

Evaluating the Existing Basic Income Simulation Literature

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Abstract

This paper delves into the academic literature that exists that models, in detail, specific basic incomes for Canada to understand what main proposals already exist in the literature. This information will help inform the work of B.C.'s Expert Panel on Basic Income in two ways. First, it will inform the panel as to what program designs and choice elements should be considered specifically for B.C. Second, it will highlight for the panel the basic income implementation challenges raised by the choices among basic income design elements that are not addressed by the existing literature, and these would need to be solved in designing and implementing a basic income. In many cases, addressing these challenges may require any basic income policy proposal to be redesigned along the way. This paper does not provide a technical critique of this literature, which is taken up by other work.

Introduction

As outlined in Tedds, Crisan, and Petit (2020), there is no unique basic income model. While there are generally agreed upon principles that should guide the design of any basic income proposal and there are essential design elements that a basic income ought to incorporate, it is clear that there is no such thing as the perfect or preferred basic income arrangement. There are, in fact, myriad choices, depending on the desired objectives, whether the basic income will be integrated with companion programs or replace them and to what extent, how it will be administered, what form the benefit will take, and so on. Further, the choice among many of these elements is also dependent on the specific institutional and policy context of any jurisdiction.

Tedds and Crisan (2020) explore the various political commitments to a basic income and Canada and find insufficient detail in these commitments to inform a design and implementation of a basic income in B.C. This paper expands on this work and delves into the academic literature that exists that models, in detail, specific basic incomes for Canada to understand what main proposals already exist in the literature. This information will help inform the work of B.C.'s Expert Panel on Basic Income in two ways. First, it will inform the panel as to what program designs and choice elements should be considered specifically for B.C. Second, it will highlight for the panel the basic income implementation challenges raised by the choices among basic income design elements that are not addressed by the existing literature, but which the panel will need to consider. This paper does not provide a technical critique of this literature, but interested readers can find such a critique in Kesselman (2018).

Existing Canadian Basic Income Modelling Literature

Any basic income proposal for B.C. should be informed by what other proposals have already detailed, how they relate to the five guiding principles and 13 identified elements detailed in Tedds et al. (2020), what common features they share, and where they differ. A recent and growing literature outlines specific proposals for a basic income in Canada. The key academic papers in this research area include work by Simpson and Stevens (2015, 2019), Stevens and Simpson (2017), Boadway, Cuff, and Koebel (2018a, 2018b), and Koebel and Pohler (2019).¹

In all cases, the existing literature uses simulations to quantify, assess, and compare alternative basic income policies. These simulations are conducted using the Social Policy Simulation Database and Model (SPSD/M) (Statistics Canada, n.d.). The SPSPD/M is a tool developed by Statistics Canada that allows for the modification of existing taxes and transfer

¹ Work has also been completed by various think-tanks, public policy advocacy groups, and government organizations that model basic incomes. This work includes Klein and Ivanova (2018), Macdonald (2016), the Office of the Parliamentary Budget Officer (2018) related to the costing of an Ontario basic income, Pasma and Regehr (2020), and the models described by Quebec's (Expert Committee on the Guaranteed Minimum Income, 2018). In this paper we focus solely on the academic literature on which these other models are based.

programs and for testing proposals for new programs. SPSPD/M statistically represents Canadian individuals and their families not only with detailed demographic information but also their income, their transfers, and their taxes, along with various federal and provincial program parameters. The SPSPD/M also includes measures of poverty, including the Market Based Measure (MBM), against which the modelled proposals can be evaluated. A limitation of the SPSPD/M is that it only simulates programs' immediate impacts—that is, it does not factor in behavioural responses. Behavioural responses can be modelled separately, but they require a significant number of non-trivial assumptions in order to be able to wholly factor in all responses. Typically, the absence of behavioural responses in the modelling of a basic income will tend to underestimate the total costs of a hypothetical basic income program and overestimate the total net gains to its beneficiaries.

All of this existing academic work uses Boadway (2013) for its starting inspiration. Boadway (2013) argued that the Canadian personal income tax system could be turned into a basic income by streamlining existing tax credits and making all tax credits refundable and means tested. All of the subsequent academic work then proposes variants of a basic income in the form of a refundable tax credit² that is fully or mostly revenue neutral through the streamlining of existing tax credits and various benefits. In all cases, the main source of funding for the proposal comes from the elimination of the basic exemption.³ These authors argue that there are several advantages to this style of revenue-neutral approaches to a basic income. First, it is an incremental approach to a basic income, basically repackaging existing tax credits into a streamlined conditional basic income, possibly increasing the acceptability of a basic income proposal. Second, it uses an existing administrative body, the Canada Revenue Agency (CRA), and an existing application system, the annual tax form. Third, it is at least partially or fully self-funded, depending on other features of the basic income proposal. Fourth, the benefits accrue to those at the bottom of the income distribution, a desirable outcome if the objective is poverty reduction. However, it is important to keep in mind that tax filers who currently benefit from existing non-refundable tax credits will likely be made worse off under a negative income tax system, and anyone who does not file a tax return⁴ derives no basic income benefit. This is concerning, since Cameron, Tedds, Robson, and Schwartz (2020) show that non-filing rates

² Tax credits reduce a tax filer's tax owing. In the case of a refundable tax credit, if the application of the tax credits results in negative tax owing, that negative amount is returned to the tax filer. In the case of a non-refundable tax credit, the application of the tax credits can only reduce the amount of tax owing to \$0, with the excess amount forfeited. Some of this literature refers to this system as a negative income tax system, but that is inaccurate given that none of this work envisions changes to the tax system to make a negative income tax implementable. For more detail regarding the definition of a negative income tax and how it differs from a refundable tax credit, see Kesselman (2020).

³ The basic personal exemption is the income amount that every person can earn tax-free. The amount of tax savings from the basic personal exemption depends on the size of the exemption and the tax rate applied. For example, in 2019 the federal personal exemption was \$12,069 and the tax rate applied is the lowest statutory tax rate of 15% for a tax savings per person of \$1,810.35. In B.C., however, the personal exemption is set at \$10,682 and the tax rate applied is the lowest statutory tax rate of 5.06% for a tax savings per person of \$540.92.

⁴ Under Canadian tax law, only individuals who owe taxes are required to file an annual tax return. Any individual who does not owe taxes or for whom tax withholding at least covers their taxes owing is not required, by law, to file a tax return.

among the most vulnerable Canadians are sufficiently high to generate concern about the ability to use the tax system, as it is currently structured, to deliver a basic income–type benefit intended to address poverty.

As detailed in Kesselman (2020), there are several technical details that have to be laid out related to the design of income transfers including basic incomes, namely the benefit level, the beneficiary unit and corresponding equivalence scale, what income levels define to whom the benefit is paid and to whom the benefit is not paid, and whether and to what degree the benefit payment is reduced between these two thresholds. All of these choices matter for meeting stated objectives, as well as the cost of the program and the distributional outcomes. Another key aspect is known alternatively as the claw-back rate, the tax-back rate, or the benefit reduction rate (BRR), which is the rate (if any) at which the benefit is reduced as the beneficiary unit's other income increases. The BRR is a parameter with significant influence, though not the only one, on the welfare wall.⁵ The larger the BRR, the lower the benefit accrued to an individual by earning additional income, possibly reducing their work effort. However, a larger BRR makes the program more affordable, because the benefit is eliminated at a lower level of earned income. Decisions on the BRR then have to balance these competing effects. With all this in mind, we begin by taking each of the existing models proposed in the academic literature and considering their design elements.

Simpson and Stevens (2015) present options for a federal basic income that is a refundable tax credit for all adult-headed households. Using the year 2013, they convert 23 federal non-refundable tax credits that existed in that tax year into refundable tax credits. The total value of these credits is estimated to be \$83.3 billion, which can be repackaged into a basic income benefit.⁶ Their main objective is to direct more of this value to low-income families, thereby reducing poverty, which they define using the low income cut-off (LICO) measure.⁷ The beneficiary unit under their program is the household, defined as the census family,⁸ though the

⁵ The welfare wall refers to the obstacles that social assistance recipients face when they enter paid work. Economists typically focus solely on the impact of taxes and benefit reduction rates. However, many other features of programs also feed into the welfare wall, and these are the obstacles that recipients more often cite (e.g., Hertz, Gray, & Leslie, 2020). These obstacles include the loss of in-kind benefits along with various eligibility criteria (e.g., Petit & Tedds, 2020b).

⁶ In this proposal, the authors include in their 23 credits the tax credits for CPP and EI contributions. These credits exist to ensure that CPP and EI contributions come from pre-tax income. Eliminating these credits necessarily means that CPP and EI contributions would instead be made from after-tax income and that means that CPP and EI benefits would have to correspondingly be made tax-exempt, a complication not considered in the paper.

⁷ For more information on poverty measures in Canada, see Petit and Tedds (2020a).

⁸ As per Statistics Canada (2008), a census family consists of a head, a spouse (if there is one), and their children under the age of 25 (including their guardian children), living together in the same dwelling. Unattached individuals are included as census families of size 1 in the SPSD/M. It is worth noting that this is not the definition of a family used by the CRA, which is the nuclear family and only includes children under 18 years of age or children over 18 who have a serious disability. Further, the definition of the family used by Statistics Canada to generate poverty statistics, such as the Market Basket Measure, is the economic family. Economic family refers to a group of two or more persons living in the same dwelling who are related by blood, marriage, common-law or adoption, including foster children. By definition, all persons who are members of a census family are also members of an economic family, but an economic family may contain more than one census family. It is clear that while the notion of delivering benefits to a family seems simple, in reality defining a family is fairly complicated. These distinctions are

payment of the benefit is split in half and delivered to each adult. The benefit is a varying benefit, equal to 15%⁹ of the value of existing non-refundable tax credits available to the beneficiary unit. Scenario 1 considers a BRR of 15% that exempts no taxable income from the benefit reduction (i.e., the first dollar of income unrelated to the benefit payment is reduced by 15 cents). Scenario 2 considers a higher BRR of 25% starting at all income above the low-income line¹⁰ and a BRR of 100% on all income above double the low-income line.¹¹ The definition of income used to determine the benefit reduction is family income. In all cases, the calculated benefit is quite modest, averaging \$1,317 and \$1,436 per year for low-income filers and around \$1,000 per year for non-low-income filers. Overall, the poverty rate is reduced quite marginally (by less than one percentage point), though with larger reductions in the poverty gap (between six and eight percentage points).¹² The additional cost of this program, over the current expenditures on the non-refundable tax credits, is between \$6.6 and \$7.2 billion per year,¹³ which the authors propose could be funded using projected budget surpluses,¹⁴ eliminating some of the non-refundable tax credits (which would also reduce the basic income benefit), raising taxes on high-income earners, and increasing the variability in the benefit.

Stevens and Simpson (2017) build on the aforementioned work and consider a richer basic income. Similar to Simpson and Stevens (2015), using the year 2015, they convert many, but not all, federal non-refundable tax credits that existed in that year into a refundable tax credit yielding \$51.2 billion that could be redirected into a basic income.¹⁵ This time they define the beneficiary unit as the nuclear family and adjust the benefit for family size using the square root scale. The benefit amount is still split in two, though, and then paid to each of the two adults in

particularly important to understanding the resulting poverty measures, as using different family types results in different poverty statistics that are not directly comparable to poverty statistics obtained using a different family type.

⁹ Fifteen percent represents the lowest statutory federal personal income tax rate in 2013 and is the rate at which non-refundable tax credits were paid out at in that tax year.

¹⁰ Because the low-income line also varies by family size, not only does the benefit vary but so does the income threshold at which the BRR is applied.

¹¹ A third scenario considers a BRR that varies by family size. This simply reduces the calculated benefit and hence overall program costs vary by marginal amounts.

¹² The interpretation of the poverty gap is detailed in Petit and Tedds (2020a). Because few people are actually lifted out of poverty via this proposal, but the income of everyone in poverty is increased, this is likely driving the result of narrowing of the poverty gap.

¹³ Due to lower income tax filers forfeiting some of the value when the credits are non-refundable, the total actual expenditure when they are non-refundable tax credits is \$69.6 billion versus the total value of \$83.3 billion that the authors cost their proposal at. Most of the value of the non-refundable credits comes from the elimination of the basic personal exemption.

¹⁴ In 2015, Canada was projected to run budget surpluses well into the future. However, a mini-recession hit in late 2015, followed by the collapse in oil prices and a change in government, and there have been no federal budgetary surpluses since then and none are projected anytime in the near future, given the impact of the COVID-19 pandemic.

¹⁵ They include the following tax credits for elimination: basic exemption, age and pension income, fitness and transit, total education, family tax cut credit, and the GST tax credit. Since this paper was published, the fitness, transit, education, and family tax credits have all been eliminated and folded into the Canada Child Benefit, a basic income for families with children. These changes remove over \$8 billion in funding from the authors' proposed basic income.

the family.¹⁶ Four different BRRs are considered: 15%, 35%, 50%, and 75%. The base benefit then varies according to the BRR, as the benefit is calculated to stay within the fixed budget constraint of \$51.2 billion. The base benefit for an individual is \$6,657 for a BRR of 15%, rising to \$15,885 for a BRR of 75%. The benefit increases based on family size by the noted equivalence scale. The benefit is increased for disabled dependants and caregivers. The income at which the benefit no longer applies ranges from \$44,380 (BRR=15%) to \$21,180 (BRR=75%). This proposal has a much larger reduction in the LICO poverty rate, declining by up to 50%, and similar reductions in the poverty gap. The authors also consider the implication of each of the provinces matching the federal program in the same way, which serves to increase the federal benefit by varying amounts across the provinces. For B.C. in particular, the basic income guarantee would increase by a modest \$2,098 for an individual, the smallest amount in Canada. This is because the primary source of funds for the basic income proposal is the elimination of the basic income exemption, and B.C. has the lowest tax rate at which these credits are calculated (5.06%).

Simpson and Stevens (2019) again consider a refundable income tax form of a basic income, but this time focus on what would happen if a province, Alberta in this case, wanted to implement it, rather than the federal government. Using the year 2017, they convert six of the largest Albertan non-refundable tax credits, valued at \$5.4 billion, into refundable tax credits.¹⁷ They again opt for a self-financed basic income program, resulting in either \$5.4 billion or \$6.1 billion available to fund the basic income, depending on whether the additional benefits are included. Again, they define the beneficiary unit as the nuclear family, adjusting the benefit for family size using the square root scale. Four different BRRs are considered: 0%, 10%,¹⁸ 35%, and 50%. The base benefit then varies according to the BRR, as the benefit is calculated to stay within the identified fixed budget constraint. The base benefit for an individual is \$1,331 for a BRR of 10%, rising to \$10,340 for a BRR of 50%. The benefit increases based on family size by the noted equivalence scale. The benefit is also increased for disabled dependants and caregivers. The income at which the benefit no longer applies ranges from \$63,890 (BRR=10%) to \$29,246 (BRR=50%). The authors also consider the implication of the federal government matching the provincial program in the same way.

Boadway et al. (2018a, 2018b)¹⁹ take a more expansive approach to a self-financed negative income tax form of a basic income. The stated objective of the proposal is poverty

¹⁶ None of these studies considers families with more than two adults, as with polyamorous families. While such families are currently not legally recognized, it does appear that it is a small but growing family type in Canada (Boyd, 2017).

¹⁷ They also add the following provincial refundable tax credits: the Alberta Child Benefit, the Alberta Family Employment Tax Credit, the Alberta Seniors Benefit, and the Alberta Carbon Levy Rebate. The Alberta Carbon Levy Rebate was cancelled by the current United Conservative Party government in the summer of 2019, and the Alberta Child Benefit and the Alberta Family Employment Tax Credit were combined into one payment and the overall budget reduced by \$50 million (Cameron, Petit, & Tedds, 2019).

¹⁸ Ten percent represents the lowest statutory Alberta personal income tax rate in 2013 and is the rate at which non-refundable tax credits were paid out at in that tax year.

¹⁹ Macdonald (2016) considers a similar model to that presented in Boadway et al. (2018a, 2018b) and as a result will not be discussed here.

reduction, with everyone being lifted up to the MBM threshold. Using the year 2015, they would eliminate almost all other federal income transfers. This includes not only non-refundable tax credits,²⁰ but also nearly all refundable tax credits,²¹ Old Age Security, and the Guaranteed Income Supplement. The total value of these credits and programs is estimated to be \$119.6 billion. The beneficiary unit is defined as the family unit, with the benefit adjusted by the square root scale and the benefit then split evenly among the number of adults and paid out individually. The individual benefit is defined as \$13,672 less any amount received from social assistance or disability benefits.²² The BRR, set to ensure that the program is self-financed, is 30% and applies until the benefit reaches \$0. Ideally, the provinces would join the program by eliminating social assistance and disability benefits and harmonize all tax credits and benefits with the federal program. This program yields sizable reductions in poverty, nearly eliminating poverty for parents and couples, albeit at the cost of increasing the poverty rate among seniors.

Koebel and Pohler (2019) build on all these designs and address ongoing critiques of the aforementioned literature by proposing a hybrid basic income program. As with the literature described above, their program is still based on the design elements outlined in Boadway (2013) but pairs their refundable tax credit basic income benefit with an earnings subsidy based on the Canada Workers Benefit. A national program that the provinces can tailor for jurisdictional specific reasons, the Canada Workers Benefit targets working-age single adults (the group with the highest poverty rates in B.C.) and encourages people to work by ensuring that work pays. Unlike all the proposals outlined above that focus on the household, the beneficiary unit proposed by this program is the individual, on the basis of gender-based equity. In addition, all income thresholds and BRRs are similarly based on individual income and not family income, as all the proposals described above do. Koebel and Pohler (2019), however, is similarly focused on people aged 18–64.²³

The basic income benefit that is proposed would be set to the social assistance minimum in place in the province, thereby varying by province. In B.C. the base benefit for a single person is currently \$9,120, an amount that is nearly half of the MBM poverty line in the province. The earnings subsidy would also vary by province according to tax rates. The intent of the earnings subsidy is to ensure that individuals receive an additional 30 cents for every dollar in wages and self-employment income earned, factoring in taxes paid. For example, if the joint federal-provincial income tax rate is 20%, then the earnings subsidy would be 50% such that the earnings subsidy ensures that the tax paid is returned as part of its design. The BRR is set at 50%, but the income threshold at which the BRR applies depends in part on the individual's MBM poverty threshold.

²⁰ Unlike Simpson and Stevens (2015), Boadway et al. (2018a, 2018b) would not eliminate contributory tax credits, which include the CPP, Employment Insurance, and political and charitable contribution tax credits.

²¹ With the exception of the Canada Child Benefit.

²² Boadway et al. (2018b) also consider a larger individual benefit for seniors.

²³ Arguing, as many of the other proposals summarized here, that children and seniors are all well covered by existing programs like the CCB, OAS, and GIS.

The estimated gross cost for this envisioned program is \$90.51 billion, to be funded through the consolidation of current provincial social assistance programs and elimination of most federal and provincial refundable tax credits and some non-refundable ones. The outcome of this hybrid program is a substantial reduction in the poverty rate for nearly everyone except single seniors, who are worse off under the program. This is because of the inaccessibility of this benefit scheme for this group, combined with the removal of some tax credits relevant to them.

Table 1 summarizes these simulation studies by mapping each study onto the 13 design elements developed and described in Tedds et al. (2020). There are several things to note. While the basic income proposals are all fully or near fully self-financed, the generosity of the program is necessarily limited by the budget envelope,²⁴ resulting in the benefit amount from the program only varying between minimally, partially sufficient, or fully sufficient (fully sufficient only if both the federal and provincial government participate) in covering basic living costs. However, this benefit is often paid in addition to other non-tax-related income support programs, meaning that other programs will operate in tandem with the basic income benefit. The proposals are also delivered through the existing tax system, which means that beneficiaries are limited to tax filers and those who can navigate the tax forms. More importantly, though, in all cases the proposals are not simple to understand, especially in the case of Simpson and Steven (2015) and Koebel and Pohler (2019). The varying income thresholds and benefit reduction amounts that also operate within the existing income tax rates and existing program eligibility parameters mean that little is achieved with respect to simplifying the system faced by beneficiaries, and that beneficiaries can face very high marginal effective tax rates.

In all but one case, the beneficiary unit is considered to be the family, though the benefit is then split evenly across all adults in the beneficiary unit. This raises significant gender concerns. It assumes that:

- household members share equally in and have equal say over all other income
- unpaid household work is equitably allocated and all basic living expenses are equal
- everyone in the household has the same bargaining power over income and expenses

Significant literature exists on all these points, demonstrating that, on average, none of these assumptions are true. Further, while the proposed benefit is paid separately to each adult in the household, this only addresses potential power imbalances over ownership of the resulting income, though it assumes full power over the resulting bank account into which the payment is deposited. In addition, the decision to allocate the payment equally among adults in the family makes assumptions about the allocation of expenses within the households that are not tested by the authors. Not only do women pay more for necessary products (a phenomenon known as the pink tax), they also tend to bear the burden of reproductive expenses (e.g., menstrual products, birth control, pregnancy tests) and bear a greater burden of the expenses related to children. Therefore, the decision to calculate the benefit on the basis of the household but

²⁴ Actually, in all these studies, the budget envelope is what is determined first, and then the parameters of the basic income benefit are fully determined based on that funding constraint.

deliver an equal amount to the adults in the family may not actually deliver on equality. In addition, a payment that does not vary by gender, as none of these models do, does not address differences in the costs of basic necessities by gender.

All of these proposals can be viewed as exercises in reforming existing federal and provincial programs/transfers along basic income lines in a revenue-neutral way. Their modelling choices are, in part, constrained by maintaining the program cost. Overall, in these exercises, individuals at the bottom of the income distribution benefit at the expense of individuals in the middle of the income distribution, who see tax credits eliminated to finance the basic income benefit. Poverty rates and inequality are reduced at no substantial additional cost to the government, but mostly at the expense of the middle class. In order to avoid a negative impact on the middle class, additional and alternative sources of financing the basic income program would have to be considered.

Table 1:
*Summarizing the Self-financing Simulation Literature*²⁵

Design Element	Description	Simpson and Stevens 2015	Stevens and Simpson 2017	Simpson and Stevens 2019	Boadway et al. Koebel 2018 (a, b)	Koebel and Pohler 2019
Jurisdiction	For what jurisdiction is the basic income program being proposed?	Canada via federal government	Canada via federal government, with potential for the provinces to join	Alberta via Alberta government, with potential for the federal government to join	Canada via federal government, with hope that provinces will join	Canada
Objective	What is the primary objective of the basic income program?	Poverty reduction (LICO)	Poverty reduction (LICO)	Poverty reduction (LICO)	Poverty reduction toward elimination (MBM)	Poverty reduction (LICO-AT)
Sufficiency	To what degree does the basic income address or cover living costs?	Minimally sufficient (~\$1,400 for low-income households)	Partially sufficient (\$6,657 base benefit)	Partially sufficient (\$1,331–\$10,340 depending on BRR)	Partially sufficient if federal only (\$13,672), fully sufficient if federal and provincial (\$18,771)	Partially sufficient (base benefit is equal to social assistance minimum in the province of residence, plus a 30% earnings subsidy)
Exclusivity	To what degree does the basic income complement or replace existing cash or in-kind programs that provide assistance to individuals and families?	Replaces all existing federal non-refundable tax credits	Replaces many, but not all, existing non-refundable tax credits	Replaces many, but not all, existing non-refundable tax credits	Replaces most non-refundable and refundable tax credits, OAS, GIS	Replaces social assistance and most existing provincial refundable and non-refundable tax credits
Universality	What portion of the population is covered by a basic income program?	18+ tax filers	Permanent residents who are 18+ and tax filers	18+ tax filers	18+ tax filers	Canadians aged 18–64
Beneficiary unit	How is the beneficiary unit defined?	Census family	Nuclear family	Nuclear family	Nuclear family	Individual
Equivalence scale	What mechanism is used to scale the transfer according to household size?	FILL	Adults only, square root scale	Adults only, square root scale	Adults only, square root scale	N/A
Uniformity	To what degree do the beneficiary units receive similar benefit levels?	Benefit paid 15% of existing non-refundable tax credits available to the beneficiary unit	Uniform benefit, with a top-up for disabled dependants (\$1,500) and caregivers (\$750)	Uniform benefit, with a top-up for disabled dependants (\$1,450) and caregivers (\$1,080)	Uniform benefit, though seniors receive \$18,744	Base level basic income benefit plus an earnings subsidy, both of which vary by province

²⁵ Table can be accessed online at https://docs.google.com/spreadsheets/d/1pBTrRxIrkHj0JDpHtVODy4nPzScD7n_xrjeksLb5ic/edit?usp=sharing

Duration	For how long can a beneficiary receive the basic income?	Permanent benefit	Permanent benefit	Permanent benefit	Permanent benefit	Permanent benefit
Frequency	How frequently is the basic income benefit paid?	Not stated	Not stated	Not stated	Not stated	Not stated
Conditionality	Is a beneficiary restricted in any way in their eligibility for a basic income	Benefit may be reduced (15% or 25%) based on family income; no exempt income or exempting income below 25% of the low-income line; beneficiary unit would need to file annual tax form	Benefit is reduced (15%, 35%, 50%, or 75%) based on net family income; no exempt income; beneficiary unit would need to file annual tax return and must have filed one in year Y-1 to get the benefit in year Y	Benefit is reduced (0%, 10%, 35%, 50%) with additional net family income (line 150); beneficiary unit would need to file annual tax return	Individual benefit is reduced for any social assistance or disability benefit received; benefit is also reduced (effectively 30%) with additional net family income; beneficiary unit would need to file annual tax return	Benefit is reduced (50%) once individual income reaches the MBM income threshold
Form	What form or shape does the basic income take?	Refundable tax credit	Refundable tax credit	Refundable tax credit	Refundable tax credit	Refundable tax credit
Administration	What administrative structure would be used to deliver the basic income?	CRA via the tax system	CRA via the tax system	CRA via the tax system	CRA via the tax system	CRA via the tax system
Funding	How is the basic income program financed?	\$83.3B program partially self-financed, remainder (~\$7B) through increased taxes or reduced benefit	\$51.2B program fully self-financed through the elimination of existing non-refundable tax credits	\$5.4B program fully self-financed through the elimination of existing non-refundable tax credits	\$119.6B program fully self-financed through the elimination of existing non-refundable and refundable tax credits, OAS and GIS	\$90.51B program fully financed by eliminating social assistance and most federal and provincial refundable and non-refundable tax credits

Discussion

How do these proposals measure up against the four principles of a basic income: simplicity, respect, economic security, and social inclusion? All of the models are highly complex, particularly in terms of a person understanding their benefit from year to year, and all require annual tax filing. This requires everyone to complete a tax form and be assessed via the tax system. In many ways, applying for social assistance can be easier and less daunting than a tax form. Further, the social assistance system has dedicated caseworkers who are trained social workers, whereas the tax system does not. While there is much to like about removing stigma through the tax system, as noted by Tedds (2017) the tax system would need a dramatic overhaul to be able to deliver on a basic income.

Koebel and Pohler (2019) propose a model similar to that considered by the Expert Committee on the Guaranteed Minimum Income (2018). This model takes the existing social assistance system and delivers it through the tax system. By doing so, it automatically changes the definition of income used to qualify for the program, eliminates the asset test, eliminates monthly reporting and related behavioural conditions, and adds an earnings exemption. The proposal is certainly simpler than the existing social assistance system, removes the stigma of social assistance, and continues to provide financial stability and security, but the use of the tax system still raises some concerns. However, this model, in addition to benefit increases, changes the earnings exemption, and integration with earnings may have some merit for serious consideration if aspects related to tax filing, tax audits, and benefit holds could be addressed.

With regard to social inclusion, the main consideration in the literature is with labour supply. The conventional view and a significant barrier to public acceptance of basic income programs is that they encourage people to reduce their labour supply and generally decrease their labour market attachment. However, if we expand our definition of labour to more than “paid work,” a basic income can be viewed as a form of compensation for unpaid work. It is quite possible that providing such compensation would also encourage more people to switch from paid to unpaid work. But to automatically conclude that this is undesirable for society means dismissing the value of unpaid work. In addition, basic income programs potentially provide the financial support that some people need to pursue education, instead of being forced into low-skilled, low-paying jobs. Thus, despite the potentially adverse effects of basic income programs on labour supply in the short run, their overall impact on labour supply is less clear. To the extent that it encourages investment in human capital, the provision of a basic income encourages the more efficient choice, leading to a more skilled labour supply in the future, as well as more resiliency and less dependence on income support programs.

In terms of the 13 design elements of a basic income, several choice decisions have no simple answers and these remain unaddressed by the existing literature. These are important points for the Expert Panel on Basic Income to consider in detail. A non-comprehensive list of these issues is presented below.

1. Objective: Poverty Reduction—But What About Poverty Depths or the Cycle of Poverty?

All of the basic income proposals outlined here consider the main objective of the basic income to be to reduce or eliminate poverty, measured relative to one of the three measures of poverty produced by Statistics Canada. However, their ability to produce dramatic reductions in poverty is directly related to the size of the benefits, which in turn is related to the cost and the benefit reduction rate. None of the proposals discuss the cycle of poverty, though. The cycle of poverty is a much more complex matter. While a basic income will reduce poverty and is likely to stimulate human capital formation, significant work would still have to be done to ensure that the most vulnerable are socially included and that people are not made vulnerable to discrimination, barriers to accessing capital and financial services, and violence, among other factors. This also suggests that the dream of a basic income replacing the so-called poverty industry may be a utopian one.

2. Sufficiency, Exclusivity, and Uniformity: What Is a Sufficient Basic Income and How Does It Work With the Current System?

The proposals are all over the map when it comes to what level the basic income benefit should be set at and whether everyone should get the same amount. Basic benefits range from \$1,000 to \$22,000. Some proposals give everyone the same benefit regardless, while others give much more to seniors, if they are included in the proposal. A small number of proposals provide a small top-up for people with disabilities. Some proposals vary their benefit by province. Given the varying needs of individuals, not only related to ability to earn additional income but also to specific living costs, how realistic is a uniform benefit? Providing a uniform benefit means some will have many more of their basic needs covered, while others will have many fewer of their basic needs covered. However, varying the benefit by group or geographic region creates pressure to be classified in a group with a higher benefit, thereby increasing the need to establish eligibility conditions that must be investigated, or incentives to move to a region with a higher benefit (border considerations). Whether a benefit could or should vary may depend particularly on the current social and income support system for those people and in that region. That means a much more detailed knowledge of any specific jurisdiction is needed to be able to understand the full complement of benefits and supports available and, more importantly, how they all interact. However, keeping these layers of supports, as most proposals advocate, is somewhat orthogonal to the basic income principle of simplicity. These are fairly complex issues and are not easy to resolve.

3. Universality and Administration: Is It a Basic Income If It Is Not Universal?

Most people envision a basic income being available to everyone. But what does “everyone” mean? As Canada already has rich child benefit programs and comprehensive seniors’ benefits, most of the proposals for Canada are focused on the 18–64-year-old cohort. Given that statistics indicate that poverty rates are highest among this age group, particularly those not in an economic family, the focus makes some sense. But from there, decisions still

need to be made about who in this age group is considered eligible. For the most part, since the proposed design is a refundable tax credit, the focus is on tax filers. But tax filers can be both residents and non-residents. While some proposals focus on Canadian citizens, or include permanent residents, or even the number of times someone has to file before they are eligible for the benefit, most do not further define who they mean by a tax filer. Nor do most proposals discuss how universal is the notion of a tax filer.

In Canada, only individuals who owe taxes are legally required to file taxes. That means that if the tax collector has collected enough taxes through withholding to cover the tax liability there is no requirement to actually file a tax form. While knowledge about the degree of filing rates in Canada is murky, there is some evidence that raises concerns. Stapleton (2018) notes that a third of single Ontario works residents did not file a tax return; Turner Strategies (2018) find that only 3% of homeless individuals receive the GST/HST credit one is automatically assessed when filing taxes; Bajwa (2015, p. 7) suggests that upwards of 26% of marginalized families do not file a tax return; and Prosper Canada (2018) estimates that 30%–40% of First Nations families do not file a tax return and do not receive the Canada Child Benefit. If a basic income is delivered through the tax system, do these filing rates mean that universality is only achieved notionally? If the basic income benefit is big enough, will more of these vulnerable groups file tax returns? Or are there institutional, cultural, and indirect cost barriers that would continue to affect filing rates? Thus, if the benefits are to be delivered through the tax system, addressing filing rates should be a priority, perhaps through the implementation of pre-populated tax forms, like in the United Kingdom, or at least automatic tax filing for vulnerable groups with tax forms filed with the CRA (e.g., T5007) (see Petit, Tedds, Green, & Kesselman, Forthcoming for more information on autofiling).

Further, timing and responsiveness of the support is also critical. The advantage of the existing social support system is that applications are taken all year and include crisis support programs. Currently, under the tax system in Canada, tax returns are only filed once a year. As noted in Simpson and Stevens (2019) and Tedds (2017), without changes to the system, a basic income delivered through the tax system may not be responsive to critical shocks, meaning there would still be a need for additional programs to supplement a basic income delivered through the tax system. That in itself is not a problem, but it would conflict with some basic income advocates' view that the basic income would eradicate the poverty industry, and it makes the system more complex. Attention would need to be paid to how the system interacts in its entirety, a point made previously.

4. Recipient: Individuals or family?

Most of the simulation studies deliver the basic income to the family, mostly defined as a nuclear family, and one considers the delivery of the basic income to individuals. Which choice is preferred? As it turns out, there is no simple answer to this question. Delivering the benefit to the individual is preferred in the context of gender considerations, but it necessarily means that the benefit will go to individuals who are not in poor households (though the individuals themselves may, in fact, be poor based on the sharing of income and assets within the

household). This means that the amount of poverty reduced by the program is muted using conventional statistics. In addition, delivering the benefit to individuals over households increases the program costs or requires the benefit to be reduced and/or the BRR to be increased. Any decisions on these grounds require trade-offs that are not easy to make. Some of the proposals considered the model of calculating the benefit based on the household but delivering the benefit equally yet separately to the individuals. Whether this helps with ensuring that the individual has control over the income still depends on the power dynamics in the household.

An additional complication is related to adult children (aged 18–24 in particular) who live in the same dwelling as their parents. While they are included in the definition of a family if the definition of a family used is the census family, they are their own “family” if either the nuclear or economic definition of a family is used. Since the tax system uses the nuclear family definition to assess taxes and deliver benefits, if the tax system is used then adult children living at home will qualify for the basic income. Therefore, it is a matter that arises regardless of how the beneficiary unit, individual or household, is defined. For some, this is a matter of particular concern and was the main critique of the Ontario Basic Income Pilot (Milligan, 2017). Given the amount of time that Canadians now spend in post-secondary education, it may be time to reconsider using age 18 as the threshold for adulthood and instead considering ages 18–24 as a transition period where they are becoming labour market–ready and perhaps are treated as dependants of their parents. That said, there will be sufficient 18–24-year-olds who are independent and in need of income support. Further, just because a young adult lives with their parents does not guarantee that the parents are actually financially supporting them. They may be responsible for contributing to rent, food, clothing, transportation, and the like. Suggesting that low-income young adults who live in the same dwelling as their parents are not worthy of income support raises the problem of considering some the deserving poor and others the undeserving poor. Again, this is a complex matter, which has both cost and political ramifications.

5. Frequency: Regular, lump sum, or a mix to the two?

Most basic income proposals envision the basic income to be delivered on a regular basis, though often the degree of regularity is left unstated. Most proposals deliver the basic income as a refundable tax credit that could be simply paid at tax filing (e.g., the Canada Workers Benefit) or could be paid monthly following tax filing (e.g., the Canada Child Benefit). However, in terms of some of the resiliency barriers that some people face, including those trying to escape domestic violence, some consideration should be given to lump payments as well, especially if there is a desire to help these households develop resilience by building their financial assets to help them withstand future shocks. Quebec’s expert committee considered this as a design feature in one of its proposals, where a lump sum payment was added to the monthly benefit in the first year that a person is eligible.

6. Conditionality: Does the BRR Matter?

All of the basic income proposals that take the form of a refundable tax credit have to consider how the basic income benefit will be reduced with additional income. This is the benefit reduction rate (BRR). For example, a BRR of 50% means that for every dollar of income earned above the basic income, the basic income is reduced by 50 cents. The simulations propose BRRs that range from 0% (a universal basic income) to 75%. How much the basic income is reduced matters for incentivizing people to earn additional income. For the most part, the BRRs in the simulations result from the choice of base benefit and funding envelope. There is little theory to guide BRRs, except that we know when a BRR is too small or too large—the Goldilocks approach to policy design. However, the BRRs presented in the simulations are not considered within the overall system, only the benefit itself, despite the fact that all of the proposals maintain most of the existing social support system. How the BRRs interact for all of the programs for which a person or family is entitled is really what matters for incentives and responses, as Petit et al. (2020) show for social assistance recipients in B.C. These interaction effects need to be considered in any basic income proposal.

7. Form: Cash—But Where or How or When?

In all cases, what is being provided is cash. While many people have already opted for direct transfers into their bank account, there are a number of delivery factors that are not addressed in the simulation literature. It is often assumed that the beneficiaries will have access to financial services and have the financial literacy to manage the benefit. However, these assumptions need to be tested. What are the costs of having a bank account, and are those costs affordable to everyone? Does the affordability of and access to financial services impede a basic income's ability to address power imbalances and control over income within a beneficiary unit? What portion of Canadians are considered to be under-banked or unbankable? If the benefit is deposited into a bank account, will it be considered to be exempt income (meaning a creditor cannot garnishee the amount)?²⁶ Given that many social assistance recipients currently volunteer to have their shelter amount provided directly to their landlord, can similar payment options be part of a basic income? Given the advances in fintech, should consideration be given to other forms of delivery, including digital delivery, cryptocurrency, prepaid debit cards, and the like? If the benefit is to be delivered monthly, what time of the month is best to ensure financial stability, financial security, and bill payment, or would increased regularity help meet these needs? Should everyone get the benefit on the same date, or should it be staggered across beneficiary units (Richardson, Laing, Choi, & Nosova, 2019)? And as an overarching consideration, does everyone have the means to acquire the identification necessary to receive the basic income? While these details may not matter for simulations per se, they do matter for the actual design and delivery of the simulated proposal, and will need to be addressed at some point in the policy design and implementation cycle; these matters are the focus of several companion papers commissioned by the expert panel.

²⁶ The Ontario Basic Income Pilot did not ensure that the basic income benefit was exempt income.

8. Fiscal federalism

Most basic income proposals envision delivery at the federal level. However, while the current federal government is considering a basic income proposal for parents in the first year of a child's life and have suggested that the current suite of federal programs could be enhanced to provide a minimum income of sorts, it does not have any plans to implement a broad-based basic income program (Press (2018)). Provinces like B.C. may therefore want to move toward a basic income on their own. However, doing so raises some important fiscal federalism issues. If B.C. moves forward alone, how much fiscal room does it have to do so, and is that fiscal room assured for the long term? A companion paper indicates that the province faces some fiscal challenges in the long term that would need to be balanced with any large fiscal expenditure. How could or how should a B.C. basic income be funded? As described, most of the simulations presented here are funded through the elimination of various non-refundable and refundable tax credits, with more than half of the funding coming from the elimination of the basic exemption. However, this sizable amount occurs because in many cases the rate at which the credits are calculated is quite high. In B.C., however, the rate at which the credits are calculated is 5.06%. Eliminating all provincial refundable and non-refundable tax credits, along with income assistance, raises \$4 billion in funding for a basic income, which amounts to about \$1,209 for single adults. Is a provincial basic income that reduces poverty rates and the depths of poverty sufficiently financially feasible? Do costs vary enough across the province to warrant a benefit that varies across the province? And does a sufficiently generous basic income pose mobility concerns, attracting people to move to B.C. solely for this program? Can these concerns be addressed through program parameters, such as the two-year filing constraint proposed for Manitoba? Again, these are challenging questions that will need detailed reflection.

Summary

Reviewing the existing basic income simulation literature for Canada provides a good starting point on which to build further simulations for B.C. However, many implementation challenges remain unaddressed, and these would need to be solved in designing and implementing a basic income. In many cases, addressing these challenges may require any basic income policy proposal to be redesigned along the way. These are matters that the Expert Panel on Basic Income will need to address in its work.

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