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Why are Lower-income Parents Less Likely to Open an RESP Account? The Roles of Literacy, Education and Wealth

by Aneta Bonikowska and Marc Frenette

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Abstract

The Government of Canada offers various financial incentives for parents to save for their children's postsecondary education by contributing to a Registered Education Savings Plan (RESP). However, RESP participation rates tend to rise substantially with family income, and previous research has demonstrated that family wealth was the single most important reason for this trend (among factors that could be examined). This study explores whether differences in parental literacy, numeracy and financial literacy can further account for some of the gap in RESP participation by level of family income. The results suggest that differences in wealth (which may also reflect differences in unobserved characteristics correlated with wealth) remain the single most important factor behind the gap in RESP participation by family income, even after accounting for differences in parental levels of education and literacy, numeracy and financial literacy. In fact, differences in wealth accounted for 50% to 79% of the total gap in RESP participation between families in the top and bottom income quartiles, depending on the method and dataset used. Differences in financial literacy accounted for a moderate share of the RESP participation gap (between 13% and 19%), while differences in literacy and numeracy played smaller, statistically insignificant roles.

Executive summary

Obtaining a postsecondary education is an important career investment strategy for many youth. However, enrolment is unequally distributed across levels of family income. One factor that could assist youth in paying for the costs of attending a postsecondary institution is accumulating early savings. Indeed, previous research has demonstrated that youth with access to Registered Education Savings Plan (RESP) funds are more likely to attend postsecondary institutions than those without. While the share of parents opening RESP accounts for their children has been increasing steadily over time, it remains more than twice as high among high-income parents as among low-income parents.

Previous research has found that wealth is the single most important factor (among those that could be examined) behind the gap in RESP participation by level of family income. The education level of the parents also mattered, but to a lesser degree than wealth.

This study explores whether the gap in RESP take-up is affected not only by wealth and education, but also by differences in levels of literacy, numeracy and financial literacy between high- and low-income parents.

Data for the study come from two sources: the 2014 Canadian Financial Capability Survey to study the role of financial literacy, and the third wave (2016) of the Longitudinal and International Study of Adults for literacy and numeracy scores collected in the 2012 Programme for the International Assessment of Adult Competencies. The study uses Gelbach and Oaxaca–Blinder decompositions to explore the relative importance of literacy, numeracy, financial literacy, education and wealth differences between high- and low-income parents in accounting for the RESP participation gap.

The results suggest that differences in wealth remain the single most important factor behind the gap in RESP participation by family income, even after accounting for differences in parental education and literacy, numeracy and financial literacy. In fact, differences in wealth accounted for 50% to 79% of the total gap in RESP participation between families in the top and bottom income quartiles, depending on the method and dataset used. This estimated effect of wealth may not be causal. It is possible that it is at least partly due to differences between the bottom and top income quartiles in unobserved characteristics that are also correlated with wealth (e.g., savings behaviour).

Differences in financial literacy accounted for a moderate share of the RESP participation gap (between 13% and 19%), while differences in literacy and numeracy played smaller, statistically insignificant roles. The results thus provide no compelling evidence that raising literacy rates among low-income parents would increase their RESP participation rates. However, there may be some role for financial literacy.

1 Introduction

It is well established that postsecondary graduates generally earn considerably more than high school graduates in both the short term and the long term (Frenette 2019). It is therefore not surprising that many people believe higher education represents Canada's best opportunity to reduce income inequality (e.g., Parkin 2016). However, a large divide still exists in postsecondary enrolment by parental income. Indeed, Frenette (2017*a*) found that in 2014, 78.7% of youth from families in the top 20% of the income distribution were enrolled in postsecondary education by age 19, while only 47.1% of their counterparts from the bottom 20% of the distribution were enrolled.

Although earlier research suggested that only 12% of the gap in university attendance between youth from families in the top and the bottom of the income distribution was due to financial constraints (Frenette 2007), real (constant dollar) tuition fees have risen by 25.8% from 2006 to 2017.[1] Saving for a postsecondary education early on may minimize the impact of rising tuition fees on family budgets. To this end, the federal government offers financial incentives to save for postsecondary education through a Registered Education Savings Plan (RESP). The incentives come in three forms. First, the government will match contributions to an existing RESP at a rate of 20% on the first $2,500 in contributions, regardless of income, for all children through the Canada Education Savings Grant (CESG), and an additional 10% or 20% on the first $500 for children whose parental income lies below set thresholds (through the "additional" amount of the CESG, or A-CESG). The grant (including the additional amount) is available until the end of the calendar year in which the beneficiary turns 17 years of age, up to a lifetime maximum of $7,200. Second, the government will invest in RESPs on behalf of children through the Canada Learning Bond (CLB), as long as their parental income lies below a fixed threshold, an RESP account has been opened on their behalf and an application has been completed for the incentive(s). The government will provide an initial $500 CLB payment, as well as additional payments of $100 annually for each year of eligibility, up to age 15, and to a lifetime maximum of $2,000—even if no contributions have been made by any subscribers. Third, any investment earnings derived from the RESP will be taxed in the hands of the beneficiaries (if they attend a postsecondary institution), as opposed to the subscribers (who make the contributions). Since many students have little or no income, they often can withdraw money tax-free, resulting in a cost-effective mechanism of saving for postsecondary studies. These incentives may encourage parents to open an RESP account, which can stay open for up to 36 years less a day.

Previous research has shown that 15-year-olds who had access to RESP funds were significantly more likely to subsequently attend a postsecondary institution, even after accounting for differences in parental income and education, as well as the child's performance on a standardized reading test and overall high school marks (Frenette 2017*b*).[2] Despite this, only about half of families with children younger than 18 have opened an RESP account. The incidence of RESP participation rises sharply with parental income: about one-quarter of qualifying families from the bottom 20% of the income distribution opened an RESP, compared with about two-thirds of families in the top of the distribution. Moreover, 23% of RESP holders who were eligible for the

1. Average university undergraduate tuition fees in Canada (all fields of study) increased by 50.4% from 2006/2007 to 2017/2018 (Statistics Canada, 2020a), compared with an increase of only 19.5% in the Consumer Price Index from 2006 to 2017 (Statistics Canada, 2020b). This resulted in a 25.8% increase in real tuition fees.
2. Similarly, Ford and Kwakye (2016) report results from a randomized control trial conducted in New Brunswick (the Learning Accounts intervention of the Future to Discover project). The intervention consisted of promising high school students up to $8,000 in funds earmarked for postsecondary studies. The study showed that among students from low-income families and whose parents do not possess any postsecondary credentials, those offered the promised funds were significantly more likely to enroll in and graduate from a postsecondary institution. Although the study demonstrates the positive effects of having money set aside for postsecondary studies, it is worth noting that students had to "use it or lose it." In contrast, the RESP contributions made by subscribers (but not the matching contributions by the government) can be recovered if the beneficiaries do not use the funds to attend a postsecondary institution, as long as the taxes are paid on the earnings of the RESP investments.

CLB in 2012 did not receive CLB contributions from the government since they did not apply for it (ESDC 2015).

Milligan (2005) and Frenette (2017*b*) found that differences in wealth were the most important factor behind the gap in RESP participation by income level, followed by education (among factors that could be examined). However, neither study could consider the roles of parental literacy, including general literacy, numeracy and financial literacy.

Indeed, the relatively low take-up rate of RESPs among lower-income families may result from the numerous steps involved in benefiting from the savings incentives. First, families must be aware of RESPs and the details of the incentives (the CESG, A-CESG, CLB and the tax implications associated with RESP withdrawal). Low-income parents who have no wealth or disposable income to contribute to an RESP may be unaware that they qualify for the CLB without having to make any contributions of their own. They must also obtain a social insurance number for each eligible child. Next, they must open an RESP and apply for incentives. Finally, eligibility for the income-contingent incentives requires income verification, which requires filing an income tax return annually. While appreciating the full benefits of the savings incentives requires a certain degree of financial knowledge and basic mathematical skills, applicants must also be able to read and fill out forms. In fact, both international (OECD INFE 2011; OECD 2016*a*) and Canadian (Task Force on Financial Literacy 2010) definitions of financial literacy point to not only having the knowledge, but also having the skills necessary to make sound or reasonable financial decisions. While the definitions do not describe which particular skills are needed, Robson (2016) summarizes several studies that describe the challenges in promoting savings (including education savings) among low-income families, and concludes that the parents' financial capability, literacy and numeracy may indeed pose barriers. Therefore, it is conceivable that the low RESP participation rates of lower-income parents may result from poorer financial literacy, as well as lower general literacy and numeracy. Understanding the roles of each may help policy makers design interventions geared toward reducing the gap in RESP participation.

To date, only one Canadian study has explored the relationship between financial literacy and education savings (Audet and Bele 2011). Using the 2009 Canadian Financial Capability Survey (CFCS), the study found that parents who save for postsecondary education generally have higher levels of financial literacy in several subdomains than those who do not. However, the role of financial literacy in understanding the differences in the proportion of high- and low-income families with RESP accounts was not investigated. Furthermore, no Canadian studies have examined the relationship between education savings, literacy and numeracy.

The purpose of the current study is to fill these gaps in the literature. It seeks to determine what portion of the gap in RESP participation across parental income levels can be explained by differences in literacy, numeracy and financial literacy, compared with differences in wealth, education and demographics. This study uses data from two surveys, the 2014 CFCS and the third wave of the Longitudinal and International Study of Adults (LISA), conducted in 2016. The 2014 CFCS includes a 14-question objective assessment of financial knowledge. A subset of LISA respondents participated in the 2012 Programme for the International Assessment of Adult Competencies (PIAAC), which contains detailed literacy and numeracy assessments. Both the 2014 CFCS and the 2016 LISA contain flags for RESP participation.

The next section describes the analytical methods and data in more detail, and is followed by a presentation of the findings. The study and main results are summarized in the conclusion.

2 Methodology

Previous studies have shown that despite RESP participation increasing over time among all income groups, it remains considerably higher among the high-income group (Milligan 2005; Frenette 2017*b*). Both studies conclude that, among the factors that could be examined, wealth is the single most important factor behind the gap in RESP participation. The current study builds on this work to explore whether differences in literacy, numeracy and financial literacy levels can further account for some of the difference in RESP take-up between high- and low-income families using the following model:

$$\begin{aligned} RESP_i = {} & \alpha + \delta 1 Q2 + \delta 2 Q3 + \delta 3 Q4 \\ & + \beta 1 \left(Literacy_i \, OR \, Numeracy_i \, OR \, Financial \, literacy_i \right) + \beta 2 Demographics_i \\ & + \beta 3 Wealth_i + \beta 4 Education_i + e_i \end{aligned} \qquad (1)$$

where the dependent variable, RESP, is an indicator variable equal to 1 if parents are saving for their minor children's postsecondary education in an RESP account, and 0 if they are not saving at all, or saving in other ways.[3] In this study, high-income families are those in the fourth (top) quartile, and low-income families are those in the first (bottom) quartile of the income distribution, defined in more detail below. The difference in RESP take-up between high- and low-income parents will be captured by the coefficient $\delta 3$ on the indicator variable $Q4$, which identifies respondents in the top income quartile.

Since no single dataset includes measures of literacy, numeracy and financial literacy, it is impossible to directly compare the magnitude of their respective effects on RESP participation. Furthermore, individual literacy and numeracy scores are very highly correlated, so much so that their respective impacts cannot be directly compared (even though both are available in the 2016 LISA). Instead, how literacy, numeracy and financial literacy each affect the RESP take-up gap between high- and low-income parents is explored.

The choice to include education and wealth in a model that also includes measures of literacy, numeracy or financial literacy deserves some discussion. Since the focus of this study is on explaining the low RESP participation among low-income families relative to the higher participation of high-income families, controlling for compositional differences in education and wealth—both correlates of RESP participation—is important. Education could affect RESP participation through several different channels, such as by generating higher levels of literacy and numeracy (Green and Riddell 2007), and potentially financial literacy. Other channels might include shaping attitudes toward education and network effects. For example, higher education among parents may be correlated with a stronger belief in its importance, expectations that children will pursue postsecondary education and a desire to help children achieve postsecondary qualifications through means that could include saving in an RESP account. Higher education could also lead to network effects, whereby better-educated parents have more peers in their

3. The CFCS question on savings for children's postsecondary education may conceivably be undercounting the number of families that have opened an RESP account. The CFCS (Statistics Canada 2016) asks respondents, "Are you currently saving or have you already saved to support the cost of your children's postsecondary education?" (Question EF_Q02) and "How are you currently saving to support your children's postsecondary education?" (Question EF_Q04)—followed by a list of response options, one of which is "Contribute to a RESP account." It is possible that some low-income families that opened an RESP account and have not contributed to it but are benefiting from the CLB would have answered "no" to the first question or would not have checked off the "contribute to a RESP account" option. In LISA (Statistics Canada 2017), the corresponding questions were as follows: "Do you (and your spouse or partner) currently have savings set aside for [your child/your children]'s postsecondary education? Types of savings include bank accounts, GICs, RESPs, RRSPs, mutual funds, investment funds, etc." (Question CHFP_Q05) followed by "Which of the following methods are you using to save for [your child/your children]'s postsecondary education?" (Question CHFP_Q20) with one answer category—"Registered Education Savings Plans (RESPs)".

social and professional circles who may share information about RESPs and their benefits with them. Peer pressure that parents may feel from others investing in RESPs could be another channel. Conditioning on education in the model enables the impact of literacy, numeracy or financial literacy to be separated from the remaining channels through which education may be driving RESP participation. If education were excluded from the model, the impact of literacy, numeracy and financial literacy would likely be overestimated, since those variables are correlated with the now omitted education variables that affect RESP participation.[4]

Wealth could affect RESP participation through several channels as well. Parents could simply move financial resources from a savings account into an RESP account. Accumulating wealth could also prompt a person to increase their financial literacy in an effort to better manage their savings, which in turn could increase their probability of opening an RESP account. In addition, wealth could proxy for individual characteristics that are not directly observable in the data, but might influence RESP participation, including financial savvy (an ability to identify financial opportunities and act upon them), personal traits such as thriftiness and a propensity for financial planning for the future.

The decision to include or exclude RESPs in the definition of wealth has important implications for the interpretation of the model. Indeed, the wealth variable could be endogenous whether or not it includes RESPs. If RESPs are included in wealth, then an increase in RESPs would result in an increase in wealth if parents make RESP contributions by increasing their savings rate. However, an increase in RESPs would have no impact on wealth if parents move non-RESP wealth into RESPs. If wealth does not include RESPs, then an increase in RESPs would result in a decline in wealth if parents simply move non-RESP wealth into RESPs. In contrast, if parents make RESP contributions by increasing their savings rate, then an increase in RESPs would result in no change in a measure of wealth that excludes RESPs.[5]

Given the nature of the data, wealth enters the model as a series of dummy variables for the different types of assets or debt and their value (more on this in the next section). As such, including dummy variables for total RESP holdings in the family as independent variables would almost amount to regressing the dependent variable on itself. Including RESP holdings for family members other than the minor children in the family would be one alternative; however, only LISA collects information on the RESP value for children and the total value of all RESP accounts in the family, while the CFCS asks only about the total value. Therefore, RESP holdings of any kind are excluded from the set of independent variables that measure family wealth for consistency.

4. Within each education level, there is substantial variation in financial literacy scores. For example, the top-scoring 25% of respondents with a high school diploma scored higher than the bottom-scoring 25% of respondents with a postsecondary education. The same is true of literacy and numeracy scores.
5. If the objective were to estimate the causal effect of financial literacy, literacy and numeracy on RESP participation, and wealth were used only as a control variable, then including wealth in regressions would not bias the coefficient of the key independent variable in the model—whether financial literacy, literacy or numeracy—as long as conditioning results on wealth makes financial literacy as good as randomly assigned (Stock and Watson 2011). While it is not possible to assess whether this conditional random assignment assumption (or mean independence from the unobserved error term) holds, the odds of it holding increase as more covariates are included in the model.

Note that although wealth and income are correlated, wealth could vary across individuals with a similar income level (and within the same income quartile) for a variety of reasons, such as inheritances, changes in marital status (e.g., divorce), unobserved characteristics or luck. In fact, income, education, wealth, literacy, numeracy and financial literacy are all correlated to some extent. The relevant question is whether there is enough variation in the dataset to identify the desired effects—and according to the data used in this study (described below) the answer is yes.[6] Given that individual characteristics are generally correlated in non-experimental datasets, a multivariate regression analysis is used to parse out any effects independent of other correlates that the variables included in the model may have on RESP participation.

The models were estimated using a linear probability model. Since most of the estimated probabilities of saving in an RESP account lie between 30% and 70%, linear and non-linear (logit and probit) models yield similar marginal effects. One thousand bootstrap weights were used in regression estimation to take into account survey design.

The next step is to shed light on the relative contribution of differences in the correlates of RESP participation on the participation gap between high- and low-income families. To this end, two types of decompositions were carried out.

The first decomposition, proposed by Gelbach (2016), uses coefficients from two models: the first includes only indicators for income quartile, and the second includes the full set of covariates. The method apportions the difference between the estimated coefficients on the top income quartile in the two models to the different groups of covariates (the "explained" portion of the overall gap). One advantage of this approach is that it allows the coefficients on all control variables to be estimated based on the sample of all four income quartiles, making the most of a relatively small sample.

The second (and more commonly used) approach is the Oaxaca–Blinder decomposition. This method also decomposes the RESP participation gap between high- and low-income families into an "explained" part, stemming from composition differences between two groups in observable characteristics, and the residual "unexplained" part. It uses data only on the two groups of direct interest—i.e., high- and low-income parents. Differences in characteristics are weighted by coefficients from a pooled model (including the high- and low-income families).

6. While the rare case of perfect collinearity between independent variables renders coefficient estimation impossible in a regression model, multicollinearity may not be a serious problem. Although multicollinearity between independent variables does not bias regression coefficients, it may lead to imprecisely estimated coefficients. In other words, the standard errors of the estimates may be large. To detect the presence of multicollinearity, one could examine the full correlation matrix with correlation coefficients for each pair of independent variables in the model—correlation coefficients of 0.8 or higher are generally considered high (Kennedy 2008). However, this would only address the bivariate relationships between the variables and would not necessarily identify strong linear relationships between three or more variables. Hypothetically, the correlation between literacy and wealth could be driven by a third factor, such as education, that determines—at least to some degree—both the levels of literacy and wealth. To address this, the variance inflation factor (VIF) test was conducted, which is the standard test to detect multicollinearity (see, for example, Kennedy [2008] and James et al. [2017]). In this test, each independent variable is regressed on all other independent variables, the coefficient of determination (R^2) is recovered and the VIF for each variable is calculated as $VIF = 1 / \left(1 - R^2\right)$. A higher R^2 indicates more collinearity between the variable and all other independent variables, and, consequently, a higher VIF value. In practice, a VIF value of 10 or higher indicates a multicollinearity problem, although some researchers have set the threshold at 5. Note that a VIF value of 5 indicates that the standard error of the associated regression coefficient is $\sqrt{5} = 2.24$ times higher than it would be if there were no multicollinearity. A VIF test was conducted for all models in this study. In each case, all values were well below 5.

Note that in both approaches, the difference between the overall gap and the explained portion relates to the unexplained portion of the gap. The unexplained portion stems from differences in unobserved factors and differences in returns to characteristics, both observed and unobserved, between the two groups being compared.

3 Data and sample selection

3.1 Variable definitions

The LISA measures of literacy and numeracy come from the 2012 PIAAC. Both literacy and numeracy were measured using an objective assessment on a scale of 0 to 500.[7] Literacy and numeracy scores were further divided into six proficiency levels: levels 1 to 5, with 5 being the highest level, and below level 1. These levels define a set of tasks that an individual would be able to successfully complete with some probability.[8]

Literacy and numeracy are very strongly correlated, with a Pearson's correlation of 0.88. As such, it is impossible to estimate any independent effects the two may have on RESP participation. While the discussion of results will focus on literacy, the main results were also reproduced using the numeracy score.

Financial literacy was assessed on the CFCS using 14 multiple choice questions that tested respondents' knowledge and understanding of concepts such as interest rates and inflation, and how these affect savings, as well as knowledge of financial products such as corporate bonds, mutual funds, mortgages and savings accounts.[9] One of the 14 questions pertains to financial behaviour more than knowledge. The CFCS and its financial literacy assessment predate work done in this area at the Organisation for Economic Co-operation and Development (OECD). In a recent report, financial literacy was defined as "a complex phenomenon, made up of a combination of knowledge, attitudes and behaviours" (OECD 2016*a*, 52). For a total maximum financial literacy score of 21 points, the financial literacy assessment developed by the OECD consists of three sets of questions: seven about financial knowledge, nine about financial behaviour and five about financial attitudes. Note that the financial behaviour component has the biggest impact on the total score—the report's authors note that "[t]his reflects the general understanding that financial well-being results primarily from positive behaviours" (OECD 2016*a*, 52). In interpreting the results of the current study, it is important to consider that the CFCS assessment consists primarily of financial knowledge.

In this study, the results of the CFCS assessment are used in two ways: (1) as a financial literacy score, or the total number of questions answered correctly, on a scale from 0 to 14; and (2) as a series of 14 indicator variables, each taking the value 1 if the corresponding assessment question

7. Rather than provide a single estimate of a respondent's literacy and numeracy, PIAAC includes 10 plausible values for each. Since Stata routines for the Oaxaca–Blinder and Gelbach decompositions used in this study do not incorporate the use of plausible values, the analysis in this study reports results using the first plausible value of literacy and numeracy, following Pellizzari and Fichen (2017). This generates valid point estimates but not variance estimates. However, key regression analysis was replicated using all 10 plausible values and the results were qualitatively unchanged.
8. For more detail on the tasks that individuals are expected to successfully complete at each level, see OECD (2016b).
9. The objective assessment is available online (Statistics Canada 2016).

was answered correctly, and 0 otherwise.[10] The second approach allows for the possibility that not all questions on the CFCS are equally strong predictors of RESP savings, and two people with the same total score could have answered a different combination of questions correctly. For example, understanding the principle of compound interest may be more important in this context than knowing what a corporate bond is.

In this analysis, families were ranked by total parental income, before taxes, and adjusted for household size (i.e., divided by the square root of the household size).[11] In LISA, individual income was drawn from tax records, rather than survey responses. About 12% of individual income observations were imputed because a match to a tax record could not be made. In the CFCS, respondents were asked about their individual and household income, which resulted in income needing to be imputed for about half of the sample. Instead, this study uses a record linkage between the 2014 CFCS and the 2013 T1 Family File (T1FF) to obtain a more accurate measure of income. The T1FF also identifies the spouses of CFCS respondents, allowing for the income of both parents (when present) to be calculated, as in LISA. About 10% of CFCS respondents could not be linked to the T1FF. For those observations, household income reported on (or imputed in) the CFCS was used instead.

In both the LISA and CFCS samples, education is measured with indicator variables for the highest completed level of education of the parent answering questions about the children in the household: less than high school, high school, non-university postsecondary, bachelor's degree, and certificates and degrees above the bachelor's degree level.

Wealth was measured similarly in both surveys. In each case, respondents were asked to indicate which types of assets the family possessed among five broad asset categories: tangible assets, such as a house, vehicles or jewellery; Registered Retirement Savings Plans (RRSPs); RESPs; other financial assets, such as cash savings, investments or non-RRSP pension plans; and business assets, such as business property or patents. They were also asked what types of debts and liabilities they had, if any. Once the respondents indicated that they had a particular type of asset or debt, they were asked about the total value of that asset or debt. Roughly half of the respondents in the CFCS sample did not provide a value for some component of assets or debts. As a result, their net worth as a single number could not be calculated. Given the high proportion of observations with missing data and the relatively small overall sample size, wealth was captured in regression models through a series of indicator variables. These were used for ranges of value for each of the four asset categories used (all except RESPs) and for debts, with a separate indicator for respondents with missing data on a particular asset or debt. This allowed for all available information on any assets or debts to be used in the analysis. This approach may also account for common characteristics shared by respondents who did not provide precise information on the value of assets or debts.[12]

10. In both approaches, responses coded on the survey as "I don't know," "refused" and "not stated" were considered incorrect answers and coded as zero. Given that this was an assessment, any response other than a correct response can be seen as reflecting a lack of financial literacy knowledge or lack of confidence in that knowledge. As a robustness check, results were also estimated after removing individuals from the sample with a response coded as "refused" or "not stated" on at least 1 of the 14 questions in the survey data. This did not yield any material change in the results.
11. Dividing by the square root of the household size produces an "equivalent" income. The thresholds that separate income quartiles in contemporaneous dollars are as follows: in LISA, the thresholds are $29,410, $48,250 and $69,800; in the CFCS, they are $26,100, $42,280 and $64,910. Therefore, in LISA, a family of four with parental income below $58,820 ($= \$29{,}410 * \sqrt{4}$) would be in the bottom income quartile, while a family of four with parental income above $139,600 ($= \$69{,}800 * \sqrt{4}$) would be in the top income quartile.
12. Regression analysis using the LISA data includes an additional control variable for observations where some assets may have been double reported.

The set of sociodemographic characteristics used in the analysis for the parent who answered questions about a child included age, sex, marital status (married; common-law relationship; separated, divorced or widowed; and single), immigrant status and province of residence. Finally, regressions included comparable controls for the number and age of children in both LISA and the CFCS: number of children in the household younger than 12 years, aged 12 to 14 years and aged 15 to 17 years.

4 Sample selection

The CFCS sample consists of respondents who said they were financially responsible for a child or children younger than 18, have a child or children living in the household, gave a valid (yes or no) response to the question on whether they are saving or have saved for a child's postsecondary education, and were able to articulate what kinds of accounts they were saving in, if any. A very small number of respondents with missing information on marital status, immigrant status and education were excluded from the sample. Ideally, one would want to measure the impact of a person's financial literacy on the probability that they decided to open an RESP account for a child. When financial literacy information is available for only one parent (as in the CFCS), but the other parent (or someone else altogether) makes financial decisions for the household, this asymmetry in information introduces measurement error in the financial literacy variable. Random measurement error in an independent variable can lead to the estimated correlation between that variable and the outcome variable (RESP savings) to be biased toward zero (attenuation bias). Because of this concern, the sample was further restricted to the respondents who said they were mostly responsible for the financial planning in their family, and those who stated that they shared that responsibility with their spouse. The sensitivity of the results to the latter restriction was tested and is described in the results section. The final sample size for the CFCS data is 1,183 observations.

The LISA sample consists of respondents with a child or children younger than 18 in the household, who have a literacy and numeracy score,[13] who gave a valid answer to questions about whether or not they are saving for a child's postsecondary education and how they are saving, and who answered questions about the family's net worth (as a proxy for being the person who makes financial decisions in the household).[14] Observations with missing information on education and immigrant status were dropped from the sample. The final sample size for the LISA data is 827 observations.

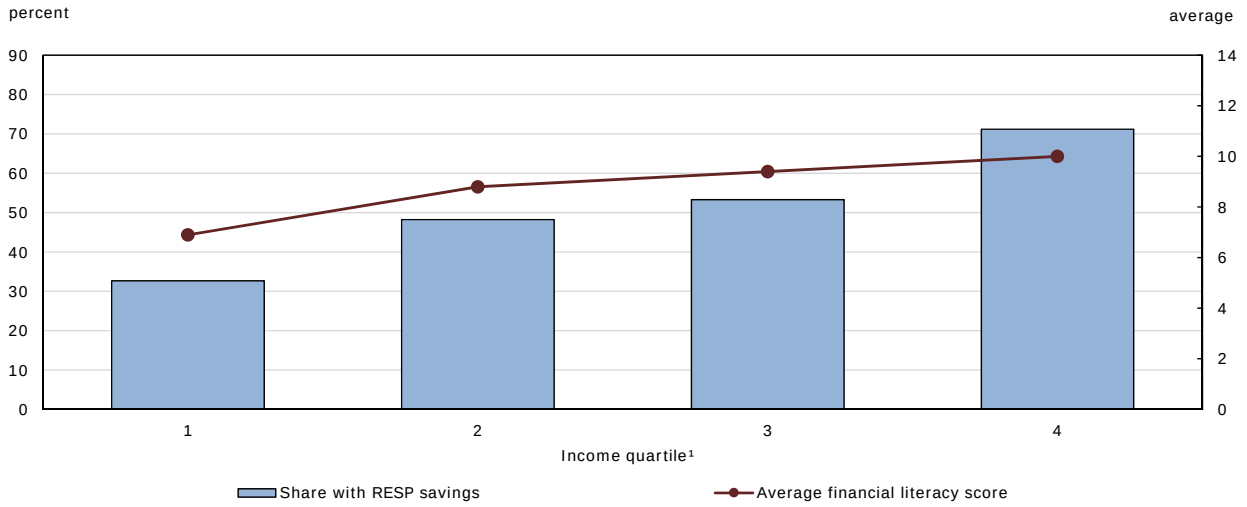
5 Descriptive statistics

According to the 2014 CFCS, nearly 52% of households were saving for their children's postsecondary education in an RESP account (Chart 1). This share was 32.7% among households in the bottom income quartile and 71.2% among households in the top income quartile. Financial literacy scores (or the number of correct answers given on a 14-question assessment) also rose with income, from an average of 6.9 correct answers in the bottom quartile to 10.0 in the top quartile. Assuming that correctly answering at least 70% of the questions (or 10 out of 14) is the target score for financial knowledge (as suggested by the OECD [2016*a*] for the

13. Literacy and numeracy scores are available for a subsample of households in LISA, and for only one person in the household aged 16 to 65.
14. Unlike the CFCS, multiple members of a household are or can be interviewed for LISA. While respondents are not explicitly asked about who is mainly responsible for financial planning in the household (as with the CFCS), it can be observed whether the same or a different household member answered questions about the child or children and about the net worth of the family. It can therefore be inferred that the person answering questions about net worth (i.e., the person most knowledgeable about the family's net worth) is most likely to be making financial decisions in the family (or at least sharing the role).

financial knowledge component of its financial literacy measure), then about 27% of respondents in the bottom income quartile achieved this target, compared with about 68% of respondents in the top income quartile—about 2.5 times more.

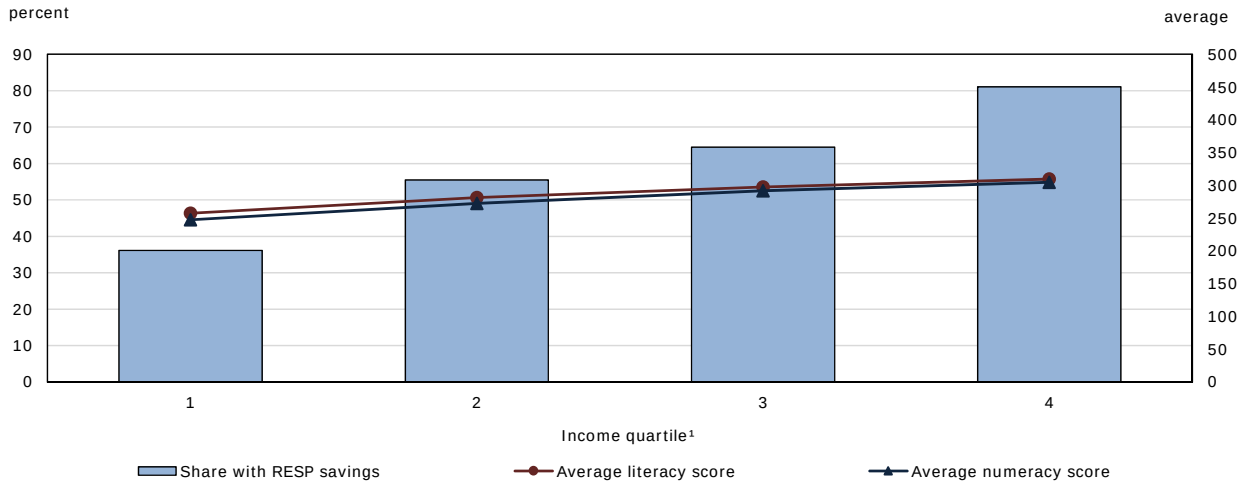
Chart 1
Share of households with children under the age of 18 who have RESP savings for the children's postsecondary education, and average financial literacy scores, by parental income quartile



1. Quartile of equivalent total before-tax parental income.
Note: RESP: Registered Education Savings Plan.
Source: Statistics Canada, Canadian Financial Capability Survey, 2014.

In the 2016 LISA, nearly 58% of families were saving for their children's education in an RESP account (Chart 2). This proportion was 36.1% among families in the bottom quartile and 81.1% among families in the top quartile. Literacy and numeracy also rose with income. On the 0-to-500 scale, the difference in average scores between the top and bottom income quartiles was 52.5 points for literacy and 57.2 points for numeracy—just over one standard deviation. The average literacy score (257) and numeracy score (248) in the bottom income quartile roughly correspond with the mid-point of proficiency level 2 (226 to 275 points), while the average literacy score (310) and numeracy score (305) in the top income quartile falls roughly in the middle of proficiency level 3 (276 to 325 points).

Chart 2
Share of households with children under the age of 18 who have RESP savings for the children's postsecondary education, and average literacy and numeracy scores, by parental income quartile



1. Quartile of equivalent total before-tax parental income.
Note: RESP: Registered Education Savings Plan.
Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

Tables 1 and 2 show descriptive statistics for the full set of variables used in the analysis for CFCS and LISA data, respectively. In addition to the important differences in financial literacy and literacy or numeracy across income quartiles shown in Charts 1 and 2, respondents in the top income quartile were more likely than those in the bottom income quartile to

- have a postsecondary qualification
- be married
- be Canadian-born
- live in Alberta or British Columbia
- be wealthy.

The overall CFCS and LISA samples differ in that respondents in the LISA sample are more likely to have an educational credential above a bachelor's degree, less likely to be married and more likely to give a valid answer to questions about assets and debts. Immigrants are also more evenly distributed across the income distribution in LISA than in the CFCS. Controlling for all of these characteristics in regression analysis facilitates the comparison of results across the two samples.

Table 1
Respondent characteristics, by income quartile, Canadian Financial Capability Survey

	First quartile	Second quartile	Third quartile	Fourth quartile	Total
			number		
Average financial literacy score (out of 14)	6.9	8.8	9.4	10.0	8.8
			percent		
With Registered Education Savings Plan savings	32.7	48.2	53.3	71.2	51.8
Female	64.0	48.6	51.7	39.1	50.6
Highest level of completed education					
Less than high school	19.6	9.0	3.9	0.6	8.1
High school	30.3	24.9	21.6	10.2	21.5
Non-university postsecondary	28.3	42.3	40.9	32.7	36.1
Bachelor's degree	13.1	20.9	24.1	33.5	23.1
Above a bachelor's degree	8.7	2.8	9.4	23.1	11.2
Marital status					
Married	50.4	69.9	78.4	80.4	70.1
Common-law	17.7	16.4	12.5	13.4	15.0
Separated, divorced or widowed	15.1	5.7	7.2	5.1	8.2
Single, never married	16.8	8.1	1.9	1.2	6.8
Immigrant	38.4	27.6	18.3	14.4	24.4
Province of residence					
Newfoundland and Labrador	1.1	1.3	0.7	1.5	1.2
Prince Edward Island	0.3	0.3	0.5	0.2	0.3
Nova Scotia	2.8	2.3	2.7	1.8	2.4
New Brunswick	1.3	2.1	3.1	1.3	1.9
Quebec	24.0	19.4	18.9	19.6	20.4
Ontario	42.3	41.4	41.4	37.5	40.6
Manitoba	3.7	3.4	3.3	3.9	3.6
Saskatchewan	3.1	2.9	3.8	3.8	3.4
Alberta	8.9	13.9	11.2	17.9	13.0
British Columbia	12.5	13.1	14.5	12.6	13.2
			average		
Number of children aged 15 to 17 in the household	0.3	0.2	0.3	0.4	0.3
Number of children aged 12 to 14 in the household	0.3	0.3	0.2	0.3	0.3
Number of children younger than 12 in the household	1.4	1.3	1.2	1.1	1.3

Note: Percentages may not add up to 100.0% because of rounding.
Source: Statistics Canada, Canadian Financial Capability Survey, 2014.

Table 1
Respondent characteristics, by income quartile, Canadian Financial Capability Survey (continued)

	First quartile	Second quartile	Third quartile	Fourth quartile	Total
			percent		
Household net worth					
Tangible assets					
$0 to less than $100,000	60.5	29.1	16.4	4.0	26.9
$100,000 to less than $300,000	14.4	23.2	20.8	6.1	16.0
$300,000 to less than $500,000	8.2	17.7	32.9	20.5	20.0
$500,000 or more	8.5	14.7	21.4	54.6	25.3
Missing value	8.4	15.3	8.5	14.7	11.8
Registered Retirement Savings Plan					
None	74.0	37.0	16.1	5.8	32.5
More than $0 to less than $25,000	7.6	27.3	26.4	10.6	18.0
$25,000 or more	5.6	17.4	38.8	66.1	32.6
Missing value	12.7	18.3	18.8	17.6	16.9
Financial assets					
None	53.8	35.0	23.0	9.3	29.8
More than $0 to less than $10,000	12.6	21.2	17.2	4.5	13.8
$10,000 to less than $30,000	9.5	7.7	18.1	13.0	12.1
$30,000 or more	5.1	16.3	23.0	45.6	23.0
Missing value	18.9	19.8	18.7	27.5	21.3
Business assets					
None	86.6	87.3	84.8	81.3	85.0
Business assets of any posititve value	3.4	9.9	12.7	14.0	10.1
Missing value	10.0	2.8	2.5	4.7	4.9
Debts and liabilities					
None	18.5	8.9	5.4	8.4	10.2
More than $0 to less than $50,000	45.5	31.8	27.2	18.1	30.4
$50,000 to less than $150,000	14.9	15.8	21.6	15.6	17.0
$150,000 to less than $250,000	5.3	21.8	19.7	17.9	16.3
$250,000 or more	5.8	11.5	16.0	27.5	15.4
Missing value	10.0	10.1	9.9	12.6	10.7

Note: Percentages may not add up to 100.0% because of rounding.
Source: Statistics Canada, Canadian Financial Capability Survey, 2014.

Table 2
Respondent characteristics, by income quartile, Longitudinal and International Study of Adults

	First quartile	Second quartile	Third quartile	Fourth quartile	Total
			number		
Average literacy score (out of 500)	257	281	298	310	285
Average numeracy score (out of 500)	248	272	292	305	277
			percent		
With Registered Education Savings Plan	36.1	55.5	64.5	81.1	57.8
Female	73.5	75.8	63.9	65.7	70.0
Highest level of completed education					
Less than high school	9.3	2.9	1.6	0.2	3.8
High school	35.1	16.7	9.0	5.3	17.5
Non-university postsecondary	35.8	51.7	38.4	22.4	37.6
Bachelor's degree	13.6	14.5	30.6	33.9	22.4
Above a bachelor's degree	6.1	14.3	20.4	38.2	18.6
Marital status					
Married	27.5	49.8	61.8	75.8	52.1
Common-law	7.8	15.0	20.6	16.1	14.6
Separated, divorced or widowed	34.5	20.8	12.2	6.9	19.5
Single, never married	30.1	14.4	5.3	1.1	13.7
Immigrant	29.9	22.8	22.8	17.8	23.8
Province of residence					
Newfoundland and Labrador	0.7	0.8	1.2	1.5	1.0
Prince Edward Island	0.2	0.2	0.4	0.4	0.3
Nova Scotia	3.7	3.1	3.2	2.4	3.1
New Brunswick	3.5	3.2	2.3	2.6	2.9
Quebec	22.8	26.7	24.0	23.7	24.3
Ontario	47.1	44.6	29.3	34.5	39.3
Manitoba	3.6	3.0	4.9	4.2	3.9
Saskatchewan	1.5	2.7	4.0	4.9	3.2
Alberta	8.5	7.9	17.6	13.1	11.6
British Columbia	8.3	7.7	13.2	12.7	10.3
			average		
Number of children aged 15 to 17 in the household	0.4	0.3	0.4	0.3	0.3
Number of children aged 12 to 14 in the household	0.4	0.3	0.3	0.3	0.3
Number of children younger than 12 in the household	1.1	1.3	1.1	1.1	1.2

Note: Percentages may not add up to 100.0% because of rounding.

Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

Table 2
Respondent characteristics, by income quartile, Longitudinal and International Study of Adults (continued)

	First quartile	Second quartile	Third quartile	Fourth quartile	Total
			percent		
Household net worth					
Tangible assets					
$0 to less than $100,000	59.6	35.8	15.9	11.9	32.4
$100,000 to less than $300,000	15.3	24.8	18.9	12.6	18.0
$300,000 to less than $500,000	13.6	19.4	29.5	22.3	20.9
$500,000 or more	10.3	15.4	29.8	50.6	25.1
Missing value	1.3	4.6	5.9	2.6	3.5
Registered Retirement Savings Plan					
None	60.1	42.3	22.1	9.8	35.3
More than $0 to less than $25,000	24.6	32.3	26.9	13.6	24.8
$25,000 or more	6.9	21.0	44.8	70.7	33.6
Missing value	8.5	4.3	6.3	5.9	6.3
Financial assets					
None	53.3	31.3	22.7	16.1	32.1
More than $0 to less than $10,000	25.8	35.7	26.6	11.0	25.3
$10,000 to less than $30,000	8.1	13.2	18.0	19.7	14.4
$30,000 or more	6.2	13.9	22.0	46.2	20.7
Missing value	6.6	5.9	10.8	6.9	7.5
Business assets					
None	91.3	84.8	86.4	80.6	86.1
Business assets of any positive value	7.7	13.0	9.8	16.9	11.6
Missing value	1.0	2.1	3.8	2.5	2.3
Debts and liabilities					
None	17.4	11.9	4.7	9.7	11.2
More than $0 to less than $50,000	41.1	30.9	10.9	12.3	24.8
$50,000 to less than $150,000	11.3	11.9	20.5	16.3	14.8
$150,000 to less than $250,000	14.3	16.5	22.3	16.2	17.3
$250,000 or more	11.4	22.0	32.6	38.8	25.3
Missing value	4.5	6.8	9.0	6.7	6.7

Note: Percentages may not add up to 100.0% because of rounding.
Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

6 Regression and decomposition results

There was a 38.5 percentage point gap in RESP participation observed between the top and bottom income quartiles in the 2014 CFCS data (Table 3, Model 1). After conditioning on the four sets of covariates shown in Equation (1), the gap was reduced to 9.5 percentage points (Model 2) and was no longer statistically significant. The estimated coefficient on the financial literacy score is statistically significant at the 10% level. This suggests that, conditional on education, wealth and demographic characteristics, one extra question answered correctly is associated with a 1.5 percentage point increase in the probability of saving in an RESP account.

Table 3
Marginal effects from linear probability models of Registered Education Savings Plan participation, Canadian Financial Capability Survey

	Model 1		Model 2		Model 3	
	coefficient	bootstrap standard error	coefficient	bootstrap standard error	coefficient	bootstrap standard error
Income quartile (reference group: first (bottom))						
Second	0.155 *	0.07	0.034	0.07	0.024	0.07
Third	0.206 **	0.07	0.000	0.08	-0.011	0.08
Fourth (top)	0.385 ***	0.07	0.095	0.09	0.061	0.09
Financial literacy, correct answer to question						
1	...	...	...	...	0.066	0.05
2	...	...	...	...	0.033	0.05
3	...	...	...	...	-0.012	0.05
4	...	...	...	...	-0.068	0.05
5	...	...	...	...	0.036	0.06
6	...	...	...	...	0.042	0.06
7	...	...	...	...	0.079	0.05
8	...	...	...	...	-0.022	0.05
9	...	...	...	...	-0.090 *	0.05
10	...	...	...	...	0.031	0.05
11	...	...	...	...	0.009	0.06
12	...	...	...	...	-0.022	0.12
13	...	...	...	...	-0.013	0.05
14	...	...	...	...	0.135	0.10
Financial literacy score	...	...	0.015 †	0.01	...	...
Education level (reference group: high school)						
Less than high school	...	...	-0.102	0.10	-0.080	0.10
Non-university postsecondary	...	...	0.078	0.06	0.087	0.06
Bachelor's degree	...	...	0.049	0.07	0.026	0.07
Above a bachelor's degree	...	...	0.035	0.09	0.036	0.09
Female	...	...	0.026	0.05	0.024	0.05
Age	...	...	-0.002	0.00	-0.002	0.00
Marital status (reference group: married)						
Common-law	...	...	-0.098	0.07	-0.140 *	0.07
Separated, divorced or widowed	...	...	0.026	0.06	0.017	0.07
Single, never married	...	...	-0.100	0.08	-0.119	0.08
Immigrant	...	...	0.146 *	0.07	0.141 *	0.06
Number of children aged 15 to 17 in the household	...	...	-0.073 †	0.04	-0.076 †	0.04
Number of children aged 12 to 14 in the household	...	...	0.018	0.04	0.014	0.04
Number of children younger than 12 in the household	...	...	0.053 †	0.03	0.054 †	0.03

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Notes: The sample size for Models 1, 2 and 3 is 1,183. R-squared is 0.0786 for Model 1, 0.271 for Model 2 and 0.294 for Model 3.

Source: Statistics Canada, Canadian Financial Capability Survey, 2014.

Table 3
Marginal effects from linear probability models of Registered Education Savings Plan participation, Canadian Financial Capability Survey (continued)

	Model 1		Model 2		Model 3	
	coefficient	bootstrap standard error	coefficient	bootstrap standard error	coefficient	bootstrap standard error
Province of residence (reference group: Ontario)						
Newfoundland and Labrador	...	...	0.025	0.08	0.030	0.09
Prince Edward Island	...	...	-0.022	0.09	-0.008	0.10
Nova Scotia	...	...	-0.146 *	0.06	-0.135 *	0.07
New Brunswick	...	...	-0.052	0.08	-0.043	0.08
Quebec	...	...	-0.087	0.07	-0.066	0.07
Manitoba	...	...	-0.080	0.07	-0.077	0.07
Saskatchewan	...	...	0.052	0.06	0.065	0.06
Alberta	...	...	-0.149 †	0.09	-0.136	0.09
British Columbia	...	...	-0.101	0.07	-0.106	0.07
Tangible assets (reference group: $0 to less than $100,000)						
$100,000 to less than $300,000	...	...	0.035	0.08	0.044	0.08
$300,000 to less than $500,000	...	...	0.101	0.09	0.121	0.10
$500,000 or more	...	...	0.067	0.09	0.095	0.09
Missing value	...	...	0.041	0.09	0.069	0.09
Registered Retirement Savings Plan (reference group: none)						
More than $0 to less than $25,000	...	...	0.097	0.07	0.079	0.07
$25,000 or more	...	...	0.318 ***	0.07	0.317 ***	0.07
Missing value	...	...	0.045	0.08	0.038	0.08
Financial assets (reference group: none)						
More than $0 to less than $10,000	...	...	0.089	0.07	0.098	0.07
$10,000 to less than $30,000	...	...	-0.014	0.08	-0.009	0.08
$30,000 or more	...	...	0.014	0.07	0.005	0.07
Missing value	...	...	0.248 ***	0.07	0.244 **	0.08
Business assets (reference group: none)						
Business assets of any positive value	...	...	0.164 **	0.06	0.156 **	0.06
Missing value	...	...	0.004	0.12	-0.006	0.13
Debts and liabilities (reference group: none)						
More than $0 to less than $50,000	...	...	-0.099	0.08	-0.081	0.07
$50,000 to less than $150,000	...	...	-0.061	0.09	-0.051	0.09
$150,000 to less than $250,000	...	...	-0.126	0.09	-0.123	0.09
$250,000 or more	...	...	-0.080	0.09	-0.068	0.08
Missing value	...	...	-0.114	0.11	-0.107	0.11
Constant	0.327 ***	0.05	0.202	0.20	0.171	0.20

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Notes: The sample size for Models 1, 2 and 3 is 1,183. R-squared is 0.0786 for Model 1, 0.271 for Model 2 and 0.294 for Model 3.

Source: Statistics Canada, Canadian Financial Capability Survey, 2014.

Model 3 includes a different specification for financial literacy: 14 indicator variables take the value 1 if the corresponding question on the objective financial literacy assessment in CFCS was answered correctly, and 0 otherwise. Together, the set of 14 indicator variables is not statistically significant. When specified this way, financial literacy accounts for a bigger share of the gap in RESP participation than in Model 2, with a 6.1 percentage point gap remaining between high- and low-income families.

There does not appear to be an education gradient in RESP participation, conditional on all other factors included in the model. Immigrants are more likely to open RESP accounts than their Canadian-born peers by about 14 percentage points. Parents with older children are less likely to open an account, while parents with young children are more likely to do so. Finally, some types and quantities of assets are positively associated with RESP participation. Parents with RRSP holdings of at least $25,000 are much more likely have RESP accounts for their children. It seems unlikely that individuals would transfer money from an RRSP account into an RESP account given the tax implications. The positive correlation may reflect, for example, a tendency for financial advisers to advertise a variety of products to clients or for individuals with a tendency to financially plan for the future to be more likely to do so both for themselves and for their children. In fact, there is evidence of a complementarity between education and retirement savings programs in both Canada and the United States—Messacar and Frenette (2019) showed that among positive education and retirement savers, education savings (through RESPs) crowd in retirement savings (RRSPs). Similarly, Gelber (2011) showed that in the United States, eligibility for 401(k)—a form of education savings account—crowds in individual retirement account use.

Even though the estimated coefficients on financial literacy are not highly statistically significant, the Gelbach decomposition suggests that differences in financial literacy proficiency between high- and low-income parents account for 7.2 percentage points out of the 38.5 percentage point gap in RESP participation—or 18.7%—which is statistically significant at 1% (Table 4).[15] Financial literacy is not very strongly associated with opening an RESP account. That is, it is not highly statistically significant in regressions, and the estimated coefficients on financial literacy suggest only a small increase in the probability of having an RESP per one unit increase in financial literacy. However, the level of financial literacy is so much lower among parents in the bottom income quartile than among those in the top that overall financial literacy differences account for a non-negligible share of the gap in RESP participation across the income distribution. In the Oaxaca–Blinder decomposition, financial literacy explains a slightly smaller portion of the overall gap (13.0%). In both decompositions, differences in financial literacy account for a larger share of the gap than differences in education. However, in both cases, wealth is the main explanatory factor and accounts for over 70% of the gap.[16]

15. Unlike the regression and Oaxaca–Blinder estimates, the standard errors in the Gelbach decomposition were not calculated using the bootstrap weights provided in both datasets since the available Stata routine does not allow for the use of bootstrap weights. However, both regression and Oaxaca–Blinder significance results were unchanged when re-estimated without replicate weights.
16. This is higher than the percentage of the gap between the first and fifth income quintiles (42.6%) accounted for by wealth in the 2012 Survey of Financial Security (Frenette 2017b). Several reasons may contribute to this difference, including differences in the RESP question on each survey, the income measure available, the measurement of wealth, the model specifications and the data sample.

Table 4
Decomposition results accounting for the gap in Registered Education Savings Plan participation between high- and low-income parents, Canadian Financial Capability Survey

	Main sample		Canadian-born sample	
	percentage points	percent of overall gap	percentage points	percent of overall gap
Gelbach decomposition				
Overall gap	0.385	…	0.459	…
Explained gap	0.324	84.2	0.365	94.7
Share of income gap in RESP participation accounted for by				
Demographics	-0.053	-13.8	0.003	0.8
Net worth	0.276 ***	71.7	0.301 ***	78.2
Education	0.029	7.5	0.051 †	13.2
Financial literacy	0.072 **	18.7	0.046 †	11.9
Oaxaca–Blinder decomposition				
Overall gap	0.385	…	0.459	…
Explained gap	0.279	72.5	0.360	93.5
Share of income gap in RESP participation accounted for by				
Demographics	-0.090 †	-23.4	-0.024	-6.2
Net worth	0.304 ***	79.0	0.320 ***	83.1
Education	0.016	4.2	0.034	8.8
Financial literacy	0.050	13.0	0.030	7.8

… not applicable

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Notes: The number of observations for the main sample is 587. The number of observations for the Canadian-born sample is 496. RESP: Registered Education Savings Plan. Decompositions are based on models that represented financial literacy as a series of indicator variables for whether or not each question on the assessment had been answered correctly.

Source: Statistics Canada, Canadian Financial Capability Survey, 2014.

In the 2016 LISA, a 45.1 percentage point gap in RESP participation separated high- and low-income families (Table 5). Neither the literacy (Model 2) nor the numeracy (Model 3) score was statistically significant. The magnitude of the estimated coefficients was also quite small—a 100 point increase in the literacy score was associated with a 4.9 percentage point increase in the probability of saving in an RESP account. Note that the difference in average literacy scores between high school dropouts and respondents with an education credential above a bachelor's degree was fewer than 100 points.

Table 5
Marginal effects from linear probability models of Registered Education Savings Plan participation, Longitudinal and International Study of Adults

	Model 1		Model 2		Model 3	
	coefficient	bootstrap standard error	coefficient	bootstrap standard error	coefficient	bootstrap standard error
Income quartile (reference group: first (bottom))						
Second	0.194 **	0.07	0.066	0.06	0.066	0.06
Third	0.284 ***	0.06	0.060	0.07	0.061	0.07
Fourth (top)	0.451 ***	0.06	0.120 †	0.07	0.120 †	0.07
Literacy score (divided by 100)	…	…	0.049	0.05	…	…
Numeracy score (divided by 100)	…	…	…	…	0.035	0.04
Education level (reference group: high school)						
Less than high school	…	…	0.072	0.13	0.073	0.13
Non-university postsecondary	…	…	0.100 †	0.06	0.105 †	0.06
Bachelor's degree	…	…	0.127 †	0.07	0.133 †	0.07
Above a bachelor's degree	…	…	0.140 †	0.08	0.148 *	0.07
Female	…	…	0.116 **	0.04	0.119 **	0.04
Age	…	…	0.007 *	0.00	0.006 *	0.00
Marital status (reference group: married)						
Common-law	…	…	-0.067	0.06	-0.065	0.06
Separated, divorced or widowed	…	…	0.046	0.06	0.045	0.06
Single, never married	…	…	-0.133 †	0.07	-0.131 †	0.07
Immigrant	…	…	0.033	0.06	0.029	0.06
Number of children aged 15 to 17 in the household	…	…	-0.078 *	0.04	-0.078 *	0.04
Number of children aged 12 to 14 in the household	…	…	0.052	0.04	0.053	0.04
Number of children younger than 12 in the household	…	…	0.048 *	0.02	0.048 *	0.02
Province of residence (reference group: Ontario)						
Newfoundland and Labrador	…	…	-0.167 †	0.09	-0.164 †	0.09
Prince Edward Island	…	…	-0.062	0.16	-0.063	0.16
Nova Scotia	…	…	0.002	0.08	0.008	0.08
New Brunswick	…	…	-0.147 *	0.07	-0.144 *	0.07
Quebec	…	…	-0.118 *	0.05	-0.118 *	0.05
Manitoba	…	…	-0.223 **	0.07	-0.221 **	0.07
Saskatchewan	…	…	-0.137 *	0.06	-0.139 *	0.06
Alberta	…	…	-0.049	0.06	-0.047	0.06
British Columbia	…	…	-0.051	0.07	-0.048	0.07

… not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Notes: The sample size for all models is 827. R-squared is 0.108 for Model 1, 0.309 for Model 2 and 0.309 for Model 3.

Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

Table 5
Marginal effects from linear probability models of Registered Education Savings plan participation, Longitudinal International Study of Adults (continued)

	Model 1		Model 2		Model 3	
	coefficient	bootstrap standard error	coefficient	bootstrap standard error	coefficient	bootstrap standard error
Tangible assets (reference group: $0 to less than $100,000)						
$100,000 to less than $300,000	…	…	0.022	0.06	0.022	0.06
$300,000 to less than $500,000	…	…	0.037	0.07	0.038	0.07
$500,000 or more	…	…	0.085	0.07	0.085	0.07
Missing value	…	…	-0.056	0.12	-0.057	0.12
Registered Retirement Savings Plan (reference group: none)						
More than $0 to less than $25,000	…	…	0.227 ***	0.06	0.229 ***	0.06
$25,000 or more	…	…	0.317 ***	0.06	0.321 ***	0.06
Missing value	…	…	0.239 *	0.10	0.238 *	0.09
Financial assets (reference group: none)						
More than $0 to less than $10,000	…	…	0.041	0.06	0.043	0.06
$10,000 to less than $30,000	…	…	0.166 **	0.06	0.167 **	0.06
$30,000 or more	…	…	0.050	0.06	0.050	0.06
Missing value	…	…	0.113	0.09	0.115	0.09
Business assets (reference group: none)						
Business assets of any positive value	…	…	-0.028	0.05	-0.026	0.05
Missing value	…	…	0.105	0.14	0.107	0.14
Debts and liabilities (reference group: none)						
More than $0 to less than $50,000	…	…	0.006	0.07	0.007	0.07
$50,000 to less than $150,000	…	…	0.021	0.08	0.023	0.08
$150,000 to less than $250,000	…	…	0.079	0.08	0.079	0.08
$250,000 or more	…	…	-0.004	0.08	-0.004	0.08
Missing value	…	…	0.027	0.12	0.025	0.12
Double-counting flag	…	…	0.043	0.13	0.041	0.13
Constant	0.361 ***	0.05	-0.323 †	0.19	-0.286	0.18

… not applicable
* significantly different from reference category ($p < 0.05$)
** significantly different from reference category ($p < 0.01$)
*** significantly different from reference category ($p < 0.001$)
† significantly different from reference category ($p < 0.10$)
Notes: The sample size for all models is 827. R-squared is 0.108 for Model 1, 0.309 for Model 2 and 0.309 for Model 3.
Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

After literacy, net worth and demographic characteristics were controlled for, a statistically significant education gradient remained in RESP participation. Parents with educational attainment above a bachelor's degree had a 14 percentage point higher probability of saving in an RESP than parents with only a high school diploma. Note also that the estimated coefficient on literacy became much smaller and was no longer statistically significant once education controls were added into the model (results not reported). Taken together, these two findings suggest that education contributes to a higher probability of saving in an RESP account through channels other than literacy. The same conclusion applies to numeracy.

As in the CFCS data, there is a positive correlation between RESP participation and having RRSP savings. There is also a positive correlation with having certain financial assets. A significant relationship between RESP participation and the age and number of children is similar to the relationship found in the CFCS data. Notably, the immigrant coefficient is small in magnitude and not statistically significant, unlike in the CFCS.

The above results are also reflected in the Gelbach decomposition, showing that differences in literacy account for about 5.5% of the overall gap in RESP participation. This is less than differences in education—but neither estimate is statistically significant (Table 6). Although the Oaxaca–Blinder decomposition suggests the opposite—a somewhat higher share of the gap is accounted for by differences in literacy rather than education—both estimates are rather small and not statistically significant.[17] Differences in net worth accounted for about half of the overall gap in RESP participation in LISA. Despite this being less than in the CFCS data, net worth is still the main explanatory factor. Similar results were observed when numeracy was included in the model instead of literacy (Table 7).

Table 6
Decomposition results accounting for the gap in RESP participation between high- and low-income parents, including literacy, Longitudinal and International Study of Adults

	Main sample		Canadian-born sample	
	percentage points	percent of overall gap	percentage points	percent of overall gap
Gelbach decomposition				
Overall gap	0.451	…	0.467	…
Explained gap	0.331	73.4	0.337	74.7
Share of income gap in RESP participation accounted for by				
Demographics	0.013	2.9	0.027	6.0
Net worth	0.242 ***	53.7	0.240 ***	53.2
Education	0.051	11.3	0.048	10.6
Literacy	0.025	5.5	0.022	4.9
Oaxaca–Blinder decomposition				
Overall gap	0.451	…	0.467	…
Explained gap	0.290	64.3	0.306	67.8
Share of income gap in RESP participation accounted for by				
Demographics	0.016	3.5	0.049	10.9
Net worth	0.227 **	50.3	0.226 **	50.1
Education	0.015	3.3	-0.004	-0.9
Literacy	0.031	6.9	0.035	7.8

… not applicable

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

Note: RESP: Registered Education Savings Plan.

Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

17. The small sample sizes create common support concerns (i.e., a lack of overlap between the key independent variables and their confounders). To address this issue, decomposition results (using both methods) where education was grouped into three categories (high school or less, non-university postsecondary and university degree) were estimated and yielded results virtually identical to those presented in the paper.

Table 7
Decomposition results accounting for the gap in RESP participation between high- and low-income parents, including numeracy, Longitudinal and International Study of Adults

	Main sample		Canadian-born sample	
	percentage points	percent of overall gap	percentage points	percent of overall gap
Gelbach decomposition				
Overall gap	0.451	…	0.467	…
Explained gap	0.330 ***	73.27	0.339 ***	72.59
Share of income gap in RESP participation accounted for by				
Demographics	0.013	2.82	0.026	5.57
Net worth	0.244 ***	54.14	0.243 ***	52.03
Education	0.054 †	11.89	0.050	10.71
Numeracy	0.020	4.42	0.020	4.28
Oaxaca–Blinder decomposition				
Overall gap	0.451	…	0.467	…
Explained gap	0.299	66.30	0.317	70.29
Share of income gap in RESP participation accounted for by				
Demographics	0.015	3.34	0.052	11.48
Net worth	0.225 ***	49.89	0.228 ***	50.51
Education	0.012	2.67	-0.002	-0.48
Numeracy	0.047	10.35	0.039	8.74

…not applicable

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Note: RESP: Registerd Education Savings Plan.

Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

7 Robustness checks

The models in Tables 3 and 5 were rerun excluding immigrants (Tables 8 and 9). Immigrants generally earn less than observationally equivalent Canadian-born workers (i.e., workers with similar observable characteristics, such as education level, marital status and age) but their children have high educational attainment (on average). Milligan (2005) found a higher RESP participation rate among immigrants than among Canadian-born individuals. The immigrant samples in the CFCS and LISA are too small to draw reliable inferences about RESP participation among immigrants, but their inclusion in the analysis sample could still affect the estimates.

Table 8
Marginal effects from linear probability models of Registered Education Savings Plan participation, Canadian-born sample, Canadian Financial Capability Survey

	Model 1		Model 2		Model 3	
	coefficient	bootstrap standard error	coefficient	bootstrap standard error	coefficient	bootstrap standard error
Income quartile (reference group: first (bottom))						
Second	0.163 *	0.07	0.000	0.08	-0.006	0.08
Third	0.316 ***	0.07	0.019	0.08	0.029	0.08
Fourth (top)	0.459 ***	0.07	0.058	0.09	0.087	0.09
Financial literacy, correct answer to question						
1	...	...	0.040	0.05	...	...
2	...	...	0.041	0.05	...	...
3	...	...	-0.036	0.05	...	...
4	...	...	0.020	0.05	...	...
5	...	...	0.007	0.06	...	...
6	...	...	0.073	0.06	...	...
7	...	...	0.053	0.05	...	...
8	...	...	-0.010	0.05	...	...
9	...	...	-0.096 *	0.05	...	...
10	...	...	0.037	0.04	...	...
11	...	...	0.044	0.06	...	...
12	...	...	-0.209 †	0.12	...	...
13	...	...	0.086	0.06	...	...
14	...	...	0.085	0.09	...	...
Financial literacy score	...	...	...	...	0.011	0.01
Education level (reference group: high school)						
Less than high school	...	...	-0.020	0.10	-0.044	0.11
Non-university postsecondary	...	...	0.086	0.06	0.077	0.06
Bachelor's degree	...	...	0.095	0.07	0.098	0.07
Above a bachelor's degree	...	...	0.103	0.09	0.085	0.09
Female	...	...	-0.045	0.05	-0.030	0.05
Age	...	...	-0.003	0.00	-0.004	0.00
Marital status (reference group: married)						
Common-law	...	...	-0.125 †	0.06	-0.109 †	0.06
Separated, divorced or widowed	...	...	0.052	0.07	0.048	0.06
Single, never married	...	...	-0.054	0.08	-0.050	0.08
Number of children aged 15 to 17 in the household	...	...	-0.101 *	0.05	-0.098 *	0.05
Number of children aged 12 to 14 in the household	...	...	0.003	0.04	0.012	0.04
Number of children younger than 12 in the household	...	...	0.056 †	0.03	0.051 †	0.03

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Notes: The sample size for Models 1, 2 and 3 is 1,012. R-squared is 0.112 for Model 1, 0.344 for Model 2 and 0.318 for Model 3.

Source: Statistics Canada, Canadian Financial Capability Survey, 2014.

Table 8
Marginal effects from linear probability models of Registered Education Savings Plan participation, Canadian-born sample, Canadian Financial Capability Survey (continued)

	Model 1		Model 2		Model 3	
	coefficient	bootstrap standard error	coefficient	bootstrap standard error	coefficient	bootstrap standard error
Province of residence (reference group: Ontario)						
Newfoundland and Labrador	...	...	0.021	0.08	0.029	0.08
Prince Edward Island	...	...	-0.043	0.09	-0.049	0.09
Nova Scotia	...	...	-0.153 *	0.07	-0.173 **	0.07
New Brunswick	...	...	-0.066	0.09	-0.077	0.08
Quebec	...	...	-0.126 †	0.07	-0.160 *	0.07
Manitoba	...	...	-0.055	0.08	-0.076	0.07
Saskatchewan	...	...	0.044	0.06	0.026	0.06
Alberta	...	...	-0.035	0.09	-0.057	0.09
British Columbia	...	...	-0.142 *	0.07	-0.150 *	0.07
Tangible assets (reference group: $0 to less than $100,000)						
$100,000 to less than $300,000	...	...	0.084	0.08	0.090	0.07
$300,000 to less than $500,000	...	...	0.152 †	0.09	0.168 *	0.08
$500,000 or more	...	...	0.104	0.09	0.100	0.09
Missing value	...	...	0.090	0.09	0.081	0.09
Registered Retirement Savings Plan (reference group: none)						
More than $0 to less than $25,000	...	...	0.204 **	0.08	0.217 **	0.08
$25,000 or more	...	...	0.373 ***	0.07	0.367 ***	0.07
Missing value	...	...	0.113	0.08	0.131	0.08
Financial assets (reference group: none)						
More than $0 to less than $10,000	...	...	0.074	0.07	0.083	0.07
$10,000 to less than $30,000	...	...	0.084	0.09	0.098	0.09
$30,000 or more	...	...	-0.015	0.07	-0.005	0.07
Missing value	...	...	0.171 *	0.07	0.187 *	0.07
Business assets (reference group: none)						
Business assets of any positive value	...	...	0.146 *	0.06	0.140 *	0.06
Missing value	...	...	-0.158	0.11	-0.130	0.12
Debts and liabilities (reference group: none)						
More than $0 to less than $50,000	...	...	-0.061	0.08	-0.078	0.08
$50,000 to less than $150,000	...	...	-0.072	0.10	-0.106	0.10
$150,000 to less than $250,000	...	...	-0.116	0.10	-0.137	0.10
$250,000 or more	...	...	-0.106	0.10	-0.123	0.10
Missing value	...	...	-0.054	0.12	-0.086	0.11
Constant	0.242 ***	0.05	0.239	0.21	0.265	0.22

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Notes: The sample size for Models 1, 2 and 3 is 1,012. R-squared is 0.112 for Model 1, 0.344 for Model 2 and 0.318 for Model 3.

Source: Statistics Canada, Canadian Financial Capability Survey, 2014.

Table 9
Marginal effects from linear probability models of Registered Education Savings Plan participation, Canadian-born sample, Longitudinal and International Study of Adults

	Model 1		Model 2		Model 3	
	coefficient	bootstrap standard error	coefficient	bootstrap standard error	coefficient	bootstrap standard error
Income quartile (reference group: first (bottom))						
Second	0.184 *	0.08	0.067	0.07	0.065	0.07
Third	0.259 ***	0.07	0.058	0.08	0.056	0.08
Fourth (top)	0.467 ***	0.06	0.131	0.08	0.128	0.08
Literacy score (divided by 100)	...	...	0.057	0.06	...	...
Numeracy score (divided by 100)	...	...	...	...	0.043	0.06
Education level (reference group: high school)						
Less than high school	...	...	0.072	0.15	0.075	0.15
Non-university postsecondary	...	...	0.072	0.06	0.076	0.06
Bachelor's degree	...	...	0.137 †	0.08	0.141 †	0.08
Above a bachelor's degree	...	...	0.109	0.09	0.116	0.09
Female	...	...	0.129 **	0.05	0.133 **	0.05
Age	...	...	0.007 †	0.00	0.006 †	0.00
Marital status (reference group: married)						
Common-law	...	...	-0.077	0.06	-0.077	0.06
Separated, divorced or widowed	...	...	-0.004	0.07	-0.006	0.07
Single, never married	...	...	-0.125	0.08	-0.124	0.08
Number of children aged 15 to 17 in the household	...	...	-0.065 †	0.04	-0.065 †	0.04
Number of children aged 12 to 14 in the household	...	...	0.041	0.05	0.040	0.05
Number of children younger than 12 in the household	...	...	0.040	0.03	0.040	0.03
Province of residence (reference group: Ontario)						
Newfoundland and Labrador	...	...	-0.216 *	0.10	-0.211 *	0.10
Prince Edward Island	...	...	-0.083	0.17	-0.083	0.17
Nova Scotia	...	...	-0.033	0.08	-0.026	0.08
New Brunswick	...	...	-0.170 *	0.08	-0.166 *	0.08
Quebec	...	...	-0.137 *	0.06	-0.137 *	0.06
Manitoba	...	...	-0.330 ***	0.08	-0.326 ***	0.08
Saskatchewan	...	...	-0.192 **	0.07	-0.195 **	0.07
Alberta	...	...	-0.167 *	0.07	-0.166 *	0.07
British Columbia	...	...	-0.120	0.09	-0.118	0.09

... not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Notes: The sample size for all models is 669. R-squared is 0.112 for Model 1, 0.329 for Model 2 and 0.328 for Model 3.

Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

Table 9
Marginal effects from linear probability models of Registered Education Savings Plan participation, Canadian-born sample, Longitudinal and International Study of Adults (continued)

	Model 1		Model 2		Model 3	
	coefficient	bootstrap standard error	coefficient	bootstrap standard error	coefficient	bootstrap standard error
Tangible assets (reference group: $0 to less than $100,000)						
$100,000 to less than $300,000	…	…	0.032	0.07	0.031	0.07
$300,000 to less than $500,000	…	…	0.032	0.07	0.032	0.07
$500,000 or more	…	…	0.081	0.08	0.082	0.08
Missing value	…	…	-0.112	0.13	-0.111	0.13
Registered Retirement Savings Plan (reference group: none)						
More than $0 to less than $25,000	…	…	0.234 ***	0.07	0.237 ***	0.07
$25,000 or more	…	…	0.325 ***	0.06	0.331 ***	0.06
Missing value	…	…	0.313 **	0.11	0.315 **	0.10
Financial assets (reference group: none)						
More than $0 to less than $10,000	…	…	-0.010	0.06	-0.007	0.06
$10,000 to less than $30,000	…	…	0.190 *	0.07	0.192 **	0.07
$30,000 or more	…	…	0.024	0.07	0.025	0.07
Missing value	…	…	0.022	0.10	0.021	0.10
Business assets (reference group: none)						
Business assets of any value	…	…	-0.013	0.06	-0.012	0.06
Missing value	…	…	0.352 **	0.12	0.356 **	0.12
Debts and liabilities (reference group: none)						
More than $0 to less than $50,000	…	…	0.042	0.08	0.043	0.08
$50,000 to less than $150,000	…	…	0.052	0.08	0.054	0.08
$150,000 to less than $250,000	…	…	0.086	0.09	0.088	0.09
$250,000 or more	…	…	0.014	0.09	0.014	0.09
Missing value	…	…	0.071	0.14	0.071	0.13
Double-counting flag	…	…	0.014	0.16	0.012	0.16
Constant	0.343 ***	0.06	-0.305	0.23	-0.264	0.23

… not applicable

* significantly different from reference category ($p < 0.05$)

** significantly different from reference category ($p < 0.01$)

*** significantly different from reference category ($p < 0.001$)

† significantly different from reference category ($p < 0.10$)

Notes: The sample size for all models is 669. R-squared is 0.112 for Model 1, 0.329 for Model 2 and 0.328 for Model 3.

Source: Statistics Canada, Longitudinal and International Study of Adults, 2016.

When immigrants were removed from the CFCS sample (Table 8), the gap in RESP take-up between the bottom and top income quartiles increased from 38.5 percentage points to 45.9 percentage points. This is because more immigrants were present in the bottom income quartile, and immigrants in the bottom quartile had higher rates of RESP take-up than their Canadian-born counterparts. Both decomposition methods showed a somewhat larger share of the RESP gap now being accounted for by differences in education, and a smaller share being accounted for by differences in financial literacy (Table 4). Immigrants were more evenly distributed across the income distribution in the LISA sample than in the CFCS sample. In LISA, the RESP gap changed little—from 45.1 percentage points to 46.7 percentage points (Table 9)—when immigrants were removed from the sample. This also did not substantially change the decomposition results for literacy (Tables 6 and 7).

The model specifications thus far restrict the estimated relationship between RESP participation and literacy, numeracy and financial literacy to be the same across income quartiles. To test this assumption, interactions between literacy, numeracy and financial literacy with income quartiles were added to the models (results not shown). The interaction terms were generally quite small and jointly not statistically significant. Thus there is no evidence that higher levels of literacy, numeracy and financial literacy are associated with bigger increases in RESP participation in some parts of parental income distribution than in others.

As another robustness check, the model with financial literacy was rerun, removing in turn controls for (1) education, (2) wealth and (3) both education and wealth (leaving only controls for demographic characteristics and financial literacy in the model). The objective was to see what share of the gap in RESP participation would be accounted for by differences in financial literacy under the alternative assumption that education and wealth have no effects independent of financial literacy on RESP take-up. In a model controlling for financial literacy with a series of dummy variables, the share of the RESP gap accounted for by financial literacy according to the Gelbach decomposition rose from 18.7% to 20.0% when excluding education, to 24.9% when excluding wealth, and to 27.3% when excluding both education and wealth. In a model that included the financial literacy score (instead of the 14 dummy variables), the maximum share of the RESP gap that financial literacy accounted for was 20.5%. Even if a model that excludes education and wealth were preferable on theoretical grounds, financial literacy would still not account for much more than one-quarter of the RESP participation gap between families in the top and bottom income quartiles.

Models were also rerun after relaxing the sample restriction that required the parent responding to the survey to also be responsible for financial planning in the family (in the CFCS sample) or the household member most knowledgeable about the household's assets and debt (in the LISA sample). In the CFCS data, this increased the sample size from 1,183 to 1,411 observations, and the gap in RESP participation between high- and low-income parents dropped from 38.5 percentage points to 35.2 percentage points. As expected, the coefficient on the financial literacy score went from 0.015 (statistically significant at the 10% level) to 0.008 (no longer statistically significant). In the LISA sample, the sample size rose from 827 to 1,008 observations, the RESP participation gap fell slightly from 45.1 percentage points to 44.1 percentage points, and coefficients on both literacy and numeracy scores declined further and remained not statistically significant.

8 Conclusion

A postsecondary education is often the most significant career investment made by youth. However, enrolment is unequally distributed across income levels, and securing savings to pay for school may be an important factor to enrolment. To encourage parents to save for their children's education, the Government of Canada offers various financial incentives to contribute to a Registered Education Savings Plan (RESP).

According to previous research, postsecondary enrolment rates are generally higher among youth with access to RESP funds. While the share of parents opening RESP accounts for their children has been increasing steadily over time, it remains more than twice as high among high-income parents as among low-income parents. Previous research has also found that wealth is the single most important factor behind the gap in RESP participation by level of family income (among factors that could be examined). The education level of the parents also mattered, but to a lesser degree than wealth.

This study explores whether the gap in RESP take-up is affected not only by wealth and education, but also by differences in levels of literacy, numeracy and financial literacy between high- and low-income parents.

The results suggest that differences in wealth remain the single most important factor behind the gap in RESP participation by family income, even after accounting for differences in parental education and literacy, numeracy and financial literacy. In fact, differences in wealth accounted for 50% to 79% of the total gap in RESP participation between families in the top and bottom income quartiles, depending on the method and dataset used. Differences in financial literacy accounted for a moderate share of the RESP participation gap (between 13% and 19%), while differences in literacy and numeracy played smaller, statistically insignificant roles.

It is important to note that the measure of financial literacy used in this study is primarily based on financial knowledge. However, a more complete definition of financial literacy would also include attitudes and behaviour (e.g., OECD 2016*a*). To the extent that these additional components may be highly correlated with wealth, it is also possible that their impact on RESP participation may be captured by wealth. This study shows that there is little evidence that differences in RESP participation rates across the income distribution are primarily related to differences in financial knowledge, or to differences in literacy and numeracy.

This study informs a very specific question: "To what extent could the gap in RESP participation between high- and low-income parents be closed if low-income parents had higher levels of literacy, numeracy and financial literacy holding all else equal?" As such, it takes parents' education, wealth and indeed low-income status as given. If adequate data were available, an alternative question of interest might be: "To what extent can raising literacy, numeracy and financial literacy early in a person's life lead to a higher probability of opening an RESP account in the future both directly, and indirectly (through improved education outcomes, higher income and more accumulated wealth)?" A useful avenue for future research would be to address this question.

The COVID-19 pandemic raises further questions. How will RESP participation and the level of RESP contributions change in the coming months and years? Could the gap in RESP participation between high- and low-income families widen? In the short-term, current and prospective students may be seeing their RESP balances fall as a result of the decline in the stock market, depending on the type of investments held in the account. Students from high-income families stand to lose more in absolute terms given that their RESP balances are on average higher than those of students from lower-income families (Frenette 2017b). Current and prospective postsecondary students from lower-income families may be facing a particularly challenging financial situation moving forward. Most do not have access to RESP savings. Many will likely have fewer job

prospects to finance their studies with in the coming months (Frenette, Messacar, and Handler 2020). They may also receive less financial help from their parents or other family members if those individuals also lost income as a result of the COVID-19 pandemic and have limited wealth to fall back on. This may lead some youth to postpone or forgo pursuing or finishing their postsecondary studies altogether.

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