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How Government-Backed Registered Retirement Savings Plans Impact Canadians' Tax-Free Savings Account:
Does Social Equity Matter?

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Personal savings can help cushion financial difficulties and reduce the need to apply for government assistance. This study examined who benefits the most and the least from the government-supported Registered Retirement Savings Plan (RRSP) and Tax-Free Savings Account (TFSA). The compound theory of social equity was used to analyze data from the 2019 Canadian Survey of Financial Security. The results suggest that there are disparities in contributions to TFSA and RRSP based on the level of education and gender of single parents. Our analysis using correlation, OLS, and quantile regressions found that there are statistically significant but relatively small differences in contributions for less educated individuals and single-parent families led by women. These findings suggest that governments could focus on financial education, improve financial inclusion policies, and review rules on TFSA and RRSP contribution limits, which could pose a cognitive administrative burden for vulnerable households.

Americans and Canadians in the lowest income quartile are sometimes just one car accident or one missed paycheck away from financial ruin. That is why a web of local, county, state/provincial, and federal programs—often referred to as the social safety net—are in place to cover basic necessities for their respective citizens. In 2009, the government of Canada implemented a tax-sheltered savings incentive program to encourage households to save money through a financial savings vehicle called the Tax-Free Savings Account (TFSA) (Shillington 2019; Zaman 2017). Subsequently, any investment in a TFSA through an account opened in a financial institution is neither taxable nor tax-deductible (Shillington 2019) and is subject to contribution limits defined by the government of Canada (Shillington 2019). By implementing the TFSA, "the Government of Canada wanted to offer another savings vehicle in addition to Registered Retirement Savings Plans (RRSPs)" (Berger et al. 2019, 309) which is, unlike the TFSA, tax-deductible and non-taxable if investors do not withdraw the money invested from their RRSP (Shillington 2019). To this end, the TFSA offers more flexibility, as there are no regulations regarding withdrawals (Shillington 2019). As the name indicates, the RRSP is more retirement savings-oriented, equivalent to the U.S. Individual Retirement Account (IRA), whereas the TFSA is like any savings account, except that the money invested in it is tax-sheltered. This is an important government program aimed at reducing poverty, but in a broader fashion, rather than relying on means-tested programs for individuals who have possibly used up their savings, and who might be discriminated against in ill-adjusted programs (Bearfield et al. 2023). The cost of the programs in 2020 was about CAD$17 billion for the RRSP and CAD$1.5 billion for the TFSA (Department of Finance of Canada 2023).

Since the inception of the TFSA in 2009, there has been no study (to the best of our knowledge), that empirically and explicitly examines to what extent social equity—in its resource distribution and access form (Williams and Duckett 2020)— matters through the simultaneous use of RRSPs and TFSAs. This is surprising, as the government subsidizes and renounces large amounts for its revenues. Researchers (see Hossain and Lamb 2015; Zaman 2017) have analyzed the relationship between the participation or contribution to the TFSA and a few social equity variables without analyzing the effect of social equity in the simultaneous use of the TFSA and the RRSP. Furthermore, social equity concerns for the gender of single-parent households are few and far between. Single-parent households, often led by mothers, are the "grand-mommy" of intersectionality; charitable ecclesiastic help for what used to

be called "unwed mothers" has roots in the 1800s in Canada (Ward 1981). This is worth paying attention to since, to this day, "low-income and material deprivation indicators corroborate that single-parent households in Canada are materially vulnerable" (Notten and Kaplan 2021, 12). Furthermore, the gender of single parents and the level of education linked to TFSA and RRSP receive scant attention in the literature.

This study aims to fill this void by analyzing the influence of the level of education of the head of households and the gender of single-parent households in the contribution to RRSP and TFSA. The overall research question is as follows: How does the education level of the head of households and the gender of single-parent households affect investment in TFSAs and RRSPs? This matters since citizens without savings will have to rely on myriad government programs, without a financial buffer. Answering this question sheds light on social disparities that could exist in the execution of the TFSA and the RRSP. Additionally, if the purpose of the TFSA program is to offer a new savings vehicle to all Canadians (Berger et al. 2019), it would be unsurprising if the users proved to be at least moderately wealthy Canadians.

This study focuses on the relationship between the TFSA and the RRSP for three major reasons, which are interrelated. The first (and most obvious) reason is that these government savings programs do not necessarily lead to the same outcomes. The second reason is that navigating between the TFSA and the RRSP can be challenging without being an administrative burden for households that do not have a significant level of (financial) education, which is required for understanding these two savings vehicles (Simpson and Buckland 2009). The third reason, which is related to the previous one, is that both the TFSA and the RRSP can be subject to various issues of social equity and financial exclusion due to financial capacity.

Based on the results of Zaman (2017) and Hossain and Lamb (2015), we posit two hypotheses. The first is that having a postsecondary education makes a difference in the effect of a variation in the contribution to the RRSP on the TFSA. The second is that the gender of single-parent households makes a difference in the contribution to RRSP and TFSA. For this second hypothesis, Zaman (2017) and Hossain and Lamb (2015) analyzed the effect of the gender of the head of households on the TFSA but not specifically the gender of single-parent households. We test these hypotheses using data from the 2019 Survey of Financial Security, to which we apply multivariate regression models as well as correlation analysis.

The hypotheses for this study are based on the theory of social equity, which includes several forms of equality: simple individual equality, segmented equality, block equalities, domains of equality, equalities of opportunity, and value of equality (see Frederickson 1990). This study focuses on block equalities and aims to compare social equity between two groups: single-parent households with male versus female heads of households and different levels of education (postsecondary education or not) in relation to investments in TFSA and RRSP.

We employ block equalities because this specifies that there must be equality between different social groups (Frederickson 1990, 2010) being the subject of the same study. We also consider equalities of opportunity since this establishes that there is equality when two individuals have the same likelihood, for instance, of having a job (Frederickson 1990, 2010), and for this study, equal likelihood, between single-parent households led by men and women, to investing in TFSA and RRSP.

However, we do not tackle segmented equality because it stipulates equality within a segment and inequality between two segments within the same group. We would have considered segmented equality if we studied, for example, two different segments according to age within the group of single parents. Thus, the expectation would be that there would be equality between single-parent households headed by young men and young women, equality between single-parent households headed by older men and older women, and plausible inequality between single-parent households led by young adults and single-parent households led by seniors. As for domains of equality, it seeks to examine how distributed equality can be decided (Frederickson 1990, 2010), which is not the subject of this study. Regarding the value of equality, it advocates the concept of many equalities in which the parts are identical and relate to the judgments of the individuals (Frederickson 1990, 2010), which this study does not focus on. Finally, we do not consider simple individual equalities because these require a unique relationship regarding equality, for example, that it is a single and unique price of a good or service that is applied to everyone (Frederickson 1990, 2010), which is not the focus of this study.

Grounded in the compound theory of social equity (Frederickson 2010, 1990), our results suggest that there is inequity concerning the level of education of individuals and the gender of the single parent. First, the gender of single-parent households is significantly associated with the contribution to the TFSA and RRSP, and second, having a postsecondary education makes a difference in the effect of a variation in the contribution to RRSP on TFSA, even after controlling for income. All of which raises equity concerns. These results lay the groundwork that governments must focus on financial education, step up efforts in financial inclusion policies, and revise rules on TFSA and RRSP contribution limits (Rubin and Bartle 2023; Shillington 2019; Simpson and Buckland 2009) which potentially constitute a cognitive administrative burden for vulnerable households.

In the following section, we present a synthesis of the literature review on equity in public administration and economics. The third section is devoted to the presentation of methodology, data, and variables. The fourth and fifth sections are dedicated to the presentation and discussion of the results and the last section concludes with recommendations for social change.

Equity in Economic and Public Administration

Equity is a fundamental value extolled in public administration scholarship, from the accessibility of services by subgroups in the population, the similarity of the expected effect between social groups, and the vertical or horizontal direction of equity (Cepiku and Mastrodascio 2021). While some authors see equity as just a right, other authors assume that equity should be measured through the prism of the ability to pay (Cepiku and Mastrodascio 2021). Aoki and colleagues (2022) underline in a synthesis of the salient points of the articles submitted from 1992 to 2022 in *Public Administration* that equity, social justice, and inclusion are substantially studied with special attention to women, minorities, seniors, and less educated people. Equity is described as horizontal when governments apply equal treatment between the layers of society, regardless of the gap that exists between these different social strata; and conversely, it is qualified as vertical when unequal treatment is applied to different strata of society with the aim of closing the gap that existed and, thereby, bringing all these social strata back to a similar status (Cepiku and Mastrodascio 2021; Frederickson 2010). For instance, receiving equal treatment may relate to the accessibility of services offered (Andrews et al. 2019) by public bodies from all levels of government.

Socioeconomic class was one of the eight social equity lenses listed and explained by Guy and McCandless (2012). They noted that many complex reasons could impede social mobility and socioeconomic conditions. Social equity in public administration research is often limited to women and minorities (see Stivers et al. 2023), instead of social class which includes, but is not limited to women and minorities.

Federated views from authors writing under the New Public Administration banner were that on top of efficiency and effectiveness we must add social equity, which includes activities that improve the political power and economic well-being of minorities and the marginalized (Frederickson 1971, 1974, 2010; Rubin and Bartle 2023).

From then on, equity became an increasingly discussed concept in the public administration literature alongside efficiency and effectiveness (Cepiku and Mastrodascio 2021; Frederickson 1990, 2010). In a nutshell, the public administration literature converges on the responsibility of governments to ensure that social equity is considered in the implementation and enforcement of public policies, whether they are administered exclusively by the government or through outsourcing.

In the economics literature, equity is approached from the angle of poverty, social inequalities, social and financial exclusion, racial discrimination, and gender-based discrimination, just to name a few. In the Canadian context, the authors address equity as income-based inequalities (Buckland 2010, 2012; Buckland and Dong 2008; Hossain and Lamb 2015; Lightman and Good Gingrich 2018; Zaman 2017), as gender-related disparities (Hossain and Lamb 2015; Lightman and Good Gingrich 2018; Wu 2021; Zaman 2017;), as financial or wealth inequalities (Buckland 2010, 2012; Lamb 2015; Lightman and Good Gingrich 2018; Maroto 2016; Wu 2021; Zaman 2017), as disparities related to the level of education (Hossain and Lamb 2015; Wu 2021; Zaman 2017), and as disparities related to family structure (Buckland and Dong 2008; Hossain and Lamb 2015; Zaman 2017).

For the sake of brevity, we focus here on articles that explicitly discuss the TFSA and RRSP. These articles use both purely descriptive methods (Shillington 2019) and regressions (Hossain and Lamb 2015; Zaman 2017) to

understand the relationship between the TFSA and the RRSP. Shillington (2019) discusses, for example, the fact that the monetary rules of TFSA and RRSP contribution limits raise equity issues for low-income families. The authors further document that it is in households with a higher net worth that we find the Canadians most likely to have a TFSA and to contribute the most (Hossain and Lamb 2015; Zaman 2017), which suggests that net worth is a strong determinant of contribution to TFSA and therefore triggers a source of social disparity. In addition, there is a disparity in the contribution to TFSA with respect to age, especially at the level of education of the head of households (Hossain and Lamb 2015; Zaman 2017), indicating that participation in the TFSA is not equitable (Zaman 2017). However, those authors who have studied the relationship between the TFSA and the RRSP have not done so with a perspective of examining equity. For example, these authors only used RRSP as a control variable (Hossain and Lamb 2015; Zaman 2017) and did not analyze the relationship between these two savings vehicles through the prism of equity. Based on the empirical results of Zaman (2017) and Hossain and Lamb (2015) and on the compound theory of social equity (see Frederickson 1990, 2010), we posit the following working hypotheses:

Hypothesis 1: Having a postsecondary education makes a significant difference in the effect of a variation in the contribution to RRSP on TFSA.

Hypothesis 2: The gender of single-parent households makes a difference in the contribution to RRSP and TFSA.

Methodology and Data

Methodology

To test hypothesis 1 that having a postsecondary education will make a significant difference in the effect of a variation in the contribution to the RRSP on the TFSA, we use Ordinary Least Squares (OLS) estimation along with Tobit (Hossain and Lamb 2015; Zaman 2017), with TFSA balance as the dependent variable. Tobit allows dealing with a potentially inconsistent estimation as the distribution of the TFSA balance has a large mass at 0 (Hossain and Lamb 2015; Zaman 2017). The independent variables of interest are RRSP balance and level of education (EDUC). We also include other right-hand control variables in the analysis, net worth (CAP), age (AGE), gender of the head of households (GENDER), after-tax income (INC), having a pension plan (PENS), provinces (PROV), source of income (SOUR_INC) (see Hossain and Lamb 2015; Zaman 2017), and student debt (EDUC LOAN). We add the student debt (EDUC LOAN) since it is a financial balance sheet account that involves the government through the student loan program, and moreover, saving is expected to be affected by debt. In the same vein, households' after-tax income determines the amount contributed to a TFSA (Hossain and Lamb 2015; Zaman 2017). Employer-pension plan is added since saving through a TFSA is expected to be affected by other savings opportunities (not solely RRSP) and, as such, interest in contributing to a TFSA may be limited (Zaman 2017). Net worth and age are included since TFSA benefits accrue more to elderly and wealthy Canadians (Hossain and Lamb 2015; Zaman 2017); therefore, it is worth controlling. As for the provinces, we control for the fact that there is some evidence of provincial effects in both participation and contribution decisions in TFSA (Zaman 2017). We control for the source of income because households whose main source of income is government transfer might be less likely to contribute to a TFSA compared to households whose major source of income is wages and salary (Zaman 2017).

$$TFSA_i = \alpha_0 + \alpha_1 RRSP_i + \alpha_2 EDUC_i + \alpha_3 RRSP^* EDUC_i + \alpha_4 CAP_i + \alpha_5 EDUC\ LOAN_i + \alpha_6 INC_i + \alpha_7 PENS_i + \alpha_8 GENDER_i + \alpha_9 AGE_i + \alpha_{10} PROV_i + \alpha_{11} SOUR\_INC_i + \tau_i \quad (1)$$

With $TFSA_i$: household balance amount in a TFSA
$RRSP_i$: household balance amount in an RRSP
$EDUC_i$: a value of 1 if the major income earner of the household has a postsecondary education, otherwise 0
CAP_i: household net worth (total assets minus total liabilities)
$EDUC\ LOAN_i$: household balance student debt
INC_i: after-tax household income
$PENS_i$: a value of 1 if household has money in employers pension plans, otherwise 0
AGE_i: a value of 1 if the major income earner of the household is 50 years old and over, otherwise 0
$GENDER_i$: a value of 1 if the head of the household is a woman, otherwise 0
$PROV_i$: dummies variables for 10 provinces
SOUR_INCi: dummies variables for major sources of income
τ_i: error term or residual
$_i$: record of each household

In equation (1), we are interested in the coefficient of the interaction between RRSP and EDUC as this will provide evidence of whether the level of education makes a difference in the effect of RRSP on TFSA. Therefore, the null hypothesis is $\alpha_3 = 0$ and the alternative is $\alpha_3 \neq 0$. We use Fisher's F statistic and Student's t statistic to decide whether to reject the null hypothesis. We also use control variables "PROV for Province" and "SOUR_INC for the source of income" to test the stability of the estimates (see Zaman 2017). We add the "robust" option in STATA for all regressions to avert issues of heteroscedasticity that may arise. Indeed, running regression with coefficients estimated with robust standard error terms makes it possible to satisfy one of the major properties of linear regressions, namely homoscedasticity (constant variance of errors).

In addition, since there is likely to be a collinearity issue, we use the Variance Inflator Factor (VIF) to check and to mitigate this, we complement the analysis with a two-stage least squares approach (2SLS). For instance, as CAP (net worth) is expected to be influenced by INC (after-tax income), we regress CAP on INC and then plug in the estimated residual as an independent variable in the second stage regression. As such, the second stage regression is like equation (1) with the difference that CAP is replaced by the estimated residual (residual_hat) obtained from the first stage regression.

The equations are as follows:

$$CAP_i = y_0 + y_1\, INC_i + Residual_i \quad (2)$$

$$TFSA_i = \alpha_0 + \alpha_1\, RRSP_i + \alpha_2\, EDUC_i + \alpha_3\, RRSP{*}EDUC_i + \alpha_4\, Residual\_hat_i + \alpha_5\, EDUC\ LOAN_i + \alpha_6\, INC_i + \alpha_7\, PENS_i + \alpha_8\, GENDER_i + \alpha_9\, AGE_i + \alpha_{10}\, PROV_i + \alpha_{11}\, SOUR\_INC_i + \tau_i \quad (3)$$

To check the robustness of the results, we also use an alternative model on two subsamples, namely a subsample for households who have postsecondary education and another subsample for those without such education. The equation for regression analysis is as follows:

For education level (either educ = 1 or educ = 0)

$$TFSA_i = \beta_0 + \beta_1\, RRSP_i + \beta_2\, CAP_i + \beta_3\, EDUC\ LOAN_i + \beta_4\, INC_i + \beta_5\, PENS_i + \beta_6\, AGE_i + \beta_7\, GENDER_i + \beta_8\, PROV_i + \beta_9\, SOURC\_INC_i + \varepsilon_i \quad (4)$$

With ε_i: error term or residual

In equation (4), we do not include the level of education variable as an independent variable since the analysis is based on the "education level" subsamples. We use Fisher's F statistic and Student's t statistic to decide whether to reject the null hypothesis. The null hypothesis is $\beta_1 = 0$ and the alternative is $\beta_1 \neq 0$. We also examine the differences between the subsample (for example β_1 (educ = 1) – β_1 (educ = 0). Additionally, we run quantile regression, at 50%, 40%, 30%, and 20%, to gauge our findings (see Hao and Naiman 2007). Concerning the quantile regression at 40%, 30%, and 20%, we winsorize the TFSA variable by excluding the 0 for the sake of obtaining the best estimates.

As for the testing of hypothesis (2) that the gender of the single-parent households will make a difference in the contribution to RRSP and TFSA, we focus on correlation analysis since the number of records for single-parent families by gender (142 records) is not enough for data modeling as the distribution of the TFSA balances has a large mass at 0. In addition, since the rule of thumb is to use at least 10 records per righthand side variable, to take on regression analysis with 142 records, we need at most 14 independent variables (including dummies), and the models described above embed more than that figure.

Data and Descriptive Statistics

We use data from the 2019 Survey of Financial Security (SFS) collected from September 2019 to December 2019 by Statistics Canada, prior to the COVID-19 pandemic hitting Canada. The more recent data, collected in 2022, is not yet accessible. The SFS provides a comprehensive picture of the incomes, assets, debts, wealth, financial decisions, and net worth of Canadian families. The survey was conducted at the level of the family unit, the households. The total number of households in the 2019 SFS database is 10,422, spread across all provinces of Canada, Newfoundland and Labrador, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, and British Columbia. The average response rate for the 2019 SFS was 59.4%.

While some variables are collected at the major income earner of the household level (e.g., gender, age, and level of education), other variables report aggregate household information (e.g., the amount in the TFSA and RRSP, after-tax income, and student debt).

We scaled continuous variables by 10,000 as Zaman (2017) did (see Appendix for details). In all regressions, we add the survey weight variable "PWEIGHT" which provides estimates that are representative of the Canadian population. For further details on survey and survey weights used, and for the brevity of exposition, we refer readers to Statistics Canada.[1]

The descriptive statistics of dummy variables presented in Table 1 reveal that 65% of heads of the family (in terms of who has the highest income) have a postsecondary education, 75% of single-parent households are women (for a total of 142 single-parent households), 55% of households have a pension plan from their employer, 59% of the heads of households are 50 years of age or older, and only 40% of heads of the family are women. Another important fact is that the average contribution to the TFSA is $20,100; RRSP is nearly five times more, or $98,800.

In addition, while households whose heads have a postsecondary education report investing $23,800 (2.38 times 10,000) on average in their TFSA, those without such education report investing $13,400 on average, a significant difference of $10,400 (see Table 2). The difference is much higher ($69,900, significant at 1%) for RRSPs with households whose heads have a postsecondary education investing $123,600 on average compared to $53,700 for those without such education (see Table 2).

As for single-parent households, the results in Table 2 suggest that single mothers contribute, on average, less to TFSAs and RRSPs than single fathers do. The contribution difference is $6,500 (0.65 times 10,000) for the TFSA and $66,800 for the RRSP, all significant at a 1% level. In fact, single mothers contribute, on average, $2,900 to TFSA and $24,900 to RRSP whereas single fathers contribute, on average, $9,400 to TFSA and $91,700 to RRSP.

Table 1. Descriptive Statistics of Variables

Variable	Mean	Median	Standard deviation	Minimum	Maximum	Number of records
TFSA	2.01	0.00	4.21	0.00	70.00	10,422
RRSP	9.88	0.47	23.92	0.00	280.00	10,422
CAP	102.95	51.18	173.28	–87.55	3005.50	10,422
EDUC LOAN	0.21	0.00	0.95	0.00	16.50	10,422
INCOME	8.66	7.11	8.05	–47.93	215.91	10,422
PENS	0.55	1.00	0.50	0	1	10,422
GENDER	0.40	0.00	0.49	0	1	10,422
GEND SING PRT	0.75	1.00	0.44	0	1	142
EDUC	0.65	1.00	0.47	0	1	10,304
AGE	0.59	1.00	0.49	0	1	10,422

Notes: TFSA = Tax-free savings accounts; RRSP = Registered Retirement Savings Plan; CAP = Net worth; EDUC = Education; INC = After-tax income; PENS= Pension; GEND SING PRT = Gender single parent (GEND SING PRT – 1 for females and 0 for males). TFSA, RRSP, CAP, EDUC LOAN, and INCOME are expressed in CAD$10k.
Source: 2019 Survey of Financial Security; authors' calculations.

The correlation coefficients between TFSA and other variables are all significant at a 1% level (Table 3). Moreover, the correlation coefficients are not very high (the largest is 0.469), which suggests there is no multicollinearity issue at this stage of the analysis.

Results and Interpretation

For all regressions, we find that there is no multicollinearity concern as the average VIF is acceptable, around one and two. Fisher's F statistic is significant at 0.1 %, which suggests that at least one of the coefficients is significant. In

1. https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&Id=1252634

Table 2. Means and T-test Difference for Subsamples' Level of Education and Gender of Single Parents

Variables	Mean (educ = post-secondary education)	Mean (educ = no postsecondary education)	T-test difference	Mean (GEND SING PRT = women)	Mean (GEND SING PRT = men)	T-test difference
TFSA	2.38	1.34	1.04***	0.29	0.94	–0.65*
RRSP	12.36	5.37	6.99***	2.49	9.17	–6.68***
CAP	120.96	69.90	51.06***	25.64	76.72	–51.09***
EDUC LOAN	25.26	11.66	13.6***	0.42	0.00	N/A
INCOME	9.94	6.29	3.65***	4.38	7.75	–3.39***
Observations	**6,748**	**3556**		**106**	**36**	

Notes: TFSA = Tax-free savings accounts; RRSP = Registered Retirement Savings Plan; CAP = Net worth; EDUC = Education; INC = After-tax income; GEND SING PRT = Gender single parent. N/A = Not applicable. TFSA and RRSP are ongoing basis variables. *p ≤ .05; **p ≤ .01; ***p ≤ .001. Means are expressed in CAD$10k.
Source: 2019 Survey of Financial Security; authors' calculations.

Table 3. Correlation

	TFSA	RRSP	CAP	EDUC LOAN	INC	PENS	GEN-DER	EDUC	AGE
TFSA	1								
RRSP	**0.330****	1							
CAP	**0.389****	0.469**	1						
EDUC LOAN	**–0.071****	–0.037**	–0.078**	1					
INCOME	**0.228****	0.397**	0.464**	0.011	1				
PENS	**0.118****	0.080**	0.120**	–0.021*	0.220**	1			
GENDER	**–0.061****	–0.064**	–0.067**	0.012	–0.142**	–0.032**	1		
EDUC	**0.118****	0.138**	0.140**	0.068**	0.215**	0.167**	0.035**	1	
AGE	**0.213****	0.176**	0.232**	–0.130**	0.020*	0.093**	0.000	–0.133**	1

Notes: TFSA = Tax-free savings accounts; RRSP = Registered Retirement Savings Plan; CAP = Net worth; EDUC = Education; INC = After-tax income; PENS= Pension. *p ≤ .05; **p ≤ .01; ***p ≤ .001.
Source: 2019 Survey of Financial Security; authors' calculations.

addition, the results of the models without the additional control variable (column 1 and column 3) and the models with the additional control variable (columns 2 and 4) are not identical but are similar, suggesting that the estimated coefficients are stable. As a result, we only comment on the models with the additional control variable (columns 2 and 4) to avoid duplication.

The results presented in Table 4 suggest that, compared to households without a postsecondary educated head, an increase of a dollar $1 (or $1,000) in the contribution to the RRSP of those with such education yields an impact difference of 0.0160 (or 16$) significant at the 5% level using OLS and no significant difference using Tobit, all other things being equal. These results are congruent with the 2SLS approach results (equations 2 and 3) used to advert potential collinearity issues. As a result, we can state that the level of education of heads of the households makes a difference in the relationship between household contri-

bution to the TFSA and to the RRSP (hypothesis 1) albeit this difference is not strictly significant. On another note, the results suggest that student debt is a relevant determinant for household contribution to the TFSA, so that a dollar $1 (or $1000) increase in student debt reduces by $0.25 (or $250) the contribution to the TFSA, all other things being equal (Table 4 column 4). Also, the variables Gender, Age, Education, and having a pension plan are acceptable determinants (consistent with Zaman 2017, 337, 342; Hossain and Lamb 2015, 730) of household contribution to TFSA. However, it is worth noting that the sign of the regression coefficient of the gender variable is not consistent with Zaman (2017, 337, 342) and Hossain and Lamb (2015, 730).

For the subsample of households with a postsecondary educated head, the OLS results (Table 5.1) suggest that a dollar $1 (or $1,000) increase in the RRSP contribution increases by $0.0332 (or $33) the contribution to the TFSA, all other things being equal. For the subsample of households without a postsecondary educated head, the

Table 4. Effect of a Variation in the Contribution to the RRSP on the TFSA: Does the Level of Education of the Head of Household Matter?

Dependent variable: TFSA				
	OLS		**TOBIT**	
Independent variables	**Coeff.**	**Coeff.**	**Coeff.**	**Coeff.**
Constant	0.17	–0.61***	–5.42***	–6.60***
	(0.13)	(0.19)	(0.13)	(0.47)
RRSP	0.01*	0.01*	0.04***	0.04***
	(0.006)	(0.006)	(0.01)	(0.01)
EDUC	0.48***	0.43***	1.74***	1.50***
	(0.08)	(0.08)	(0.17)	(0.17)
RRSP*EDUC	0.02*	0.02*	0.003	0.007
	(0.007)	(0.007)	(0.01)	(0.01)
CAP	0.006***	0.005***	0.008***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
EDUC LOAN	–0.14***	–0.12***	–0.27***	–0.25***
	(0.02)	(0.02)	(0.07)	(0.07)
INCOME	0.003	0.01	0.02	0.02
	(0.02)	(0.02)	(0.02)	(0.02)
PENS	0.39***	0.25***	1.46***	1.13***
	(0.08)	(0.09)	(0.15)	(0.16)
AGE	1.04***	0.58***	1.87***	1.28***
	(0.07)	(0.08)	(0.15)	(0.15)
GENDER	–0.27***	–0.30***	–0.29*	–0.28*
	(0.08)	(0.07)	(0.14)	(0.13)
Control	**No**	**Yes**	**No**	**Yes**
Observations	10,304	10,280	10,304	10,280
Ror Pseudo R	0.20	0.23	0.05	0.06
Average VIF	2.18	2.59	N/A	N/A
Fisher	107***	52***	89***	44***

Notes: TFSA = Tax-free savings accounts; RRSP = Registered Retirement Savings Plan; CAP = Net worth; EDUC = Education; INC = After-tax income; PENS= Pension; VIF = Variance Inflation Factor.
*p ≤ .05; **p ≤ .01; ***p ≤ .001 Robust standard errors are in parentheses.
Contains survey weights. YES indicates that PROV and SOUR_INC have been added.
Source: 2019 Survey of Financial Security; authors' calculations.

Table 5.1. OLS Subsamples Results—Effect of a Variation in the Contribution to the RRSP on the TFSA: Does the Level of Education of the Head of Household Matter?

Dependent variable: TFSA				
	educ = postsecondary education		**educ = no postsecondary education**	
Independent variables	**Coeff.**	**Coeff.**	**Coeff.**	**Coeff.**
Constant	0.62***	–0.21***	0.29*	–0.56***
	(0.20)	(0.28)	(0.13)	(0.20)
RRSP	0.03***	0.03***	0.02***	0.02***
	(0.005)	(0.005)	(0.006)	(0.006)
CAP	0.007***	0.006***	0.005***	0.004***
	(0.001)	(0.001)	(0.001)	(0.001)
EDUC LOAN	–0.13***	–0.12***	–0.12***	–0.09**
	(0.03)	(0.03)	(0.03)	(0.03)
INCOME	0.004	0.01	-0.01	0.01
	(0.02)	(0.02)	(0.02)	(0.02)
PENS	0.42***	0.29*	0.37**	0.20
	(0.11)	(0.12)	(0.12)	(0.12)
AGE	1.04***	0.50***	0.99***	0.71***
	(0.10)	(0.11)	(0.08)	(0.09)
GENDER	–0.35***	–0.34***	–0.13	–0.22*
	(0.10)	(0.10)	(0.11)	(0.10)
Control	**No**	**Yes**	**No**	**Yes**
Observations	6,748	6,732	3,556	3,548
R	0.21	0.24	0.13	0.16
Average VIF	1.21	2.37	1.20	2.11
Fisher	91***	40***	47***	19***

Notes: TFSA = Tax-free savings accounts; RRSP = Registered Retirement Savings Plan; CAP = Net worth; EDUC = Education; INC = After-tax income; PENS= Pension; VIF = Variance Inflation Factor.
*p ≤ .05; **p ≤ .01; ***p ≤ .001 Robust standard errors are in parentheses.
Contains survey weights. YES indicates that PROV and SOUR_INC have been added.
Source: 2019 Survey of Financial Security; authors' calculations.

results suggest that an increase of a dollar $1 (or $1000) in the contribution to the RRSP increases by $0.0224 (or $22) the contribution to the TFSA, all other things being equal (Table 5.1), hence there is an impact difference of 0.0108 (0.0332 – 0.0224) between the two subsamples.

The same results apply to the Tobit models (Table 5.2) for which we notice a difference of 0.009 (0.0468 – 0.0378). This suggests that an inequality exists between households with a postsecondary educated head and those without such education, regarding the effect of the variation in the contribution to the RRSP on the TFSA. On another note, the results suggest that the variation in the RRSP contribution has a higher impact on TFSA than net worth does (for example 0.05 for RRSP, 0.007 for CAP, in column 2 of Table 5.2), all other things being equal.

On top of all of those, we employ quantile regression to check the robustness of our findings (see Hao and Naiman 2007). We use the median quantile regression as it is well-known that the median is less sensitive to outliers. The results remain consistent for which we notice an impact difference of 0.0208 (0.0424 – 0.0216).

Table 5.2. TOBIT Subsamples Results–Effect of a Variation in the Contribution to the RRSP on the TFSA: Does the Level of Education of the Head of Household Matter?

Dependent variable: TFSA				
	educ = postsecondary education		**educ = no postsecondary education**	
Independent variables	**Coeff.**	**Coeff.**	**Coeff.**	**Coeff.**
Constant	–3.20***	–4.60***	–5.42***	–7.62***
	(0.33)	(0.55)	(0.13)	(0.20)
RRSP	0.04***	0.05***	0.04***	0.04***
	(0.006)	(0.006)	(0.01)	(0.01)
CAP	0.008***	0.007***	0.008***	0.006***
	(0.001)	(0.001)	(0.001)	(0.001)
EDUC LOAN	–0.32***	–0.31***	–0.08	–0.05
	(0.08)	(0.08)	(0.15)	(0.14)
INCOME	0.02	0.02	0.02	0.02
	(0.02)	(0.02)	(0.03)	(0.04)
PENS	1.40***	1.09***	1.53***	1.12***
	(0.19)	(0.20)	(0.27)	(0.26)
AGE	1.59***	0.92***	2.57***	2.23***
	(0.18)	(0.19)	(0.26)	(0.27)
GENDER	–0.39*	–0.33*	–0.07	–0.23
	(0.17)	(0.16)	(0.25)	(0.24)
Control	**No**	**Yes**	**No**	**Yes**
Observations	6,748	6,732	3,556	3,548
R	0.05	0.06	0.04	0.05
Fisher	73***	33***	33***	16***

Notes: TFSA = Tax-free savings accounts; RRSP = Registered Retirement Savings Plan; CAP = Net worth; EDUC = Education; INC = After-tax income; PENS= Pension.
*p ≤ .05; **p ≤ .01; ***p ≤ .001 Robust standard errors are in parentheses.
Contains survey weights. YES indicates that PROV and SOUR_INC have been added.
Source: 2019 Survey of Financial Security; authors' calculations.

More precisely, for the subsample of households with a postsecondary educated head, the quantile regression results suggest that a dollar $1 (or $1,000) increase in the RRSP contribution increases by $0.0424 (or $42) the contribution to the TFSA, all other things being equal. For the subsample of households with a head without a postsecondary education, the results suggest that an increase of a dollar $1 (or $1000) in the contribution to the RRSP increases by $0.0216 (or $22) the contribution to the TFSA, all other things being equal. Given that, we can state that having a postsecondary education makes a difference in the effect of a variation in the contribution to the RRSP on the TFSA (hypothesis 1), which raises social equity concerns. To gauge that finding, after winsorizing the TFSA variable by excluding the zero, we run quantile regression (see Hao and Naiman 2007), at 40%, 30%, and 20%. The results remain consistent for which we notice an impact difference of 0.0235 at 40%, 0.0185 at 30%, and 0.0127 at 20%, hence there are social equity issues up and down the distribution, and not solely around the mean.

As for the results about the gender of single-parent households, they suggest that women who are single parents are less likely to contribute to TFSA and RRSP compared to their male counterparts (Table 6). Correlation analysis result is therefore in line with the descriptive sta-

Table 6. Correlation Between GEND SINGLE PRT and TFSA, RRSP and CAP

Variables	TFSA	RRSP	CAP
GEND SING PRT	–0.21*	–0.26**	–0.34***

Notes: TFSA = Tax-free savings accounts (household investment); RRSP = Registered Retirement Savings Plan (household investment); CAP = Net worth; GEND SING PRT = Gender single parent (GEND SING PRT – 1 for females and 0 for males). *p ≤ .05; **p ≤ .01; ***p ≤ .001.
Source: 2019 Survey of Financial Security; authors' calculations.

tistics revealing a big gap in the contribution to TFSA and RRSP, respectively $6,500 and $66,800, all significant at a 1% level. The results pinpoint gender equity issues against women among single-parent households as the gender of the single-parent households makes a difference in the contribution to RRSP and TFSA (hypothesis 2).

Discussion

Analyzing social equity in public administration is a form of performance measurement (Frederickson 2010) that deserves as much attention as efficiency and effectiveness. In this article, we examine social equity regarding the use of two government savings incentive programs, the TFSA and RRSP. The compound theory of social equity is grounded in the analysis of the 2019 Canadian Survey of Financial Security data. The results suggest the existence of inequality in terms of the level of education of households (with postsecondary education versus those without postsecondary education) and the gender of single parents (female versus male), which means that the expectation of the compound theory of social equity is unmet and thus raises equity issues. This kind of social inequity is unlikely to cause social tumult; it will not be captured by cameras (Trochmann and Guy 2022). The expectation of the compound theory of social equity is that there should be equality between different social groups and, as such, there is equality when two individuals have the same probability, for instance, having a job (Frederickson 1990, 2010) and for this study, contributing to TFSA and RRSP.

The question that should therefore be asked is whether the equity issues derived from the results are acceptable in an open and democratic society. We will cover the normative answer in the next paragraph. The purely academic answer takes time to unpack. Readers must be careful not to automatically equate statistical differences between groups as social inequities. Given a large enough sample, easily reached by universal programs or even ambitious means-tested programs, small differences between groups, even if they are substantially trivial, will be easy to identify with forgiving significance levels like alphas of 0.01 or 0.05. Our results here are a warning to *Journal of Social Equity and Public Administration* contributors and to social equity scholars at large. The fact that the most common statistical analyses reveal differences around the mean of a distribution does not imply that our analyses should be limited to this aspect. To better understand the situation, we need to examine the entire distribution, rather than just focusing on how the median citizen is doing.

The normative answer is no. The equity issues arising from the results are not acceptable in an open and democratic society. Small differences that are statistically significant are a fact of (statistical) life. For meaningful categories, perfect distributional symmetry would be mathematical oddities. Our results point to small financial inequities around the mean and larger financial inequities on the left tail of the distribution in the savings of some categories of households. As a matter of fact, additional financial education and step-up efforts to implement targeted financial inclusion policies (Shillington 2019; Simpson and Buckland 2009) could provide a buffer and shelter *some* in-risk groups from having to apply and use the social net. Governments must also have a political commitment to change policies that contribute to gender disparity (Rubin and Bartle 2023). An aspect that also deserves reflection following these results is the accountability in this collaboration between the government and the financial institutions. Who is accountable for these inequalities? There is a need to set up a framework for assessing accountability in this collaboration between government and financial institutions (Lee and Ospina 2022; Lægreid and Rykkja 2021). To this end, Lee and Hung (2021) recommend future study that examines the extent to which equity and the creation of public value affect democratic accountability in the context of any interorganizational collaboration.

These questions deserve attention from various ac-

tors as their answers will contribute to testing the expectations of domain equality of the compound theory of social equity, which seeks to understand how to decide the equitable distribution of goods and services (Frederickson 1990, 2010) that have not been tackled in this study. Moreover, this study is purely quantitative and does not include qualitative user opinions. Conducting, if possible, a study that examines the opinions of TFSA and RRSP users (and even nonusers) is an avenue for future research. This may include conducting studies that examine the administrative cognitive burden of the rules surrounding TFSA and RRSP contribution limits. On the quantitative side, it would be interesting to see future studies that replicate the method of this work by regressing the RRSP on the TFSA with a focus on causality. In this study, we regressed TFSA on RRSP (not with causal locus), but this can be bidirectional (see for example, Berger et al. 2019). On that note, it is worth cautioning readers that our results should not be interpreted as a causality but rather as a correlation or influence, and this is due to data limitations. We use one-year survey data (not panel data) from an expansive and expensive data collection effort. This now triennial study does not seek to follow the same respondents from one iteration to the next. Canadian restrictions for data availability are much stricter than American ones. This stringency hamstrings research (Grant and Andrew-Gee 2019). Variables collected in this survey, including the linguistic, indigenous, and immigration statuses of respondents were kept out of the data, because hackers could reverse engineer them to identify respondents. Endogeneity has not been mitigated for lacking strong instrumental variables. Experimental and quasi-experimental research designs would be the right path to causality (see Angrist and Pischke 2014). It would be a good idea to carry out a meta-analysis on the effect of equity on contributions to TFSAs and RRSPs once there are enough studies because it seems that the signs of the coefficients diverge. For instance, unlike Zaman (2017) and Hossain and Lamb (2015) who document that being in a female-headed household is positively associated with the contribution to TFSA, the results of this study suggest the opposite, a negative association, all other things being equal (see Tables 4, 5.1, and 5.2). This difference can be explained by the fact that we used surveys from different years. Seeking to apply the same method to this work by including panel data or surveys from previous years (2012 and 2016) could be a possible avenue. However, it is important to be aware of the challenges inherent in combining this type of data, namely the difference in sample sizes between periods (Rothwell and Robson 2017) and the survey questions that could change between periods (Simpson and Buckland 2009). Finally, if future publicly available Financial Security Survey data can include immigrants, indigenous communities, and rural versus urban populations, equity can be analyzed for several social strata.

Conclusion

This equity audit (Guy and Williams 2023) examines whether social equity affects the impact of a variation in RRSP contributions on TFSA, using data from the 2019 Survey of Financial Security collected by Statistics Canada. The study specifically assesses social equity in terms of the level of education of the head of households and the gender of single parents. We posit two hypotheses. The first hypothesis states that having a postsecondary education will make a significant difference in the effect of a variation in the contribution to RRSP on TFSA. The second hypothesis is that the gender of single-parent households will make a difference in the contribution to RRSP and TFSA. The expectation of the compound theory of social equity through block equalities is that there should be equality between different social groups (Frederickson 1990, 2010). It is the same for equalities of opportunity of the compound theory of social equity which states that there is equality when two individuals have the same probability, for instance, of having a job (Frederickson 1990, 2010), and for this study, equality in the probability, between single-parent households led by men and by women, of investing in TFSA and RRSP.

The results suggest that there are some minor forms of inequality in terms of the level of education, which does not meet the expectation of block equalities of the compound theory of social equity. In the same vein, the results related to gender do not meet the expectations of equal opportunities of the compound theory of social equity since the gender of single-parent households is significantly correlated with the contribution to TFSA and RRSP, which raises equity issues. As the contribution limits were not considered for the quantitative approach of this study, we suggest future research to investigate this to find the optimal threshold of contribution limits as well as to assess the consequences of

Appendix

Variables	Description including database variables.
TFSA	Balance amount in the TFSA (PWATFS) is divided by 10,000.
RRSP	Balance amount in the RRSP (PWARRSPL) divided by 10,000.
CAP	Net worth (PWNETWPG) divided by 10,000.
EDUC LOAN	Balance amount of student debt (PWDSLOAN) divided by 10,000.
INC	After-tax income (PEFATINC) divided by 10,000.
PENS	A dummy variable takes a value of 1, if the household has money in their employer pension plan(s); it is 0 otherwise. It takes a value of 1 if the amount in (PWARPPG) > 0, otherwise it takes a value of 0. The amount is on a going-concern basis.
EDUC	A dummy variable takes a value of 1 for households whose major income earners have some level of postsecondary education; it is 0 otherwise. Postsecondary education takes a value of 1 if PEDUCMIE = code (03) (non-university postsecondary certificate or diploma) or code (04) (university degree or certificate). Postsecondary education takes a value of 0 if PEDUCMIE = code (01) (less than high school) or code (02) (high school diploma).
GENDER	A dummy variable takes a value of 1 for households whose major income earners are female; it is 0 otherwise. It takes a value of 1 if PGDRMIE = code (02) (female) and a value of 0 if PGDRMIE = code (01) (male).
GEND SING PRT	A dummy variable takes a value of 1 if a single parent is female and a value of 0 if a single parent is male. It takes a value of 1 if PGDRMIE = code (02) (female) and PFMTYPG = code (03) (couple with children and single-parent family) and PFSZ= code (02) (number of members in the family unit is 2 persons). The value is 0 if PGDRMIE = code (01) (male) and PFMTYPG = code (03) (couple with children and single-parent family) and PFSZ = code (02) (number of members in the family unit is 2 persons).
Age	A dummy variable takes a value of 1 for households whose major income earners are 50 years old and over; it is 0 otherwise. It takes a value of 1 if PAGEMIEG > code (07) in the database (45 to 49 years old) and it takes the value of 0 if PAGEMIEG < code (08) in the database (50 to 54 years old).
PROV (Province)	A dummy variable for the province of residence for the family unit (PPVRES). Provinces (codes): Newfoundland (10), Prince Edward Island (11), Nova Scotia (12), New Brunswick (13), Quebec (24), Ontario (35), Manitoba (46), Saskatchewan (47), Alberta (48), and British Columbia (59).
SOUR_INC (Source of income)	A dummy variable for the major source of income for the family unit (PEFMJSIF). Sources (codes): wages and salaries (02), self-employment income (03), government transfers (04), investment income (05), retirement pensions (06), and other income (07).

Notes: TFSA = Tax-free savings accounts; RRSP = Registered Retirement Savings Plan; CAP = Net worth; GEND SING PRT = Gender single parent.
Source: 2019 Survey of Financial Security.

modifying or suspending these contribution limits on both public finance and Canadians.

These results, therefore, lay the groundwork that governments must focus on financial education, step up efforts in financial inclusion policies (Shillington 2019; Simpson and Buckland 2009), and revise the policy of rules on TFSA and RRSP contribution limits (Shillington 2019), which potentially leads to a cognitive administrative burden for low-income households. Our research contribution can help those just above the poverty line who can save some of their income, and not those too poor to even cover their basic needs. Nevertheless, "there is plenty of poverty above the poverty line" (Desmond 2023, 25).

References

Andrews, Rhys, Malcolm J. Beynon, and Aoife McDermott. 2019. "Configurations of New Public Management Reforms and the Efficiency, Effectiveness and Equity of Public Healthcare Systems: A Fuzzy-Set Qualitative Comparative Analysis." *Public Management Review* 21 (8): 1236–1260. https://doi.org/10.1080/14719037.2018.1561927

Angrist, Joshua D., and Jörn-Steffen Pischke. 2014. *Mastering 'Metrics. The Path from Cause to Effect*. Princeton, NJ: Princeton University Press.

Aoki, Naomi, Ian C. Elliott, Jeanne Simon, and Edmund C. Stazyk. 2021. "Putting the International in *Public Administration: An International Quarterly*. A Historical Review of 1992–2022." *Public Administration* 100 (1): 41–58. https://doi.org/10.1111/padm.12822

Berger, Leslie, Jonathan Farrar, and Lu Zhang. 2019. "An Empirical Analysis of the Displacement Effect of TFSAs on RRSPs." *Canadian Tax* 67 (2): 309–333. https://doi.org/10.32721/ctj.2019.67.2.berger

Bearfield, Domonic A., Humphrey, Nicole, Portillo, Shannon, and Norma M. Riccucci 2023. "Dismantling Institutional and Structural Racism: Implementation Strategies Across the United States." *Journal of Social Equity and Public Administration* 1 (1): 75–92. https://doi.org/10.24926/jsepa.v1i1.4837

Buckland, Jerry, and Xiao-Yuan Dong. 2008. "Banking on the Margin in Canada." *Economic Development Quarterly* 22 (3): 252–263. https://doi.org/10.1177/0891242408318738

Buckland, Jerry. 2012. *Hard Choices: Financial Exclusion, Fringe Banks and Poverty in Urban Canada*. Toronto, ON: University of Toronto Press. https://doi.org/10.3138/9781442685291

Buckland, Jerry. 2010. "Are Low-Income Canadians Financially Literate? Placing Financial Literacy in the Context of Personal and Structural Constraints." *Adult Education Quarterly* 60 (4): 357–76. https://doi.org/10.1177/0741713609358449.

Cepiku, Denita, and Marco Mastrodascio. 2021. "Equity in Public Services: A Systematic Literature Review." *Public Administration Review* 81 (6): 1019–1032. https://doi.org/10.1111/puar.13402

Department of Finance. 2023 of Canada. Report on Federal Tax Expenditures—Concepts, Estimates and Evaluations 2023. Government of Canada. Ottawa, ON. https://www.canada.ca/content/dam/fin/publications/taxexp-depfisc/2023/taxexp-depfisc-23-eng.pdf

Desmond, Matthew. 2023. *Poverty, by America*. New York: Crown.

Frederickson, H. George. 2010. *Social Equity and Public Administration: Origins, Developments, and Applications*. Armonk, NY: M.E. Sharpe. https://doi.org/10.4324/9781315700748

Frederickson, H. George. 1990. "Public Administration and Social Equity." *Public Administration Review* 50 (2): 228. https://doi.org/10.2307/976870

Frederickson, H. George. 1974. "A Symposium on Social Equity and Public Administration." *Public Administration Review* 34 (1): 1–15.

Frederickson, H. George. 1971. "Toward a New Public Administration." In *Classics of Public Administration,* edited by Shafritz, Jay M., and Albert C. Hyde, 294-305. Boston, MA: Wadsworth, 2012. ISBN 978-1111342746.

Grant, Tavia, and Eric Andrew-Gee. 2019. "What Went Wrong at Statscan? A History of Secrecy, Small-Time Thinking and Statistics." Toronto, ON: The Globe and Mail. January 26. https://www.theglobeandmail.com/canada/article-what-went-wrong-at-statscan-a-history-of-secrecy-small-timethinking/

Guy, Mary E., and Sean A. McCandless. 2012. "Social Equity: Its Legacy, Its Promise." *Public Administration Review* 72 (s1): s5–s13. https://doi.org/10.1111/j.1540-6210.2012.02635.x

Guy, Mary E., and Brian N. Williams. 2023. "A Journal Dedicated to Social Equity and Public Administration." *Journal of Social Equity and Public Administration* 1 (1): 13–18. https://doi.org/10.24926/jsepa.v1i1.4824

Hao, Lingxin, and Daniel Q. Naiman. 2007. *Quantile Regression*. Thousand Oaks, CA: Sage. http://dx.doi.org/10.4135/9781412985550

Hossain, Belayet, and Laura Lamb. 2015. "The Canadian Tax-Free Savings Account: A Programme to Help the Rich Get Richer?" *Applied Economics Letters* 23 (10): 728–731. https://doi.org/10.1080/13504851.2015.1102840

Lamb, Laura. 2015. "Aboriginal Fringe Finance Use and Financial Capabilities: Survey Evidence from a Canadian City." *Economic Papers* 34 (4): 273–289. https://doi.org/10.1111/1759-3441.12112

Lee, David, and ChiaKo Hung. 2021. "Meta-Analysis of Collaboration and Performance: Moderating Tests of Sectoral Differences in Collaborative Performance." *Journal of Public Administration Research and Theory* 32 (2): 360–379. https://doi.org/10.1093/jopart/muab038.

Lee, Seulki, and Sonia M. Ospina. 2022. "A Framework for Assessing Accountability in Collaborative Governance: A Process-Based Approach." *Perspectives on Public Management and Governance* 5 (1): 63–75. https://doi.org/10.1093/ppmgov/gvab031

Lightman, Naomi, and Luann Good Gingrich. 2018. "Measuring Economic Exclusion for Racialized Minorities, Immigrants and Women in Canada: Results from 2000 and 2010." *Journal of Poverty* 22 (5): 398–420. https://doi.org/10.1080/10875549.2018.1460736

Lægreid, Per, and Lise H. Rykkja. 2021. "Accountability and Inter-Organizational Collaboration within the State." *Public Management Review* 24 (5): 683–703. https://doi.org/10.1080/14719037.2021.1963822

Maroto, Michelle. 2016. "Fifteen Years of Wealth Disparities in Canada: New Trends or Simply the Status Quo?" *Canadian Public Policy* 42 (2): 152–167. https://doi.org/10.3138/cpp.2015-040

Notten, Geranda, and Julie Kaplan. 2021. "Material Deprivation: Measuring Poverty by Counting Necessities Households Cannot Afford." *Canadian Public Policy* 47 (1): 1–17. https://doi.org/10.3138/cpp.2020-011

Rothwell, David, and Jennifer Robson. 2017. "The Prevalence and Composition of Asset Poverty in Canada: 1999, 2005, and 2012." *International Journal of Social Welfare* 27 (1): 17–27. https://doi.org/10.1111/ijsw.12275

Rubin, Marilyn Marks, and John R. Bartle. 2023. "Gender-Responsive Budgeting: A Budget Reform to Address Gender Inequity." *Public Administration*. 101 (2): 391–405. https://doi.org/10.1111/padm.12802

Shillington, Richard. 2019. "Are Low-Income Savers Still in the Lurch? TFSAs at 10 Years." IRPP Insight 27. Montreal: Institute for Research on Public Policy, April 9, 2019. https://irpp.org/research-studies/are-low-income-savers-still-in-the-lurch-tfsas-at-10-years/

Simpson, Wayne, and Jerry Buckland. 2009. "Examining Evidence of Financial and Credit Exclusion in Canada from 1999 to 2005." *The Journal of Socio-Economics* 38 (6): 966–976. https://doi.org/10.1016/j.socec.2009.06.004

Stivers, Camilla, Sanjay K. Pandey, Leisha DeHart-Davis, Jeremy L. Hall, Kathryn Newcomer, Shannon Portillo, . . . and James Wright II. 2023. "Beyond Social Equity: Talking Social Justice in Public Administration." *Public Administration Review* 83 (2): 229-240. https://doi.org/10.1111/puar.13620

Trochmann, Maren B., and Mary E. Guy. 2022. "Meanings Matter: The Relationship Between Constitutional Values and Social Justice." *Journal of Public and Nonprofit Affairs* 8 (2): 281–293. https://doi.org/10.20899/jpna.8.2.281-293

Ward, Peter W. 1981. "Unwed Motherhood in Nineteenth-Century English Canada." *Historical Papers* 16 (1): 34–56. https://doi.org/10.7202/030867ar

Williams, Brian N., and Brendin Duckett. 2020. "At the Juncture of Administrative Evil and Administrative Racism: The Obstacles and Opportunities for Public Administrators in the United States to Uphold Civil Rights in the Twenty-First Century" *Public Administration Review* 80 (6): 1038–1050.

Wu, Jiadi. 2021. "Assessing Gender Differences in Financial Literacy in Canada." Major Research Paper Graduate School of Public and International Affairs, University of Ottawa. https://ruor.uottawa.ca/bitstream/10393/43303/1/WU%2C%20Jiadi%20-%20300104086.pdf

Zaman, Ashraf Al. 2017. "Distributional Impacts of Canada's Tax-Free Savings Accounts." *Canadian Public Policy* 43 (4): 331–c49. https://doi.org/10.3138/cpp.2016-039

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