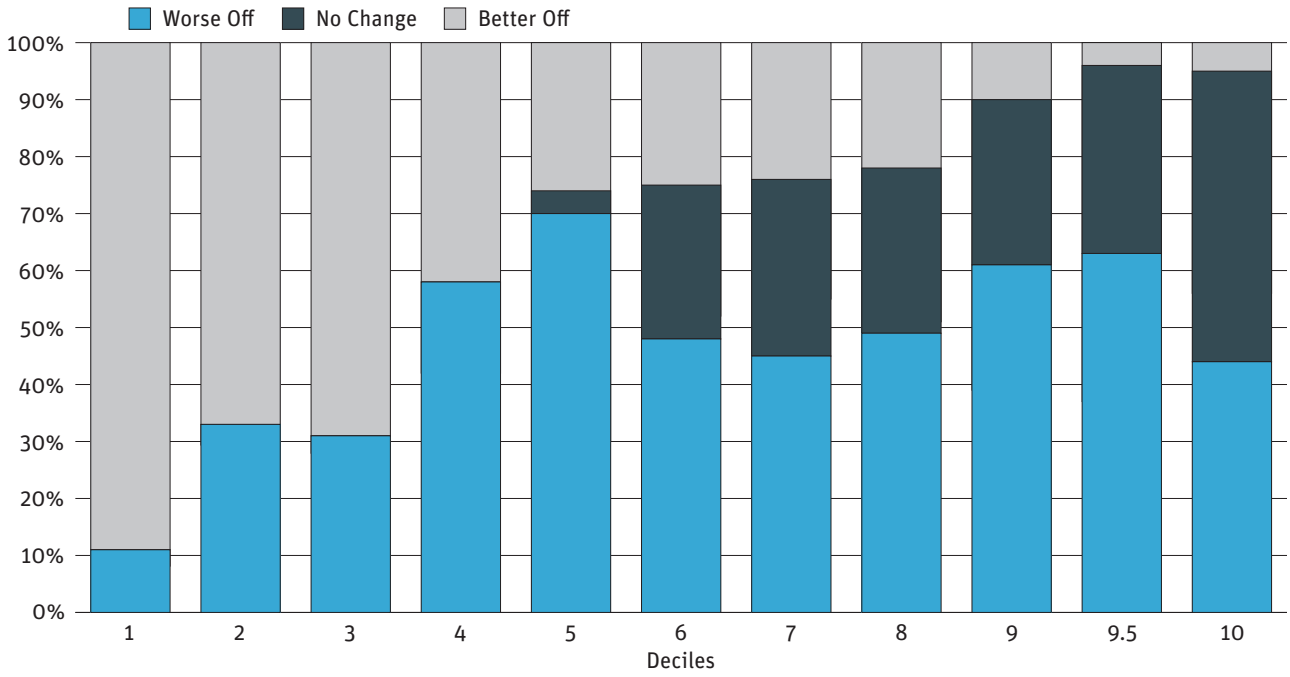
TABLE 9 New basic income traded for existing basic income programs, EITC, social assistance and EI

Maximum negative income tax (BI) amount: $18,008
Replaces basic income programs/EITCs, social assistance and employment insurance (Scenario 7)

Age	Starting poverty count (000)	Ending poverty count (000)	Change in poverty count (000)	Starting poverty rate	Ending poverty rate
Children (under 18)	750	544	-206	11%	8%
Adults (18 to 64)	2,695	1,213	-1,482	12%	5%
Seniors (65 +)	761	705	-56	12%	12%
All	4,206	2,463	-1,743	12%	7%

Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016

FIGURE 1 Impact of new basic income by decile (Scenario 7)



Source SPSD/M 22.1 glass box and author's calculations. Income deciles based on pre-tax census family incomes

Figure 1 shows which families, by decile, would be worse off or no better under this scenario. Though poverty rates have dropped, the lack of targeted support for certain groups (unemployed, seniors) leaves many people in worse shape. Programs like Old Age Security (OAS) and the Canada Child

Benefit (CCB) can reach far into the richest deciles, given their long phase out. Those in the middle class deciles, however, would be among the net losers.

Of greater concern from a poverty perspective is that among families in the second- and third-lowest deciles — those making between $14,000 and $29,000 — roughly a third are worse off in this scenario. These categories are made up primarily of single seniors (mostly women), who receive more than $18,008 under the existing web of basic income programs.

Filling the gaps with a basic income

The scenarios analysed so far have produced winners and losers based on the elimination of existing income support programs to make fiscal room for a new basic income. In this section we leave the existing social safety net in place and consider the costs and impacts on poverty of creating a 34th basic income program.

Scenario 8 establishes a $10,000 negative income tax on top of all 33 existing programs. Under this scenario, 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.[15] By design, there are no net losers under this system, although there would be a strong incentive for the provinces to cut their transfer programs and free-ride on the federal system.

Poverty would be reduced in all three broad age groups by taking this approach. The biggest impact would be among adults, where the poverty rate would drop from 12% to 9%. Child poverty would also drop, from 11% to 9%, and there would be a small impact on seniors, for whom existing basic income programs deliver a higher level of support than this new program can offer.

The overall result is that 876,000 Canadians would be lifted out of poverty. Unlike the previous scenarios, where the assumed net cost to governments was zero (since the new basic income would be financed through cuts to existing income support programs), adding a 34th basic income program would cost $14.5 billion (net), or 9% of federal revenues (although the provinces would see a net benefit), but reduce poverty in Canada by 2.4 percentage points. To put this in perspective, you could pay for this scenario by raising the GST from 5% to its former 7% rate.

Spending $14.5 billion to lift 876,000 people out of poverty results in a per-person cost of $16,600. This is a dramatically better outcome than send-

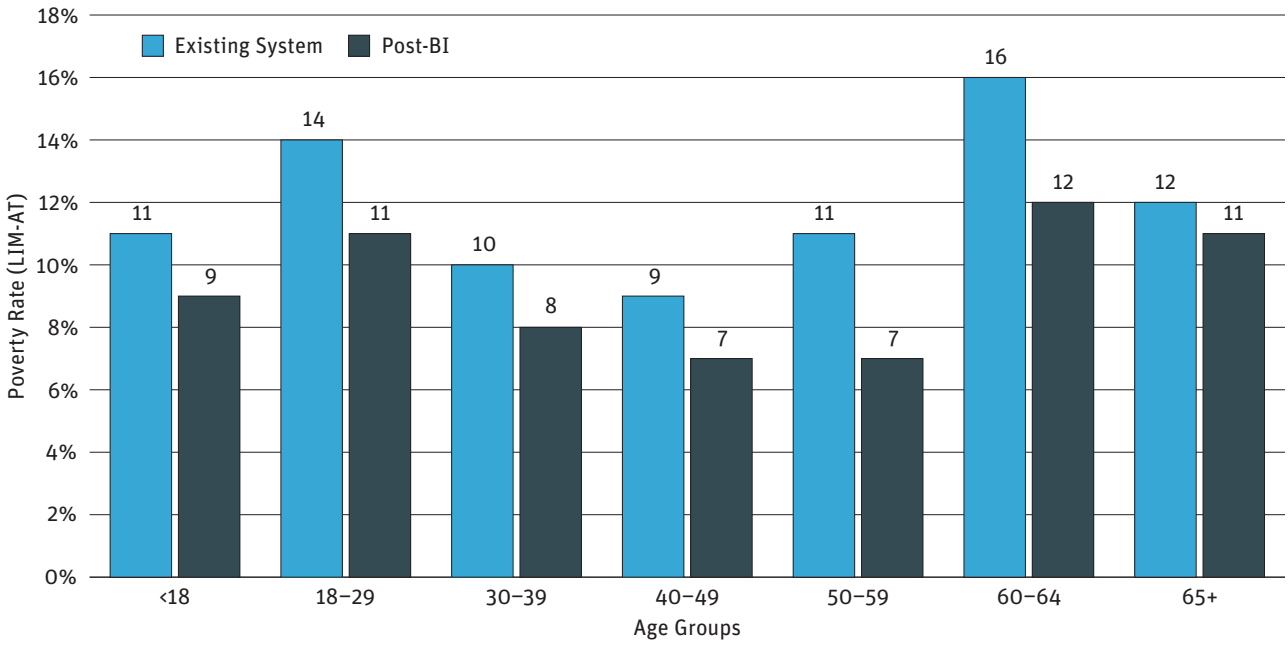
TABLE 10 New basic income filling in the gaps (Scenerio 8)

Maximum negative income tax (BI) amount: $10,000
Net cost: $14.5 billion (Scenario 8)

Age	Starting poverty count (000)	Ending poverty count (000)	Change in poverty count (000)	Starting poverty rate	Ending poverty rate
Children (under 18)	750	600	-150	11%	9%
Adults (18 to 64)	2,695	2,026	-669	12%	9%
Seniors (65 +)	761	704	-57	12%	11%
All	4,206	3,330	-876	12%	9%

Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016

FIGURE 2 Impact of basic income (BI) on poverty rates by age (Scenerio 8)



Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016

ing an identical $1,000 cheque to all Canadians, which would cost $40,886 per person lifted from poverty. But it is still relatively close to the actual poverty line of $21,810.

So the price is better, but who would benefit from this 34th basic income program? Because it is designed to come into effect only when existing per-person income supports fall short of $10,000, this new basic income would

TABLE 11 Women with low incomes, average transfers

Age	Average market income	Average income transfers	Percentage with disability	Average CCB	Average OAS/GIS	Average CPP/QPP	Average social assistance	Pre-BI poverty rate	Poverty rate reduction due to BI
<18	$72	$46	1%	$19	$0	$3	$12	11%	-22%
18–29	$7,140	$5,698	20%	$2,666	$0	$19	$1,049	14%	-21%
30–39	$5,080	$13,693	21%	$7,277	$0	$205	$2,749	10%	-22%
40–49	$5,653	$9,904	36%	$4,758	$0	$517	$2,065	10%	-23%
50–59	$5,514	$5,299	58%	$623	$0	$1,353	$1,375	11%	-32%
60–64	$3,210	$7,571	56%	$3	$1,146	$2,175	$1,090	19%	-21%
65+	$770	$18,446	61%	$16	$12,837	$4,132	$25	15%	-8%

Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016. Averages are prior to any new basic income program

have the added benefit of catching those Canadians who fall through the cracks in Canada's existing social safety net. It would help those in their 50s currently living in poverty the most, pulling 31% of them above the poverty line. The poverty rate among Canadians in their 30s, 40s, and ages 60–64 would drop 25%. The poverty rate decline would be lower for those under 30 and it would be very low for seniors — two demographics who tend to experience relatively higher rates of poverty.

How would a 34th negative income tax worth $10,000 address gendered poverty? Roughly the same number of women and men would be lifted out of poverty by this new basic income. However, women in their 50s would experience a bigger proportional reduction in poverty. *Table 11* shows the substantial drop in average transfers that women with low incomes in their 50s otherwise experience.

Women in poverty receive an average transfer of $9,904 per year in their 40s, but that amount falls to only $5,299 in their 50s and recovers somewhat to $7,571 in the 60–64 age range. This is largely due to the drop in child benefits as children move out. Child benefits are generally paid to the lower earner or sole parent, who is usually a woman. As a result, women in poverty experience a large drop in income support from this source as children leave the household.

Provincial child support programs and sales tax credits, as well as social assistance, are similarly targeted and reinforce the same trend. Throughout their lives, women living in poverty collect more social assistance than men, again likely related to children. For many women, the dramatic decline in

TABLE 12 Men with low incomes average transfers

Age	Average market income	Average income transfers	Percentage with disability	Average CCB	Average OAS/GIS	Average CPP/QPP	Average social assistance	Pre-BI poverty rate	Poverty rate reduction due to BI
<18	$103	$1	3%	$0	$0	$0	$0	11%	-18%
18–29	$7,157	$1,756	14%	$12	$0	$24	$193	14%	-21%
30–39	$8,678	$3,555	36%	$17	$0	$174	$942	10%	-26%
40–49	$8,628	$4,072	28%	$417	$0	$239	$541	8%	-28%
50–59	$6,008	$5,017	51%	$157	$0	$910	$1,518	11%	-30%
60–64	$5,636	$5,960	57%	$53	$102	$3,249	$876	14%	-29%
65+	$528	$17,483	59%	$6	$11,497	$4,515	$16	9%	-6%

Source SPSD/M 22.1 glass box and author's calculations. Using LIM-AT poverty line projected for 2016. Averages are prior to any new basic income program

transfers cannot be made up for in market income; more than half of women in their 50s living in poverty have some form of disability.

Incomes rise for women just prior to 65, but this is related to seniors' benefits. Although not directly eligible for these benefits, women begin accessing them through the Spouse's Allowance for the spouses of GIS recipients, CPP survivor's pension, and disability benefits often related to an older spouse (women tend to be younger than their male spouses.

It is worth pointing out that while women in their 50s see a disproportionate boost from a $10,000 basic income, this age group actually experiences a lower poverty rate (10.6%) compared to women aged 18 to 29, and those 60 and over (19% for ages 60–64, and 15% for the 65+).

Unlike women, men aged 40 to 65 would see a roughly equivalent impact on poverty from a $10,000 basic income. Poverty rates among low-income men in that age range would be reduced by roughly a third, close to what men in the 60–64 age range would also see, but there is less impact for men under 30, where poverty is equally as high. Men with low incomes receive smaller average income transfers currently than women, but they have higher average market incomes. Transfers related to children, such as the CCB, its provincial equivalents and child sales tax credits, much more often flow to women, who tend to be the lower earner or sole parent. Men also gain less support from social assistance, again likely related to who is caring for children.

Similar to women, low-income men tend to experience a substantial increase in disability in their 50s. For men, this has a more significant impact on market incomes, which fall from an average of $8,628 to $6,008 per year.

Social assistance, which is, on average, lower for low-income men than for women, spikes in a man's 50s, likely as market incomes fall and existing basic income programs provide little support.

Providing a basic income of at least $10,000 a person (adjusted for income and family size) exposes the lack of other income support programs in Canada targeted at people aged 50–65. For women in this age group the new basic income would be helpful, since it makes up for a decline in child benefits. For men it would make up for a decline in market income, likely brought on by disability, and men in their 40s with low incomes would also see a significant benefit.

Concerns about creating a disincentive to work must be checked against the likely effect of high disability rates on certain recipient groups. Furthermore, as a basic income is most effective for those over 50, making existing basic income programs for seniors, such GIS and its provincial counterparts, available at age 55 or even 50 would have the potential to substantially reduce poverty rates that existing transfers fail to address.

A 34th basic income in Canada worth $10,000 per person would not effectively reduce the high rate of poverty among women and men aged 18–29 and for women over 65. For senior women, improving pre-existing basic income supplements, particularly GIS, may be more effective. A basic income of $10,000 is far less than what single seniors receive already.

On the other hand, a basic income of $10,000 would also be ineffective for younger Canadians (under 30) who live in poverty. This group tends to have higher market incomes while still sitting below the poverty line. Focusing on lower youth unemployment, higher minimum wages or higher wages in general may be more effective for this group capitalizing on a stronger starting engagement with the labour market.

Conclusion

INTEREST IN A universal basic income is growing across much of the developed world including Canada, where several provinces are now studying the concept. The arguments for a new universal basic income are many, but tend to focus on the need to better address poverty, by making sure everyone has the income they need to live in dignity.

This paper tested various scenarios for what a new basic income in Canada might look like. Admittedly there are countless others with varying price tags, however, they likely fall within the bounds of cost and effectiveness of the scenarios presented. The scenarios here were selected because they represent the rough cost and efficiency bounds of the basic income approach. Scenarios replacing the web of existing support programs with a single basic income allows for a comparison of poverty impacts while maintaining the same cost.

I find that while many basic income options will reduce poverty, they can be extraordinarily expensive, with quite negative impacts on seniors or other groups, depending on their design. In scenarios 1–3, for example, poverty shoots upward among all groups. These scenarios, which result in a modest annual cheque mailed to all Canadians, are not reasonable political options, but they demonstrate how Canada's existing targeted income assistance programs tackle poverty more efficiently than same-value universal options.

In scenarios 5–7, where larger cheques (or bank transfers) can be issued by clawing back some of the basic income benefit from higher earners, we

end up with the ethical dilemma of plunging seniors into poverty so that children and adults can be lifted out, depending on the design. Neither of these approaches, while cost neutral to governments, seems particularly appealing politically.

Creating a new basic income on top of the 33 income support programs we already have in Canada is a more attractive approach, since it creates only winners, although with greater complexity and higher costs both to government. Sending an identical cheque worth $1,000 to all Canadians would reduce poverty, but at substantial governmental cost as money would flow to poor and rich alike.

The most efficient approach, however, may be a basic income in the negative income tax model that reduces in value based on income and family size — in other words, a basic income that targets those who need it most. Low-income middle-aged Canadians see a big boost under this scenario, and work disincentives are counterbalanced by high disability rates already limiting employment irrespective of other sources of income support.

In fact, targeting a 34th basic income to those over 50 would substantially reduce its cost and maximize its effectiveness. What it would not do very well, however, is address high poverty among 18–29-year-olds and senior women. For the latter it would be too small an amount to matter. Young Canadians would be better served by a stronger labour market and higher wages, which a basic income cannot address.

In short, this analysis suggests a new basic income, within the context of our present income transfer system, would not help all groups equally. There is clearly room for additional support for those not receiving sufficient income, but a universal cheque may not be the most appropriate way to address these deficiencies for all.

Appendix 1

Methodology

THE TERM "FAMILY" refers to the census family.[16] At the time of publication, the LIM-AT line was not yet known for 2016. For the purposes of this paper, the LIM-AT line was estimated based on the relative change from previous years, which were available up to 2014. It was further calibrated so that the pre-change LIM-AT rate for all Canadians in the 2016 simulations match the 2014 Canadian LIM-AT, although adjusted for all program changes between 2014 and 2016, like the introduction of the enhanced Universal Child Care Benefit (UCCB).

All simulations utilize SPSD/M 22.1 with glass box modifications.[17] All pre- and post-changes start from the Canadian tax/transfer system as it existed on July 1, 2016. Estimates assume all changes were current as of January 1, 2016, although many of them were not. SPSD/M 22.1 was released before the announcement, in spring 2016 budgets, of many changes to federal and provincial tax/transfer systems. The changes below will be incorporated into the fall 2016 version of SPSD/M, which was not yet available at the time of publication. However, the following changes were fully implemented in both the base and variant cases in all simulations using glass box despite not initially being part of SPSD/M 22.1:

1. Canada Child Benefit's replacement of UCCB, CCTB and NCBS
2. Including the fourth child Canada Child Benefit rates

3. Cancellation of Family Income Splitting

4. Increasing the Guaranteed Income Supplement top-up for single seniors

5. Cancellation of the Newfoundland Baby Bonus

6. Cancellation of the Newfoundland First Year Supplement

7. Cancellation of the Newfoundland sales tax credit

8. Cancellation of the Newfoundland home heating fuel rebate

9. Introduction of the new Newfoundland Income Supplement

10. Improvement to the Newfoundland Seniors Support

11. Increase in the Newfoundland sales tax (relevant to after tax poverty calculations)

12. Including updated Alberta Child Benefit values

13. Including changes in the Alberta Family Employment Tax Credit

14. Introduction of the new New Brunswick Sales Tax Credit

15. Including the increase in the New Brunswick sales tax (relevant to after tax poverty calculations)

16. Increase in the PEI sales tax credit

In Scenarios 1–4, a basic income is examined that sends an identically valued cheque to all Canadians irrespective of age or family size. Those cheques are then taxed back as income or clawed back from transfer programs at the pre-existing rates (although the clawbacks are irrelevant for scenarios 1–3, as all other transfer programs that have claw back are eliminated). The amounts that are taxed back are included in the cost estimate, thereby allowing for a higher basic income value. The basic income is not considered income as it relates to EITC programs, although it is considered income for all other transfers like OAS/GIS or the various provincial seniors' and child benefits, and sales tax transfers.

In Scenarios 5–8, a more complex basic income is envisioned that is closer to pre-existing transfer programs. The transfer is clawed back at 50 cents on every dollar of income. The income definition matches that of the GIS clawback. The clawback rate is varied in *Table 9*, but is otherwise 50%. The clawback begins immediately with the first dollar of income.

The transfer is also reduced based on census family size by the square root of the number of people in the family. For instance, a single person having no other income would receive the full value of the basic income, which is $15,765 in Scenario 5. However, in a two-person family with no other in-

come, each person would receive $11,147, or (15,765 * sqrt[2])/2. This attempts to adjust the transfer to family size in a similar manner as the LIM-AT adjustment, although in the latter it is based on household size instead of family size as in our scenario.

Otherwise, in Scenarios 5–8 no adjustments are made for age, although the child portions of the basic income are paid to the lower earner where two parents are present. This is the approach taken by the Canada Child Benefit. The lower earner or sole parent tends to be a woman. When the value of the basic income is presented in the paper, it is for a single-person family with no other income.

In Scenario 8, the new basic income exists alongside the 33 existing federal and provincial basic incomes. A person receives the higher amount of either what they would receive under the present transfer programs or the new basic income. The cost of the new basic income is evaluated as the difference between the present transfer systems and the basic income amount of $10,000 per person (adjusting for family size).

Appendix 2

Administrative costs

PROVINCES SPEND ROUGHLY $1.2 billion annually administering social assistance. The provincial administration costs of social assistance vary across the country, although their weighted average cost ratio is 7.5%. Put another way, for every $100 transferred to recipients, another $7.50 is spent administering the disbursement.

The administrative costs in *Table 13* should be considered as a rough guide, as it is often not possible to separate only the administrative cost of managing social assistance. More often than not, the administrators of social assistance are also responsible for a variety of other programs, like social housing, disability programs, child care subsidies, health care, dental programs and employment support programs. To fully save the administrative costs, these other programs would also have to be terminated.

At best, therefore, the administrative costs savings are an optimistic estimate of what could be saved. In the simulations above, the entire $1.2 billion is assumed to be saved when social assistance programs are cancelled, thereby taking the most optimistic figure possible for administrative cost savings.

Employment insurance costs $1.6 billion annually to administer. For every $100 that recipients receive, an additional $8.50 is spent to administer the program — a cost ratio similar to that of administering social assistance. Like social assistance, it would be difficult to actually save this entire $1.6 billion if EI were replaced with a basic income.

TABLE 13 Administrative costs of social assistance and EI programs ($mil)

Province	Administrative costs	Amounts distributed	Cost ratio
British Columbia Social Assistance	$141	$1,674	8.4%
Alberta Social Assistance	$188	$1,532	12.3%
Manitoba Social Assistance	$15	$388	3.9%
Saskatchewan Social Assistance	$51	$477	10.6%
Ontario Social Assistance	$284	$8,028	3.5%
Quebec Social Assistance	$483	$3,479	13.9%
New Brunswick Social Assistance	$21	$226	9.3%
Nova Scotia Social Assistance	$22	$251	8.8%
PEI Social Assistance	$5	$46	10.7%
Newfoundland & Labrador Social Assistance	$21	$229	9.2%
Social Assistance National (Sum)	$1,231	$16,330	7.5%
Employment Insurance National	$1,640	$19,305	8.5%

Note The table attempts to limit the administrative costs purely to the administration of the income support portion of social assistance. In many cases, however, this strict criteria could not be met due to the way spending was reported in provincial reports. Often the administrative cost of employment support services, housing and other services could not be explicitly removed. The table should be seen as a rough guide to the administrative cost ratios of social assistance income support programs rather than a definitive list.
Source British Columbia Estimates 2016/17 p. 165, Alberta 2015-16 Human Services Annual Report pp. 72–73, 2014-15 Manitoba Growth Annual Report p. 60 table 10-3H, Saskatchewan 2015-16 Estimates p. 111, Ontario Public Accounts 2014-15 pp. 2–101, Quebec Public Accounts 2014-15 vol 2 p. 190, New Brunswick Public Accounts, Supplementary Information Volume 2 p. 171, Nova Scotia 2015-16 Estimates and Supplementary Detail p. 6.8, PEI Estimates of Revenues and Expenditures 2015-16 p. 73, Newfoundland and Labrador Report on the Program Expenditures and Revenues of the Consolidated Revenue Fund 2016 p. 90, 2016 Actuarial Report on the Employment Insurance Premium Rate Table 7.

The pre-existing basic income programs are inexpensive to administer, in large part because they use last year's income to calculate this year's benefits. Last year's income is readily available through tax records. However, EI must respond much more quickly to job loss, rather than waiting a year for lower income to show up on the next year's tax filings. To respond more quickly, and verify administrative details like records of employment, requires more administration and therefore higher costs.

Presumably, a basic income replacement would have a quick-response function that could rapidly react to changing circumstance, like loss of work. However, this would raise administrative costs. In the simulations above, the entire $1.6 billion in administrative costs is assumed to be saved when EI is cancelled, thereby taking the most optimistic figure possible for administrative cost savings.

Appendix 3

The cost of eliminating poverty via a negative income tax

THERE IS OFTEN confusion around "poverty gap" calculations that estimate the amount of money required to move all Canadians from their present income to the poverty line. While a useful measure in determining how far there is to go, this should not be interpreted as the cost of eliminating poverty, as such a program would have to have a clawback element to it.

For instance, in 2013, the poverty gap in Canada was estimated at $22 billion, which is the cumulative difference between the income of every low-income family and the 2013 poverty line of $20,933.[18] However, this assumes a 100% clawback rate if it were turned into an actual program, with the likelihood of substantially higher costs in the second year. The program would give parents more time to spend with their families, adults more flexibility to go back to school, and unsatisfied workers flexibility to find a new job. But it would quickly become quite expensive if low-wage workers decided to stop working and pursue other interests, as they would be no worse off for doing so.

The estimated "poverty gap" of $19 billion is slightly smaller in 2016, thanks to the introduction of the Canada Child Benefit, the improved GIS for seniors, and several provincial programs.

A basic income program with a more realistic clawback rate (not 100%) would cost more. *Table 14* examines three negative income tax–style basic

TABLE 14 Costs to lift all Canadians to the poverty line (LIM-AT)

	Net cost (Bil)	% of Federal Revenues
2013 "Poverty Gap" (CIS Actual)	$22	10%
2016 "Poverty Gap" (SPSD/M Estimated)	$19	8%
2016 Basic Income of $21,810 (25% clawback)	$177	74%
2016 Basic Income of $21,810 (50% clawback)	$83	35%
2016 Basic Income of $21,810 (75% clawback)	$49	21%

Source SPSD/M 22.1 glass box, Federal Budget 2016, Federal Budget 2015, custom tabulation of Canada Income Survey, and author's calculations. Net cost is over and above all existing transfers and social assistance.

incomes, although it does not incorporate behavioural reactions. The single-person poverty line in 2016 is estimated at $21,810. Since all three of the basic income programs in *Table 14* provide at least that amount, they all eliminate poverty in Canada. However, the cost values are over and above all existing income and transfers.[19]

A basic income with a 25% clawback (the most generous examined) would cost $177 billion a year over and above what is already spent on income support. Paying for this program would require a 74% increase in federal government revenues to pay for; in other words, hiking the HST, personal and corporate income tax levels, and excise taxes by 74%.

A 50% clawback rate is identical to the rate used in the GIS for low-income seniors. It lowers the program cost to $83 billion a year, which would require a 35% boost to all federal revenue. This is still a formidable amount and likely politically insurmountably.

The 75% clawback rate again reduces the cost of eliminating poverty through a basic income to $49 billion a year. However, such a high clawback rate would start to interact with programs outside of the tax/transfer system and could result in net clawback of over 100%. For instance, rent-geared-to-income schemes often adjust rent to 30% of family incomes. If the clawback rate on a basic income program were 75% of each additional dollar earned, this would result in a reduction of 75 cents in the basic income but would also require an additional 30 cents in rent. In other words, the net clawback would be 105% and the family would lose $1.05 in benefits for every extra dollar of income they earned — a very serious disincentive to work.

Notes

1 Deen Beeby, "Ontario guaranteed-income pilot moves ahead with new report", CBC, August 30th, 2016, http://www.cbc.ca/news/politics/minimum-income-hugh-segal-ontario-budget-1.3740373 (Accessed August 30th, 2016)

2 Ibid.

3 Evelyn Forget, *The Town With No Poverty: Using Health Administration Data to Revisit Outcomes of a Canadian Guaranteed Annual Income Field Experiment*, University of Manitoba, Canada.

4 Milton Friedman, Capitalism and Freedom (1962)

5 David Calnitsky, *"More Normal than Welfare": The Mincome Experiment, Stigma, and Community Experience"*, Canadian Review of Sociology, 53(1), 2016

6 Erich Fromm, *The Psychological Aspects of the Guaranteed Income,* originally appeared in R. Theobald, *The Guaranteed Income* (New York: Doubleday & Co., 1966).

7 JC Herbert Emery, Valerie C Fleisch and Lynn McIntyre, *How a Guaranteed Annual Income could put food banks out of business*, The School of Public Policy SPP Research Papers, 6(37), December 2013.

8 Margot Young and James Mulvale, *Possibilities and Prospects: The Debate Over a Guaranteed Income*, Canadian Centre for Policy Alternatives, November 2009.

9 Derek Hum and Wayne Simpson, *Economic Response to a Guaranteed Annual Income: Experience from Canada and the United States*, Journal of Labor Economics, 11(1), 1993.

10 See ed. Alex Himelfarb ed., "Basic Income: Rethinking Social Policy", Canadian Centre for Policy Alternatives, October 2016.

11 All program values as of July 1, 2016. The Canada Child Benefit has replaced the UCCB, CCTB and NCBS. The NFLD baby bonus and first-year supplement has been eliminated in favour of the new NFLD Income Supplement. The single senior GIS top-up has been increased. The Alberta child benefit and changes to the Alberta Family Employment Tax Credit are included. The new HST credit from New Brunswick is included although so is the increase in that province's HST.

12 In New Brunswick this is called the New Brunswick Working Income Supplement and it is contained within the New Brunswick Child Tax Benefit. See http://www.cra-arc.gc.ca/bnfts/rltd_prgrms/nb-eng.html (accessed Sept 12, 2016).

13 David Macdonald, "EI is Not Actually Helping the Poor," July 14, 2014: http://behindthenumbers.ca/2014/07/14/ei-is-not-actually-helping-the-poor/ (accessed August 24, 2016).

14 This approach ignores the effective governmental transfers that would result if the basic income program were federal, but if provincial programs, such as social assistance, were cancelled. It also ignores the unlikeliness of completely eliminating the administrative costs of providing EI and social assistance.

15 The selection of $10,000 is arbitrary, however a sensitivity analysis was conducted examining other values. The broad conclusions in terms of who benefited demographically held until the basic income approached $17,000 a person, at which point single seniors started to be significantly impacted.

16 According to Statistics Canada: "Census family refers to a married couple and the children, if any, of either or both spouses; a couple living common law and the children, if any, of either or both partners; or, a lone parent of any marital status with at least one child living in the same dwelling and that child or those children. All members of a particular census family live in the same dwelling. A couple may be of opposite or same sex. Children may be children by birth, marriage or adoption regardless of their age or marital status as long as they live in the dwelling and do not have their own spouse or child living in the dwelling. Grandchildren living with their grandparent(s) but with no parents present also constitute a census family" (http://www.statcan.gc.ca/eng/concepts/definitions/c-fam).

17 This analysis is based on Statistics Canada's Social Policy Simulation Database and Model. The assumptions and calculations underlying the simulations results were prepared by David Macdonald and the responsibility for the use and interpretation of these data is entirely that of the authors.

18 Income Statistics Division, "Low Income Lines 2013–2014", Statistics Canada, 2015, pg 23 Table 3b for Low Income Measure 2013 adjusted for one person

19 The basic income simulated adjusts for the stated clawback rate and is also reduced by the square root of the family size to more closely resemble the LIM-AT methodology of adjusting the low income line by the square root of the household size.

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