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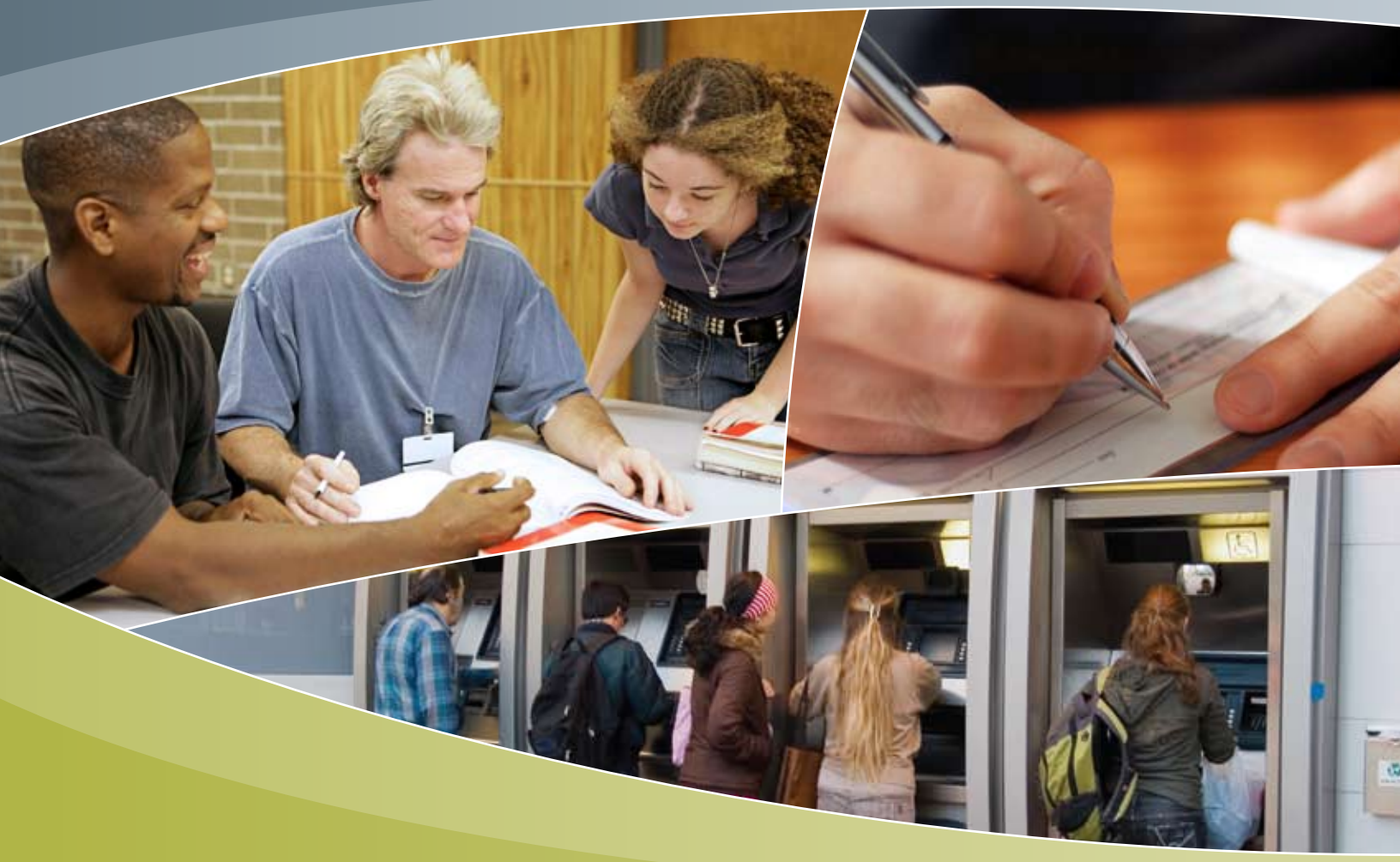

Learning *to* Save, Saving *to* Learn

Intermediate Impacts of the *learn*$ave Individual Development Accounts Project

Norm Leckie | Taylor Shek-Wai Hui
Doug Tattrie | Hongmei Cao

March 2009

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Funder of the project. The *learn*$ave project is funded by Human Resources and Skills Development Canada.

The findings and conclusions stated in this report do not necessarily represent the official positions or policies of the Department.

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Preface

Asset-based programs consist of initiatives that promote the acquisition of assets among low-income families through the provision of targeted or universal saving incentives or endowment funds. It has been proposed that such programs can be effective means of fighting poverty. In his influential book, Assets and the Poor (1991), Michael Sherraden argues that low-income individuals can save and accumulate assets if they are given the same opportunities as anyone else. These assets give people more control over their lives by supplying them with a source of empowerment and by fostering a more forward-looking attitude. Assets also increase an individual's ability to take risks and to make important decisions (such as starting a business or returning to school) that can broaden the range of opportunities for themselves and their children.

One innovative type of asset-based policy is Individual Development Accounts (IDAs), pioneered in the United States in the 1990s and introduced in Canada on a small scale. This is the type of intervention being tested in *learn*$ave. In IDAs, low-income people are encouraged to make deposits in a special account by provision of a matching grant or credit that can be used for specific purposes. In the *learn*$ave IDA, the earned credit can be used for education or starting a small business — activities seen as increasing participants' human capital, eventually their job prospects, and ultimately their economic well-being.

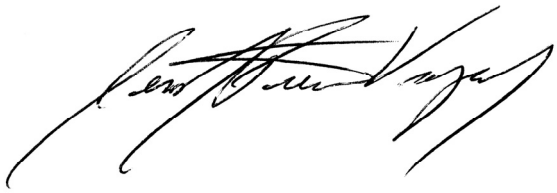
In the late 1990s, there had been much discussion of the promise of IDAs but little proof of their alleged effectiveness. Would the offer of a conditional grant for education or small business be appealing to the target group? Would the program contribute to increasing education enrolment and small business start-ups among participants? Would it improve labour market outcomes? This is the reason why, in 2000, Human Resources and Skills Development Canada (HRSDC) funded *learn*$ave, a nine-year demonstration project to test the IDA approach.

This report presents intermediate results of the *learn*$ave project, concentrating on impacts on participants' savings and education enrolment 40 months after their entry into the project. The final report, targeted for release in late spring 2009, will summarize results from all lines of evidence, including a final 54-month survey which should generate additional data to corroborate the observations and findings provided in the current report.

We are grateful to HRSDC for funding this project, in particular Satya Brink and Urvashi Dhawan-Biswal who provided the authors with advice and comments along the way. I would also wish to thank our major partner, Social and Enterprise Development Innovations (SEDI), and the community-based organizations that SEDI worked with to deliver and administer *learn*$ave in 10 sites across Canada. Thanks should also go to the financial institutions that held and administered the *learn*$ave accounts, namely, RBC Royal Bank, Assiniboine Credit Union, and Caisse d'économie Desjardins.

We are grateful as well to Connie Cheng and her team at Pollara who were responsible for conducting the participant surveys. We appreciate the contributions of Christopher Mallory (production manager), Stéphanie Navarro (executive assistant), Alison Arnot (editor), Pierre Saint-Jean (translator), and Caroline Corneau (revisor) who very capably handled the production and dissemination of this report. Finally, special thanks to my

colleagues at SRDC who performed the analysis and authored this report, namely Norm Leckie (project manager), Doug Tattrie, Taylor Shek-Wai Hui, Hongmei Cao and to Michael Dowie who contributed as well with sage advice in the preparation of this report.



Jean-Pierre Voyer
President
Social Research and Demonstration Corporation

Highlights

This is the intermediate impacts report of *learn*$ave, a research and demonstration project sponsored by Human Resources and Skills Development Canada (HRSDC). The project was designed to test the effectiveness of a matched saving incentive in encouraging low-income adults to save for education or training or to start a small business as a means of improving their economic prospects. Participants received $3 in matched saving credits for every $1 deposited in an individual development account (IDA). Credits of up to $4,500 per participant could be earned during the first 36 months. These credits had to be cashed out for accredited education or a small business start-up by month 48 or they would expire.

Impacts were measured by comparing saving and education outcomes of three similar research groups of randomly assigned participants. The *learn*$ave-only group received the matched credit incentive; the *learn*$ave-plus group received the credit plus financial management training and intensive case management services; and the control group received neither the credit nor the additional services, thus representing the counterfactual. The main data sources for this report are a survey of participants conducted 40 months after their enrolment in the project and the participant management information system.

The results in this report cover the first 40 months in the project and, as such, most are incomplete. While the results cover the full period of saving activities, participants still had another eight months to cash out their earned credits and use them, plus their *learn*$ave savings, to enrol in an education program or course or start a small business project. Thus, estimates of impacts on education participation and small business start-up are not final. The final report in the *learn*$ave series will present evidence on participants covering a period of 54 months from project enrolment, including 6 months of post-project experience.

learn$ave Account Activity

- **About half the participants saved up to the maximum qualifying for matched credits during the 36-month period of eligibility**. Those who did not tended to be the lower-educated and older participants, for whom attaining saving goals may have proved too difficult.
- **Financial management training and case management services did not greatly influence learn$ave deposit and cash-out activity**. While there is evidence that the *learn*$ave-plus participants accumulated more savings in the latter part of the program than *learn*$ave-only participants, the difference over the full period of credit eligibility was small in substantive terms. The financial training curriculum may have been too basic for many participants, particularly those with higher levels of education.
- **Most of the active saving happened early in the saving period, specifically the first 12 months**. Deposits averaged about $70 per month during the first year, falling appreciably thereafter to $20 or less after month 14. This result, coupled with the observation that many participants exercised their use of accumulated saving credits

quite early in the period, suggests that, for many program participants, *learn*$ave may have accelerated earlier plans to further their education.

- **New immigrants, participants with more education, and younger participants were more likely to make full use of the learn$ave matched credits and to make early withdrawals.**

Impact on Budgeting

- ***learn*$ave positively affected financial goal setting and budgeting**. The matched credits and, incrementally, the services increased the proportion of participants setting financial goals, while the matched credits alone increased the incidence of budgeting. Participants were motivated to budget mostly by the match-induced saving and by having to make ends meet; being instructed to do so in the financial management training added little to this impact.

Impact on Saving and Net worth

- ***learn*$ave has increased saving incidence**. The matched credits and services together increased the proportion of those who reported saving in the previous year by close to six percentage points, a finding corroborating contentions by original IDA proponents that matched saving schemes like IDAs would increase saving.
- ***learn*$ave has not, by month 40, increased total savings**. Over the 40-month period in question, all three research group on average had substantial and similar amounts of savings, measured as changes in average total financial assets.
- **There is no evidence to date that learn$ave increased total assets or net worth either**. The average control group participant experienced gains commensurate with the average program group participant.
- **While *learn*$ave did not affect the level of net worth, it has altered its composition**. The *learn*$ave matched credits led to higher average bank account balances, including *learn*$ave accounts, and reduced retirement savings. The credits also lowered average values of household assets, suggesting participants were buying fewer or cheaper goods to free up funds for their high-return *learn*$ave accounts.
- **The changes in investment and consumption induced by *learn*$ave have not caused participants undue hardship**. The *learn*$ave model assumes that, in order to set money aside for their *learn*$ave accounts, participants would reduce their current level of consumption. The results indicate that they have managed to do so without suffering much from it.

Impact on Education

- **At the 40-month mark, *learn*$ave had contributed to an improvement in participants' attitudes toward education**. The improved attitudes toward education were attributed primarily to the matched saving credits; the financial management training and case management played an insignificant incremental role here.
- **The results indicate that *learn*$ave has encouraged low-income people to participate in education and training**. The matched credits alone and the credits and services combined increased enrolment in educational programs or courses by close to 5 percentage points and over 7 percentage points, respectively. These results are preliminary as, at the time of the 40-month survey, participants had another 8 months to use their *learn*$ave savings.
- ***learn*$ave is having an impact not only on quantity of education, but also on its quality**. The increased enrolment in education has taken place mostly in university and college programs, not courses. The matched credits increased enrolment in programs by over 8 percentage points; the credits and services combined increased it by 12 points. This is good news as completion of post-secondary education programs is more likely to pay off in terms of improved labour market outcomes than the completion of individual courses or completion of degrees at lower education levels. Most of the impact was derived from the matched credits, as the services have not, so far, played much of an additional role in this respect.
- **The impacts on education program enrolment were widespread**. Based on baseline characteristics, both Canadian-born participants and new immigrants realized strong gains, as did those with no post-secondary education certification and those with a university degree; regular savers and those who were not; and participants at all low-income levels. Particularly large impacts were observed for those who worked at baseline (about 18 percentage points); those who were born in Canada (19 points); and those who had no post-secondary certification at baseline (26 points).
- **About 4 in 5 members of the control group enrolled in some form of education or training over the first 40 months of the project**. As the control group represents what the program group would have done in the absence of the saving incentives, this suggests that the *learn*$ave matched saving credits provided a windfall gain for many participants.

Impact on Labour Market Outcomes

- **Participants who had chosen to save to invest in a small business experienced self-employment increases**. The *learn*$ave-only group of the micro-enterprise stream was 14 percentage points more likely to be self-employed during the first 40 months of the project than the control group.
- **No employment impacts have been observed yet for participants who had chosen to save to invest in education**. There likely was not enough time for large numbers of

participants to have completed the education and training started under *learn*$ave and translate their increased human capital into improved labour market outcomes. Some of these impacts may be captured in the final 54-month survey.

Value of Random Assignment

- **These intermediate results clearly demonstrate the value of having a randomly assigned control group to measure the real difference that a program like *learn*$ave can make**. The value of net assets held by the three groups increased substantially over the period, and by a similar amount. If the impact of *learn*$ave had been estimated simply by comparing the net worth of the program groups at the beginning of the project to their much higher values at month 40, one might have concluded wrongly that *learn*$ave had a substantial impact on total net worth. Similarly, program group participants have exhibited a high enrolment rate in education programs or courses since the beginning of the project. Measuring impacts simply on the basis of this gain would have vastly overestimated *learn*$ave's contribution, as the control group, too, experienced high participation rates in education over the period.

Chapter 1: The *learn*$ave Project

The learn$ave project was launched in 2000 by Human Resources Development and Skills Development Canada (HRSDC)[1] to test the effectiveness of individual development accounts (IDAs) in increasing the human capital of low-income Canadians. In today's knowledge economy, the rising premium placed on human capital increases the risk of exclusion for people lacking sufficient education and skills, among whom low-income Canadians figure prominently. IDAs were pioneered in the United States in the early 1990s to match low-income people's savings as a means to encourage them to acquire key assets, such as a home, a business, retirement savings, or an education, with a view to improving their economic conditions. In funding *learn*$ave, HRSDC sought to discover if incentives to save would lead low-income adults to invest in their human capital. Recent Canadian and US evidence has shown that matched saving credits can induce them to put money aside for such a purpose[2].

The objective of this report is to present intermediate results on *learn*$ave impacts for participants at 40 months following their enrolment in the project, updating results presented in the early impacts report (Leckie et al., 2008). The purpose of this chapter is to briefly describe, first, the *learn*$ave IDA program, and, second, the method used to evaluate this program.

The *learn*$ave IDA Program

The *learn*$ave project was delivered in 10 sites across 7 Canadian provinces[3]. At three of the sites — Halifax, Toronto, and Vancouver — it was delivered as an experiment, i.e., with program and matching control groups. Data from these sites formed the basis of the impacts evidence for this study and presented in this report. At the other seven sites — Digby, Fredericton, Montreal, Grey-Bruce (Ontario), Kitchener-Waterloo, Winnipeg, and Calgary — *learn*$ave was delivered in the absence of a control group. Observations and insights from the latter sites will be presented in the final report, along with final impacts estimates.

To be eligible for *learn*$ave, applicants had to meet the following criteria:

- **Income:** Annual household income could not exceed 120 per cent of the Low-Income Cut-off (LICO), translating to about $36,000 for a household of three in Toronto and Vancouver at the time of recruitment, and to $31,000 in Halifax.
- **Liquid assets:** Liquid assets could not exceed the lesser of 10 per cent of annual income or $3,000, thus excluding those who had already saved successfully.

[1] At the time, the federal government department was known as Human Resources Development Canada (HRDC); however, this department will be referred to as HRSDC throughout this report.

[2] For Canadian evidence, see the *learn*$ave early impacts report (Leckie, Dowie, and Gyorfi-Dyke, 2008). For the United States, see Mills, Patterson, Orr, and DeMarco (2004) and Mills, Lam, DeMarco, Rodger, and Lam (2008).

[3] For a more detailed description of the *learn*$ave IDA program, see Leckie *et al*. (2008) and Kingwell, Dowie, Holler, Vincent, Gyarmati, and Cao (2005).

- **Home:** The value of the household's home could not exceed the median value of homes in the area.
- **Age:** Applicants had to be of working age (20–65 years), since the primary focus of the demonstration was adult *learn*ing and small business development; applicants 18–19 years of age had to be out of school for at least two years.
- **Education:** Applicants could not be a full-time student, i.e., carrying at least 60 per cent of a full course load, as per the definition used by the Canada Student Loans Program.
- **Residence:** Applicants had to be residing within the boundaries of a *learn*$ave site (though they could have moved later).
- **Other:** Only one person per household could apply. Applicants had to have a Social Insurance Number, thus allowing non-permanent residents to access *learn*$ave, along with those born in Canada.

At the core of the *learn*$ave IDA and other such programs was the matched saving credit saving incentive. The following describes the matched credit as it was delivered at the three experimental sites; how it was delivered in the other seven sites is described in Kingwell et al. (2008).

Eligible participants earned a $3 matched credit for every dollar they saved in a special account (representing a 300 per cent rate of return), subject to certain conditions. Deposits of up to $250 per month and $1,500 overall within three years of enrolment in *learn*$ave were eligible for matched credits. To encourage participants to save on a regular basis, participants had to make net deposits in *learn*$ave accounts of at least $10 in each of 12 months before their withdrawals would qualify for matched credits. In contrast to their *learn*$ave deposits, which were under their full control and could be withdrawn at any time, participants' matched credits were held in trust until they were ready to withdraw them ("cash them out") for approved education/training or small business start-up, which they had to do within 48 months after project enrolment. For every $4 of the cost of the education or business start-up, $1 was covered by the participant's own *learn*$ave savings and $3 by her/his earned credits (up to the total amount accumulated). A participant could cash out (or use) his or her credits any number of times or all at once.

The purposes for which the matched credits could be used were in accordance with their "saving stream." At the outset, participants were assigned to one of two streams according to their specific saving goal as indicated on their application forms: education/training or micro-enterprise[4]. A maximum of 20 per cent of participants could enter the micro-enterprise stream at each site. It is possible, therefore, that some participants in the education group would have preferred to start a small business but applied at a time when no spaces remained in the stream. Participants in the education stream had to use their credits solely for education or training purposes, including enrolment in either degree/certificate programs or shorter skills development courses, whereas micro-enterprise stream participants were allowed to use

[4] On the application form, participants were actually asked to distinguish between "education" and "training," as well as "micro-enterprise." However, there was no real difference in how the education and training streams can use their funds, so in this report, the education and training streams are referred to together as the education stream.

their savings and credits for either education/training or micro-enterprise (starting a small business).

To use (withdraw or cash out) their earned credits for education and training, participants had to be enrolled in a designated institution of their choice. A "designated" institution is a university, community college, technical institute, or private career college listed by the Canada Student Loans Program as a "Designated Educational Institution" (HRSDC, 2008). The *learn*$ave project paid tuition fees in the form of a cheque made out directly to the approved educational institution where the participant had enrolled. Learning supports were also covered, including books and computers, as well as child care services and disability supports unavailable from government programs. Participants could use up to 50 per cent of their accumulated *learn*$ave funds (deposits and credits), to a maximum of $1,500, for supports to learning.

For participants in the micro-enterprise stream, the small business for which they could use their matched credits was defined as a new business requiring up to $10,000 in start-up capital. To do so, participants were required to present a business plan identifying the following: the nature of the business; a marketing and sales strategy; administrative and production processes; a human resources plan; and a financial plan, including sources of financing and projected revenues, costs, and profits. Participants were then referred to a reputable business development agency in their local area that provided training and assistance for development of the business plan and was responsible for its approval. After the plan received approval, the matched credits were released[5]. The credits could not exceed the amount of the capital costs identified in the business plan.

Consistent with other IDA programs, some *learn*$ave participants received financial management training and enhanced case management services, in addition to the matched credits. The primary objective of the 15 hours of financial training was to help participants meet their savings goals. The curriculum covered the principles of money management, including strategies for budgeting, spending, and the use of credit. In addition, a section of the curriculum offered at most sites was devoted to assisting participants in developing realistic goals. To this end, the training sessions encouraged participants to identify their existing skills and attributes, identify strategies to help overcome barriers that could prevent them from achieving their goals, and build a practical and positive approach to meeting these goals. Note that the financial management training curriculum was not stream-specific: no instruction particular to either education or micro-enterprise was provided.

The purpose of the enhanced case management services (beyond basic administrative help) was to reinforce savings goals. This assistance consisted of encouragement to meet savings targets, assistance to identify and address problems in meeting those targets, and provision of referrals to appropriate agencies to deal with other problems as they arose. Case managers were expected to undertake a quarterly review of participants' saving activities, attendance at financial management training sessions, and progress toward goals. If a participant was having difficulty in any of these areas, the case manager contacted him or her to offer assistance. Participants were free to contact their case manager on their own.

[5] By providing an outline of their business plan, participants could withdraw a portion of their matched credits to complete the plan and conduct related activities such as market research, business training, and technical consulting.

There are two main partners in *learn*$ave. The Social Research and Demonstration Corporation (SRDC) is primarily responsible for the evaluation research. Social and Enterprise Development Innovations (SEDI) was primarily responsible for the design, implementation, and delivery of *learn*$ave, in partnership with 10 community-based organizations, one in each of 10 sites. The community agencies were responsible for recruiting and screening eligible participants, for providing financial management training sessions and case management services, and for collecting relevant data on participants, via the Participant Management Information System.

SEDI secured an agreement with financial institutions to provide specific financial services at the 10 sites. These institutions maintain participants' *learn*$ave accounts, monitor activity in those accounts, and provide a monthly report of individual transactions to the local delivery agency. RBC Royal Bank fulfilled this role at the three experimental sites and six others. At the Winnipeg site, the host organization decided to use the services of Assiniboine Credit Union instead of RBC. In Montreal, the host organization gave participants the choice of opening their *learn*$ave account with RBC or the Caisse d'économie Desjardins.

The *learn*$ave Evaluation

IDAs have been proposed to address many of the barriers low-income/skill adults face in trying to improve their situation. Proponents argue that the generous matched credits reduce participants' reticence to save, and the financial management training, case management services, and interaction with the financial institutions increase their knowledge of and comfort with financial matters and institutions. Proponents further contend that restricting the use of these credits to education and small business start-up should encourage participants to pursue activities that will increase their human capital and ultimately their economic prospects.

At the time HRSDC commissioned *learn*$ave, there was little hard evidence to support the belief that IDAs could work, i.e., that a matched saving incentive could induce low-income adults to save and to invest in their human capital through education or starting up a small business. This explains why HRSDC commissioned this evaluation in the first place: to assess the extent to which the suggested benefits of IDAs were real.

The impacts of *learn*$ave, which are one aspect of this evaluation and the focus of this report, are estimated using an experimental study design. This is one of only two evaluations of IDAs using an experimental design[6]. The main advantage of this approach is that it permits consideration of the "counterfactual," i.e., what would have occurred without a particular intervention, or, in this case, what individuals would have done had they not participated in *learn*$ave. It is quite possible that some low-income individuals, on their own, without *learn*$ave, would decide to save more and continue their education or start a new business, and in many cases, their employment situation and earnings would improve over time as a result.

[6] The other one is the evaluation of the American Dream Demonstration (ADD) IDA at Tulsa, Oklahoma (Mills *et al*., 2004). There have also been quasi-experimental evaluations of IDAs. For a description of this approach and examples, see the evaluation of the US Assets for Independence Act IDAs (Mills *et al*., 2008) and the evaluation of the United Kingdom Saving Gateway pilot (Harvey *et al*., 2007).

Therefore, to control for the influence of variables other than the *learn*$ave IDA on the outcomes and thereby paint a true picture of the intervention's effectiveness, the evaluation design comprised an experimental study involving program (or "treatment") and control groups. This is the best way of measuring the incremental impact of the intervention, i.e., isolating improvements in an individual's circumstances due to their participation in *learn*$ave, from improvements that would have occurred even if they had they not participated in the program. The latter are captured by observing the experiences and activities of a control group of individuals similar in every way to participants in the *learn*$ave IDA, except that they do not receive *learn*$ave incentives or services.

In *learn*$ave, eligible applicants were randomly assigned to one of the three research groups: two program groups and one control group. Thus, qualified applicants knew before applying that they had a two in three chance of being assigned to a program group. The three research groups were as follows: (1) the "*learn*$ave-only" program group, which received only matched saving credits; (2) the "*learn*$ave-plus" program group, which received matched credits plus financial management training and enhanced case management services[7]; and (3) the control group, which received neither *learn*$ave credits nor services. The reason for having two program groups was to isolate the impact of the financial management training and enhanced case management services from that of the matched saving credits.

A total of 3,584 applicants at the three experimental sites qualified for and were enrolled into *learn*$ave, and then randomly assigned to the three research groups. Across the three research groups, participants were distributed as follows: 1,195 participants in the *learn*$ave-only group, 1,194 in the *learn*$ave-plus group, and 1,195 participants in the control group. Participants were distributed across the three sites as follows: 1,649 in Vancouver, 1,681 in Toronto, and 254 in Halifax.

Two main data sources were used in the analysis for this report. First, the *learn*$ave Participant Management Information System (PMIS) was implemented at all sites to support both program operations and evaluation needs. The PMIS generated *learn*$ave deposit, cash out, and service utilization data on all 2,388 original program group members at the three experimental sites, an additional 227 Income Assistance participants at these sites not included in the experiment, and all 1,001 participants at the seven other sites[8].

Second, baseline and follow-up telephone surveys conducted by POLLARA Inc. (under contract with SRDC) are the source of the outcome data used in the experimental evaluation. Shortly after meeting the eligibility criteria and before random assignment to one of the three groups, applicants were surveyed by telephone to gather baseline information on personal and family characteristics. Participants were then re-contacted in follow-up surveys at 18, 40, and 54 months from the date of their last interview to gather outcome data in order to measure impacts. Data from the intermediate 40-month survey and the PMIS are the basis of this report, with comparisons to published results from the 18-month survey. The final report

[7] While participants in both program groups received some basic case management, it was only the *learn*$ave-plus group that received enhanced or intensive case management in the form of reinforcement of saving goals.

[8] Results for the latter two groups will not be presented in this report but will be in the final report. Income Assistance (IA) recipients were not included in the experiment because of some initial difficulties regarding the Ontario government's exemption of *learn*$ave funds for IA. Note that one *learn*$ave-plus group member who participated in the baseline survey did not appear in the PMIS owing to eligibility concerns.

in this series will present results from all component studies and follow-up surveys, including the 54-month survey, which wound up at the end of August 2008.

A total of 2,260 participants responded to the 40-month survey, out of the original 3,584 individuals randomly assigned and enrolled into the project (Table 1.1). This translates into a response rate of 63.1 per cent, which represents a small decline from the response rate to the 18-month survey, which was 72.1 per cent[9]. The 40-month survey occurred between August 2005 and July 2007, with an average survey interview length of about 55 minutes.

Table 1.1 *learn*$ave Survey Response, by Survey and Research Group

Survey and Response Disposition	Total	*learn* $ave-only Group	*learn* $ave-plus Group	Control Group
Baseline survey (n)	**3,584**	**1,195**	**1,194**	**1,195**
18-month survey (n)	**2,583**	**920**	**915**	**748**
Completions (%)	**72.1**	**77.0**	**76.6**	**62.6**
Non-completions (%)				
Refusals and withdrawal requests	5.5	3.3	2.6	10.5
Untraceables	17.6	15.6	16.3	21.0
Other incompletes[1]	4.9	4.1	4.5	5.1
40-month survey (n)	**2,260 [2]**	**837**	**815**	**608**
Completions (%)	**63.1**	**70.0**	**68.3**	**50.9**
Non-completions (%)				
Refusals and withdrawal requests	7.1	5.2	4.2	12.0
Untraceables	27.3	23.1	25.6	33.3
Other incompletes[1]	2.5	1.7	1.9	3.8

Source Reports provided by POLLARA.

Notes [1] Includes those who were "retired" because they were called 15 times without success, plus those who could not respond because of illness or death or who withdrew from the research prior to the survey. The proportions excluded for the latter two reasons could not be separately expressed for confidentiality reasons.

[2] Note that for the analysis, there were actually 2,254 observations as the survey data for 6 cases arrived too late to be processed for this report.

The 40-month survey response rate for the control group was lower than it was for the *learn*$ave-only and *learn*$ave-plus program groups, with the gap widening somewhat between groups since the 18-month survey (Table 1.1). This is not surprising given that control group program members likely felt less engaged in the project and thus less inclined to participate in the survey. Most of the differences in response rates can be attributed to the higher incidence of refusals and untraceable participants in the control group than in the program groups.

The unbalanced attrition (difference in response rates between program and control groups) did not negatively affect the socio-demographic comparability of the groups to a significant extent. The profiles of the respondents, based on their socio-demographic characteristics at baseline, were found to be fairly similar across research groups (see Table

[9] It should be pointed out that 11.9 per cent (268) of the 40-month survey respondents had not previously responded to the 18-month survey, while 23.1 per cent (597) of the 18-month respondents did not respond later to the 40-month survey. Overall, about half (55.4 per cent or 1,986) of the 3,584 respondents responded to **both** surveys, while about a fifth (20.5 per cent or 733) responded to neither.

1.2). The differences in baseline variables that arose at 40 months (as at 18 months[10]) and which suggest possible response bias include the following: marital status, level of higher education of mother, being unemployed, and total household income (see below for how this response bias is controlled for using regression).

[10] Indeed, few differences emerged between the 18- and 40-month survey datasets, suggesting they may be compared cross-sectionally. Consideration was given to conducting pure longitudinal analysis based on participants who responded to both follow-up surveys, but an examination of their socio-demographic characteristics suggested several significant differences from the baseline sample.

Table 1.2 Profile of 40-Month Survey Respondents by Research Group, Based on Characteristics at Baseline (%)

Characteristics at Baseline	*learn* $ave-only Group	*learn* $ave-plus Group	Control Group	Diff. L$-only vs Control	Diff. L$-plus vs L$-only	Diff. L$-plus vs Control
Gender						
Male	43.1	45.6	44.6	-1.5	2.5	0.9
Female	56.9	54.4	55.4	1.5	-2.5	-0.9
Age (years)						
Under 21	0.2	0.7	1.3	-1.1 **	0.5	-0.6
21-30	40.0	39.7	37.4	2.6	-0.3	2.3
31-40	43.8	43.5	44.3	-0.5	-0.3	-0.8
41-50	13.3	13.0	15.0	-1.7	-0.3	-2.0
52-65	2.5	3.1	2.0	0.5	0.6	1.1
Average age (years)	33.5	33.7	33.8	-0.3	0.2	-0.1
Marital Status						
Single	45.4	44.2	42.5	2.9	-1.2	1.7
Married	43.2	43.5	45.5	-2.3	0.3	-2.0
Separated, Divorced, or Widowed	11.3	12.3	12.0	-0.7	1.0	0.3
Equity Group						
Visible minority	63.0	63.5	61.6	1.4	0.4	1.9
Aboriginal	1.1	1.0	1.2	-0.1	-0.1	-0.2
Activity limitation	5.8	7.6	8.6	-2.8 **	1.8	-1.0
Year of Entry (immigration)						
Before 1993	18.2	16.5	14.4	3.8	-1.8	2.0
1993 - 1997	6.4	7.6	6.7	-0.3	1.2	0.9
After 1997	75.4	76.0	78.9	-3.5	0.6	-2.9
Economic Family Type						
Unattached individuals	45.3	46.1	39.9	5.4 **	0.8	6.2 **
Couples without children < 18 years	13.0	11.4	13.2	-0.2	-1.5	-1.8
Couples with one or more children < 18 years	28.2	29.5	31.3	-3.1	1.3	-1.8
Lone parents - one or more children < 18 years	7.4	7.9	9.6	-2.1	0.4	-1.7
Other economic family types	6.1	5.2	6.1	0.0	-1.0	-0.9
Household Size (no. of relatives in household)						
1	45.3	46.1	39.9	5.4 **	0.8	6.2 **
2	18.1	15.8	20.4	-2.3	-2.3	-4.6 **
3	22.4	22.2	23.6	-1.1	-0.2	-1.3
4	9.0	10.0	10.0	-1.0	0.9	-0.1
5	3.5	3.4	4.0	-0.5	0.0	-0.5
6 or more	1.7	2.5	2.1	-0.5	0.8	0.3
Average number in household	2.1	2.2	2.3	-0.1 *	0.0	-0.1
Highest Level of Formal Education						
Less than high school graduation certificate	1.4	2.3	2.5	-1.0	0.9	-0.1
High school graduation certificate	6.1	7.1	8.4	-2.3 *	1.0	-1.3
Some post-secondary education	16.7	16.1	16.1	0.5	-0.6	-0.1
Non-university certificate or diploma	22.2	19.5	21.6	0.6	-2.7	-2.0
University degree	53.5	54.9	51.4	2.1	1.4	3.5
Household Income in Year Prior to Survey (%)						
Under $5,000	14.2	13.6	12.1	2.1	-0.6	1.5
$5,000 to $9,999	18.6	19.3	18.8	-0.1	0.7	0.6
$10,000 to $14,999	23.3	23.0	22.3	1.0	-0.3	0.7
$15,000 to $19,999	20.2	21.9	20.4	-0.2	1.8	1.6
$20,000 to $24,999	12.1	11.0	13.2	-1.1	-1.1	-2.1
$25,000 to $29,999	5.2	4.9	6.8	-1.7	-0.2	-1.9
$30,000 or greater	6.4	6.2	6.5	-0.1	-0.2	-0.3
Sample size	833	814	607			

Source Calculations from 40-month survey data.

Notes Two-tailed t-tests were applied to differences between research groups. Statistical significance levels are indicated as * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Owing to the potential compound effect of missing values in the large number of assets and liabilities variables making up net worth, it was decided that missing values for these variables should be imputed. The imputation involved replacing the missing value with the mean value of the responses to the respective question provided by similar participants who did supply a response to the respective question. See Appendix B of Leckie et al. (2008) for details of the imputation procedure, including information on how outliers, typical of such data, were dealt with.

Next, for each hypothesis to be tested, outcome variables were extracted or derived from variables available in the 40-month survey and PMIS datasets:

- **Savings and net worth: *learn*$ave will increase participants' savings and overall net worth**: changes in financial assets from 18 to 40 months, indicative of "true" savings; self-reported savings; total savings and chequing account balances, including in the *learn*$ave account; value of various financial assets; value of physical and business assets; value of various liabilities; and net worth.
- **Budgeting: *learn*$ave will encourage participants to budget**: proportion who have a budget, and proportion who set financial goals.
- **Hardship: *learn*$ave will not cause undue hardship for participants**: proportion who had difficulty meeting expenses and making payments, who had to visit a food bank or to borrow to meet needs, who declared bankruptcy, or who had unpaid bills.
- **Education: *learn*$ave will enhance attitudes to education and encourage participants to participate in education or training**: whether or not attitudes to education are positive; proportion who participated in education programs leading to a degree, certificate, or diploma; proportion who participated in individual education courses outside of a program; proportion who completed programs or courses; and average hours of and expenditures education and training.
- **Self-employment: *learn*$ave will enhance self-employment outcomes for micro-enterprise participants**: proportion who started a small business and other self-employment outcomes for the micro-enterprise stream.
- **Labour market: *learn*$ave will eventually improve employment prospects for all participants**: proportion who worked since baseline, current labour force status, weekly hours worked, and employment earnings.
- **Financial education and case management:** The *learn*$ave financial management training and case management services will contribute positively to saving, education, micro-enterprise and labour market outcomes.

To measure *learn*$ave's impacts, the first step was to compute differences in outcomes between research groups. To measure the pure impact of the matched credits, the outcomes of the *learn*$ave-only group were compared to that of the control group. To measure the incremental or added impact of the financial management training and case management services over and above the credits, the outcomes of the *learn*$ave-plus and *learn*$ave-only

program groups were compared. The total combined impact of the incentive and the services is represented by the differences between the *learn*$ave-plus and control groups. These comparisons generate reliable estimates of impacts because of the similarity of the groups, as per the experimental design. Thus, significant differences in outcomes can be attributed to *learn*$ave since other factors, such as socio-demographic characteristics and attitudes to the future, have been controlled for through random assignment.

Regression adjustment models for each outcome variable were then run, as per Mohr (1995) and Orr (1999). In doing this, unadjusted estimates are reliable estimates based as they are on randomly assigned program and control groups. Regression adjustment strengthens the impact estimates by increasing their statistical precision and controlling for the effect of small differences in socio-demographic variables that existed at baseline or that arose at 40 months (although, as noted, the research groups remained fairly comparable). In the adjustment model, the outcome is "explained" in terms of a set of variables indicating the participants' research group, their *learn*$ave site (Halifax, Toronto, or Vancouver), their socio-demographic characteristics at baseline, and their attitude toward the future at baseline. See Appendix B of Leckie et al. (2008) for further details on the regression adjustment process.

Timeline for the Project and Outline for this Report

The *learn*$ave demonstration project is taking place over a nine-year period. The project began in June 2000 when planning started on the design of *learn*$ave's operations and its evaluation. From June 2001 to December 2003, participants were recruited and screened — the last applicants were enrolled in February 2004 after they completed the baseline survey. The last participant's saving period ended in February 2007 and his/her cash-out period in February 2008. The project, including the accompanying research, is due to end in the spring of 2009.

This intermediate impacts report presents evidence on *learn*$ave participants' experience and outcomes at the experimental sites covering their first 40 months in the project, roughly up to July 2007, which is the 40-month mark for the last cohort of enrollees in *learn*$ave[11]. The results are incomplete in that participants had another eight months to use their earned matched credits. A final report will be published in 2009 presenting complete evidence on impacts, including that derived from the 54-month survey concluded in August 2008, as well as the results of other research conducted under this project such as that based on data from participants at the non-experimental sites.

The rest of this report presents results with respect to *learn*$ave saving and cash-out activity (Chapter 2); total savings, assets, debts, and net worth impacts (Chapter 3); and education and labour market impacts (Chapter 4).

[11] Owing to time constraints, the 102 participants in the last three month-cohorts were called 3, 2, and 1 month(s) early, respectively, as part of the fourth last month-cohort in July 2007. This meant that there was somewhat less time for these individuals than earlier cohorts (1) to be contacted (though there were only four who still were being called when the survey closed) and (2) to have saved and used their credits for education or small business.

Chapter 2: *learn*$ave Account Activities

This chapter looks at *learn*$ave saving and cash-out patterns during the first 40 months of the *learn*$ave project. The early impacts report (Leckie et al., 2008) examined patterns over the first 18 months of *learn*$ave, the first half of the 36-month saving period. It reported that recruitment and enrolment had been successful, that over 90 per cent of participants had opened a *learn*$ave account, and that more than two-thirds had actively made deposits in the account. Only about a quarter of participants had withdrawn some deposits and used some matched credits. By comparing patterns over the first 40 months to those over the first 18 months, this chapter aims to determine the degree to which participants' *learn*$ave saving efforts were sustained in the second half of the saving period, whether or not matched withdrawals increased in the second half as expected, and the degree to which the financial management training and case management services had an impact on deposit and withdrawal activities.

Results presented in this chapter are for the 2,388 participants in the *learn*$ave-only and *learn*$ave-plus program groups,[1] based mainly on data from the Participant Management Information System (PMIS). Evidence is provided only for members of the program groups as data on control group members were not maintained in the PMIS.

Deposit Activity

Table 2.1 presents evidence indicating that *learn*$ave deposit activity continued in the second half of the three-year saving period, albeit at a slower rate. By the 36-month mark, average matched deposits (i.e., qualifying for matched credits) was $1,089, a little higher than it was after 18 months ($947). The average number of active saving months over the first 36 months was 30 per cent higher than it was over the first 18 months (13.8 versus 10.7 months). The proportion of participants who actively saved (i.e., deposited at least $10 in each of at least 12 months) reached about 82 per cent by the end of the saving period, 15 percentage points higher than it was after 18 months (67 per cent). The average proportion of the matchable maximum ($1,500) saved was 72.6 per cent at the end of the saving period, 9.5 percentage points higher than at the end of the first 18 months.

[1] The results shown are for **all** program group participants regardless of whether or not they completed the 40-month survey. Therefore, the number of program group participants for the results presented in this chapter is higher than it is in the next chapters, since not all program group participants responded to the 40-month survey.

Table 2.1 Participation in *learn*$ave Saving Activities, During First 18 and 36 Months

	During First 18 Months[1]	During First 36 Months
Average number of active saving months	10.7	13.8
Average proportion of months actively saved	59.5	38.3
Proportion who actively saved in 12 or more months (%)	67.2	82.3
Average total matchable savings in *learn* $ave account ($)	947	1,089
Average matchable savings per month ($)	53	30
Average non-matchable savings ($)	73	117
Average proportion saved of the maximum matchable (% of $1,500)	63.1	72.6
Proportion who saved maximum matchable amount (%)	39.8	54.2
Average closing balance in *learn* $ave account ($)	859	749
Sample size: 2,388		

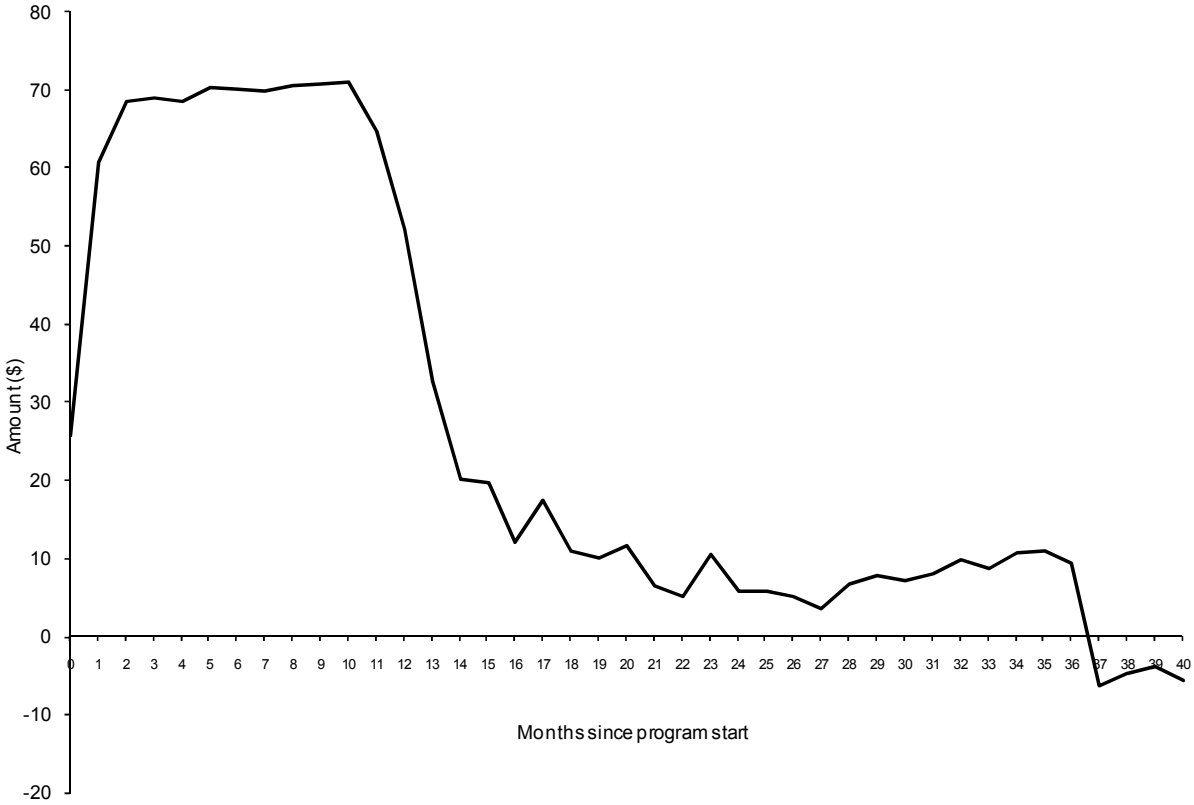
Source Participant Management Information System

Notes [1] Due to correction of records in the PMIS, some figures may differ from those previously published.

The average balance in the *learn*$ave account at the end of the saving period was somewhat lower than it was after the initial 18 months ($859 versus $749). The average net monthly amount deposited over the first 18 months ($53) was much higher than it was over the entire 36 months ($30), indicating that deposits were much lower over the second half of the saving period (about $8 per month, not shown). This is also indicated by the fact that the mean proportion of months actively saved in fell from 59.5 per cent over the first 18 months to 38.3 per cent over the entire 36 months.

In fact, most of the active saving happened early in the saving period, specifically the first 12 months when deposits averaged about $70 per month, falling appreciably thereafter to $20 or less after month 14 (Figure 2.1). Negative "deposits" appeared after month 36, which marks the end of the saving period.

Figure 2.1 Monthly Changes in Matchable Savings

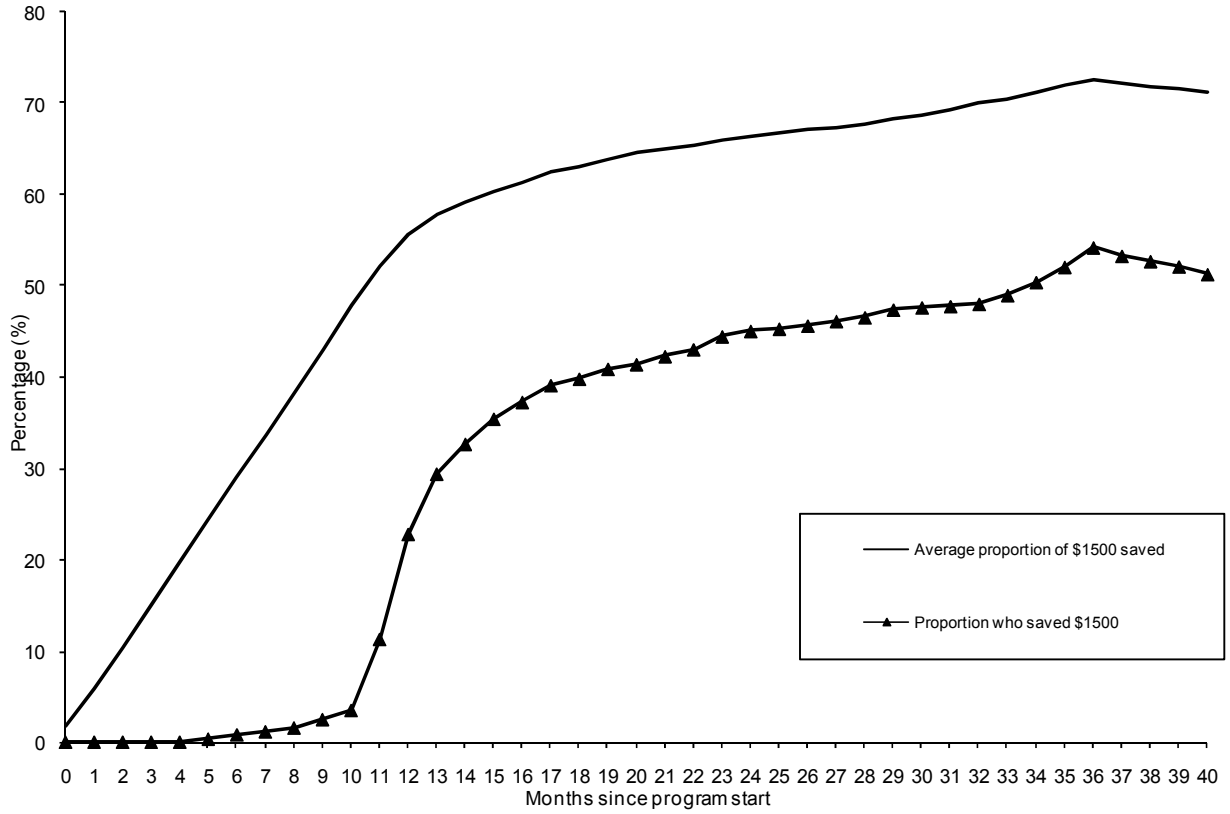


Source Participant Management Information System
Notes Sample size: 2,388.

It is interesting to note that participants, on average, deposited about $117 that did not qualify for the *learn*$ave matched credits (exceeding the $250 monthly limit or the $1,500 cumulative limit). Although the amount of non-matchable savings is small, it may suggest that participants were using their *learn*$ave account for daily banking or simply forgot about the limit.

By the end of the saving period, many participants had not saved the maximum amount ($1,500) that qualifies for matched credits. By 36 months, only a little over a half (54 per cent) reached the maximum, and the average proportion of the maximum saved was about 73 per cent. Similar to what is shown in Figure 2.1, most activity in attaining the maximum happened and increased rapidly during the first 12 months though it continued until the end of the saving period (Figure 2.2).

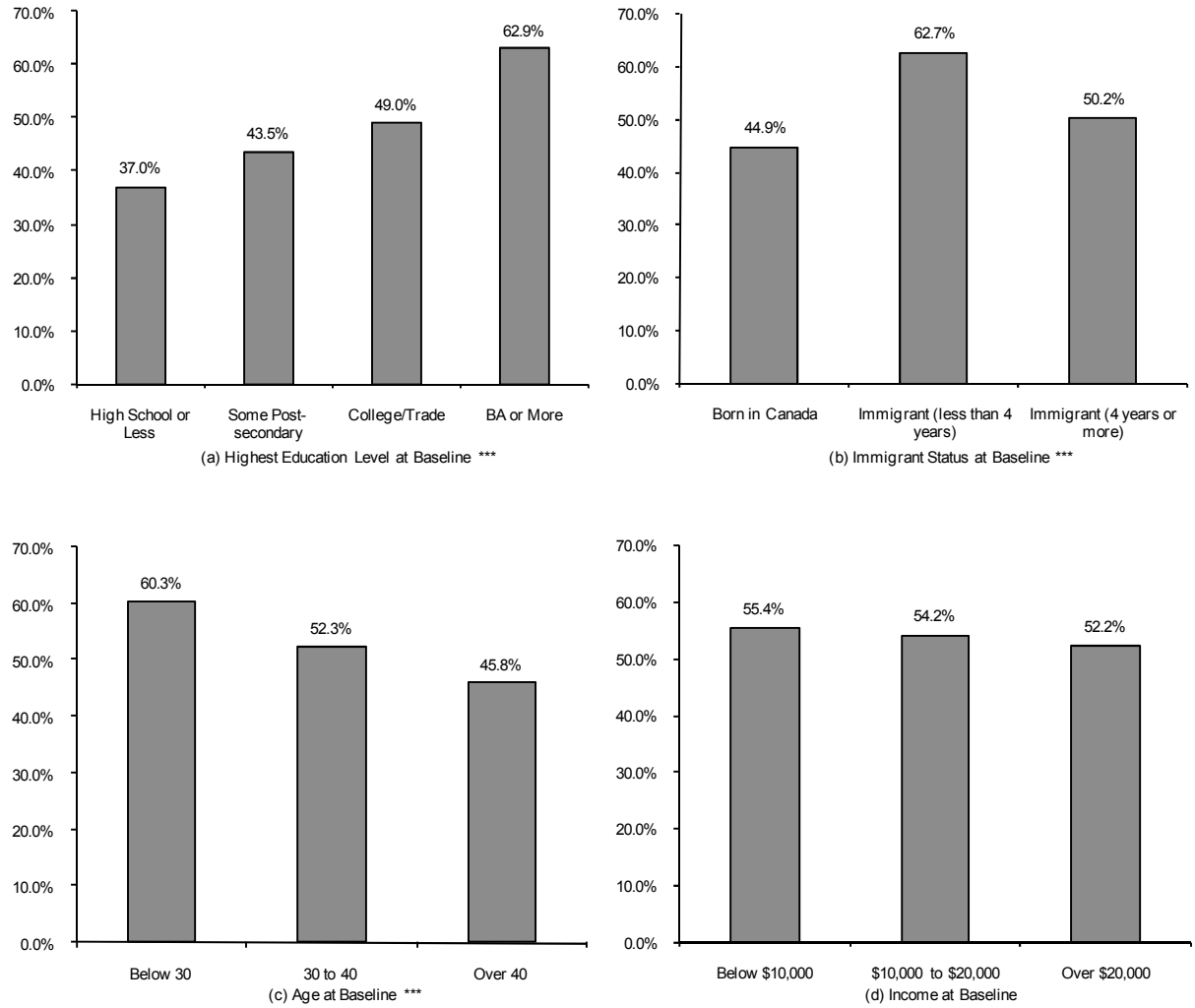
Figure 2.2 Proportion of Maximum Matchable Savings, by Month



Source Participant Management Information System
Notes Sample size: 2,388.

Figure 2.3 identifies the characteristics of participants who reached the $1,500 maximum by the end of the saving period. Participants who, at baseline, had more education, were younger, or were recent immigrants were significantly more likely to save the maximum matchable savings allowed. On the other hand, income levels at baseline did not affect the incidence of attaining the maximum. This result does not necessarily mean that income does not play a role in saving, since income at a (temporary) point of time (baseline) is not a good indicator of one's actual permanent income-earning and saving potential. Further analysis considering income performance over the entire analysis period and its link to saving will be conducted and the results presented in the final report.

Figure 2.3 Proportion of Participants who Saved $1,500 During the 36-Month Saving Period, by Participant Characteristics



Source Participant Management Information System and Baseline Survey (for participant characteristics)

Notes Sample size: 2,388.

Levels shown have been adjusted for differences in baseline characteristics, including research group, *learn*$ave site, gender, age group, highest level of education, marital status, presence of children, immigration status, activity limitation, labour force participation, household income, monthly payments of household expenses, difficulty making payments, use of household budget ,and future time perspective.

F tests were applied to test for subgroup differences. Statistical significance levels are indicated as * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Matched Withdrawals

It takes time to accumulate matchable savings to earn enough matched credits for school or starting a small business. Participants may also need additional time to search or wait for suitable education and training (perhaps due to a timing problem) or to develop the required plan for a business. Therefore, the pace of withdrawals of *learn*$ave savings and matched credits was expected to be slow at the beginning of the program and to increase during its latter stages.

Before observing results on withdrawals, note that a majority of program group participants became eligible to earn/use matched credits early. At the 40-month mark, 82 per cent were eligible to use matched credits (had contributed at least $10 to their *learn*$ave account in each of 12 months) (Table 2.2). However, a large majority of these (about 80 per cent) had become eligible by 18 months (not shown in table).

Table 2.2 *learn*$ave Matched Withdrawals, During First 18 and 40 Months

	During First 18 Months[1]	During First 40 Months
Proportion who are eligible for matched withdrawals (%)	67.2	82.3
Average number of months it took to become eligible (among those eligible)	13.6	16.3
Proportion who used matched credits at least once (%)	27.0	58.4
Proportion of those eligible for matched withdrawals who used credits at least once (%)	37.4	70.9
Proportion who used the maximum amount of credits[2] (%)	4.1	20.2
Average number of matched withdrawals	2.1	3.7
Average matched credits used per participant ($)	589	1,829
Average proportion of earned matched credits used (%)	14.4	43.3
Proportion who used all matched credits earned (%)	4.9	23.9
Average amount withdrawn per matched withdrawal ($) (among those who withdrew)	1,836	1,806
Average amount withdrawn per person over the period ($) (among those who withdrew)	2,883	3,130
Sample size: 2,388		

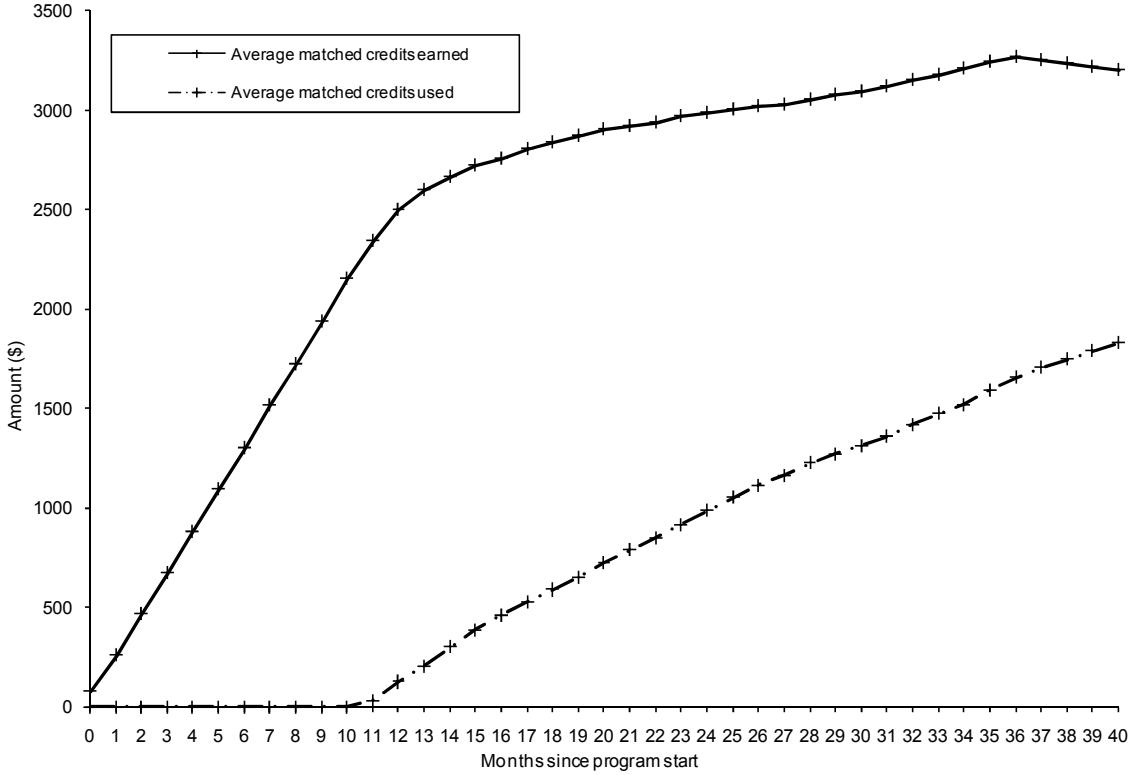
Source Participant Management Information System

Notes [1] Due to correction of records in the PMIS, some figures may differ slightly from those previously published.

[2] Participants who used $4,450 or more matched credits are considered to have used the maximum amount.

Table 2.2 also indicates that amounts withdrawn over the entire 40-month period were fairly similar to amounts withdrawn over the initial 18 months. For those who withdrew, the average amount withdrawn per withdrawal was about the same ($1,806 at 40 months versus $1,836 at 18 months), while the average amount withdrawn per person was slightly higher ($3,130 versus $2,883). However, credits could not be used until 12 monthly deposits of $10 had been made. Thus, Figure 2.4 shows that, after month 12, average credits used rose steeply; conversely, average credits earned, after having risen quickly up to that point, began to level off.

Figure 2.4 Average Matched Credits Earned and Used, by Month



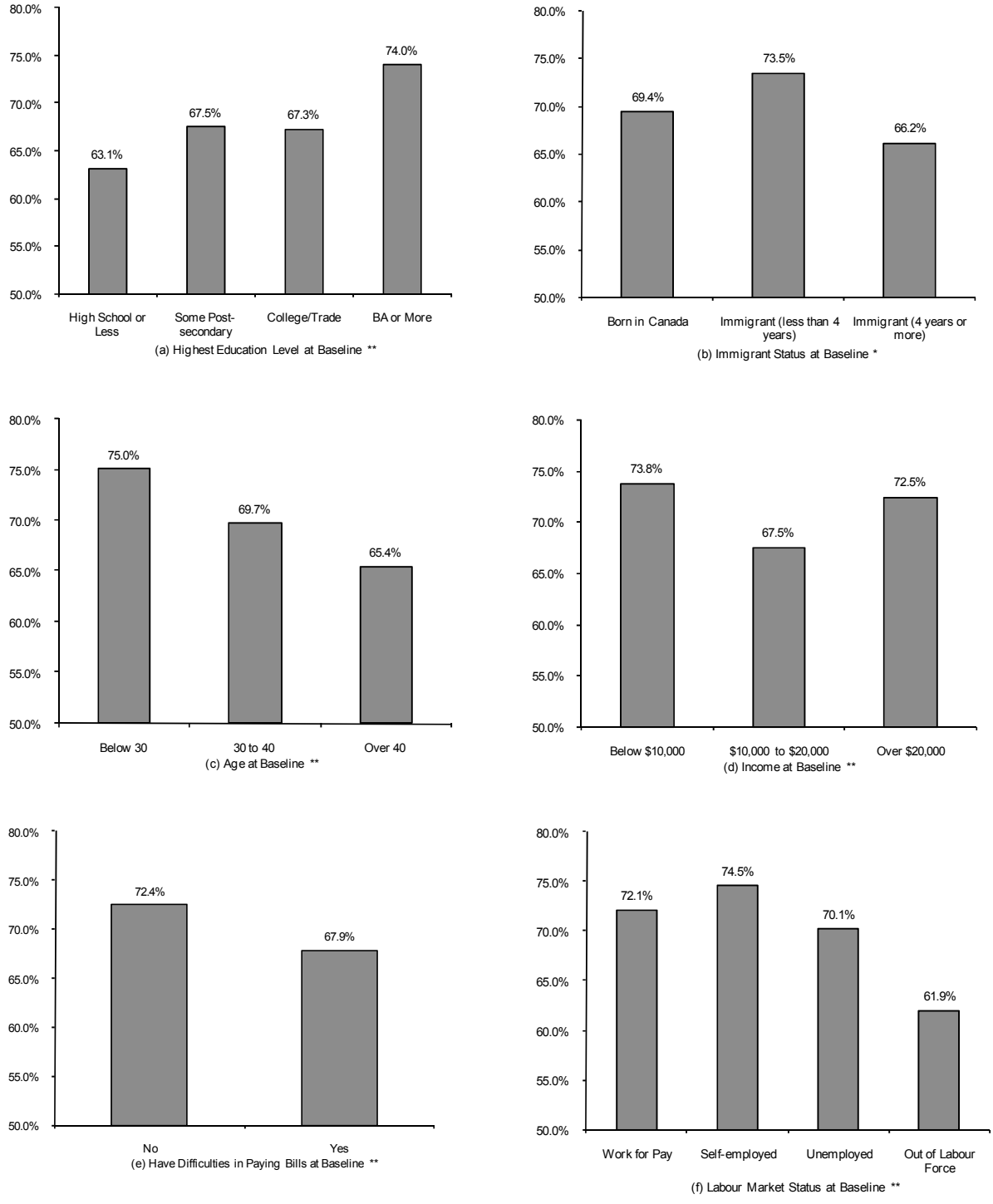
Source Participant Management Information System
Notes Sample size: 2,388.

By month 40, with eight months remaining to use matched credits, only about a fifth of participants used the maximum. The average proportion of earned matched credits used was less than half (43.3 per cent) (Table 2.2). Only about one-quarter of participants (23.9 per cent) had used all the matched credits they had earned during the first 40 months. Though use of matched credits is expected to accelerate in the last eight months of the program, under-utilization may still be present at month 48, owing possibly to a change in circumstances or a lack of learning opportunities.

Differences in the use of matched credits by participant characteristics may shed some light on motivations for using and not using matched credits. Figure 2.5 indicates that eligible participants who, at baseline, had more education, were younger, or were recent immigrants were more likely to withdraw at least once in the first 40 months. Not surprisingly, these are the same sub-groups of participants who, as seen earlier, were more likely to have saved to the maximum. However, there were differences by income level. Eligible participants with income between $10,000 and $20,000 at baseline were less likely to use matched credits, even though, as shown earlier, there were no significant differences in credits earned across income groups. Also, eligible participants encountering difficulties in paying bills and those not working at baseline were less likely to use their credits. This suggests that shorter-term extenuating circumstances may alter longer-term desires and plans for such things as education. However, with eight months remaining for participants to use their matched credits, it is still too early to speculate on the reasons for credit non-usage. This issue will be

examined again for the final report when data covering the whole program period become available.

Figure 2.5 Proportion of Eligible Participants who Used Matched Saving Credits, by Participant Characteristics



Source Participant Management Information System and Baseline Survey (for participant characteristics)

Notes Sample size: 2,388.

Levels shown have been adjusted for differences in baseline characteristics, including research group, *learn*$ave site, gender, age group, highest level of education, marital status, presence of children, immigration status, activity limitation, labour force participation, household income, monthly payments of household expenses, difficulty making payments, use of household budget, and future time perspective. F tests were applied to test for subgroup differences. Statistical significance levels are indicated as * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Financial Management Training and Case Management Services

Participants in the *learn*$ave-plus group were expected to attend 15 hours of financial management training prior to receiving matched withdrawals. As indicated in the early impacts report (Leckie et al., 2008), a large majority of participants in this group had received financial management training (about 85 per cent) by month 18, at an average of 14 hours each.

Table 2.3 presents the statistics on this training in the 40 months since enrolment. Since participation in financial management training was already quite high in the first 18 months, there was not much increase in the second half of the saving period. About 91 per cent of participants received some training by month 40, about 5 points higher than in the first 18 months. Similarly, the proportion of *learn*$ave-plus participants who received 15 or more hours of financial management training was about 80 per cent by month 40, somewhat higher than the proportion after 18 months (about 73 per cent).

Table 2.3 Incidence and Intensity of Financial Management Training, During First 18 and 40 Months

	During First 18 Months[1]	During First 40 Months
Proportion who received financial management training (%)	85.4	90.5
Proportion who received 9 or more hours (%)	79.1	86.0
Proportion who received 15 or more hours (%)	73.1	80.3
Average number of hours spent in training[2]	14.2	14.4
Sample size (*learn* $ave-plus): 1,193		

Source Participant Management Information System

Notes [1] Due to correction of records in the PMIS, some figures may differ slightly from those previously published.

[2] Among those who took some financial management training.

It was expected that case management services from project staff for both program groups would increase after the first 18 months due to matched withdrawal activity. Table 2.4 shows that, indeed, case management activities intensified after the first 18 months, particularly among the *learn*$ave-only group. Over the 40-month period, the vast majority of participants (95.3 per cent) received some services, compared to about 80 per cent over the first 18 months. The number of project-related services and contacts were considerably higher over the first 40 months than during the first 18 months. Also, project staff spent about three hours (about 180 minutes) with each participant on average during the 40 months, almost triple the approximate hour (about 66 minutes) spent over the first 18 months. This is indicative of the increased assistance needed for cash-outs.

Table 2.4 Provision of *learn*$ave Services to Participants, by Research Group, During First 18 and 40 Months

	During First 18 Months[1]	During First 40 Months		
		Total	*learn* $ave-only	*learn* $ave-plus
Proportion receiving any referrals (%)	2.4	5.7	2.3	9.1 ***
Average number of referrals	0.0	0.1	0.0	0.1 ***
Proportion receiving any project-related contact (%)	79.0	95.0	91.5	98.5 ***
Average number of project-related contacts	4.5	15.6	13.0	18.1 ***
Proportion receiving any services (%)	80.1	95.3	92.0	98.6 ***
Average number of contacts	4.8	15.9	13.2	18.6 ***
Average number of minutes spent with participants	66.1	179.7	145.9	213.5 ***
Sample size	2,388	2,388	1,195	1,193

Source Participant Management Information System

Notes [1] Due to correction of records in the PMIS, some figures may differ slightly from those previously published.
Two-tailed t-tests were applied to differences in measures between the program groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

As for differences between the program groups, 65 per cent of *learn*$ave-only participants received some services in the first 18 months compared to about 96 per cent of the *learn*$ave-plus group (Leckie et al., 2008, Table 4.4), but by the 40-month mark, the gap had narrowed appreciably (92 versus 98.6 per cent, Table 2.4 in this report). This is likely due to the need for cash-out assistance from project staff, which was provided to participants in both program groups. However, the average amount of time spent with the *learn*$ave-plus group continued to be higher than that of the *learn*$ave-only group (214 versus 146 minutes) because of the intensive case management services provided to the former.

Turning to the key question of whether or not the services made any difference on saving activities, the first section of Table 2.5 shows the estimates of the impacts of these services during the 36-month saving period. Consistent with the results at 18 months, *learn*$ave-plus participants were more active in saving than the *learn*$ave-only group: they had a higher average number of active savings months than *learn*$ave-only participants, by close to 1 month; the proportion eligible for matched withdrawals was higher for the *learn*$ave-plus group; and the average monthly amount deposited was also consistently higher for the *learn*$ave-plus group, by $2 per month. The *learn*$ave-plus participants also saved a higher average proportion of the maximum matchable savings ($1,500) and more of them saved the maximum matchable savings. At the end of the saving period, the *learn*$ave-plus group had on average $73 more in their account balance, $65 more in matchable deposits, and $44 more in non-matchable savings. Though statistically significant and positive, the impacts of *learn*$ave services remain small in substantive terms. For example, the $65 difference in average matchable deposits between program groups represents only 6 per cent of the *learn*$ave-only group's average deposits ($1,056). One possible reason for the apparent lack of impact of the services on deposits is that the financial training may have been too basic, which is suggested by larger impacts for those at the lowest education levels compared to those at higher levels (not shown here). This issue will be further investigated for the final report.

Table 2.5 Impact of Financial Management Training and Case Management Services on *learn*$ave Savings and Withdrawals, During First 40 Months

	learn $ave-only	*learn* $ave-plus	Difference (Impact)	Standard Error
***learn* $ave Saving Activity (during the 36-month saving period)**				
Proportion who opened learn$ave account (%)	91.7	95.1	3.3 ***	1.0
Average number of active saving months	13.4	14.2	0.8 ***	0.3
Average proportion of months actively saved (%)	37.2	39.5	2.3 ***	0.8
Proportion who actively saved in 12 or more months (%)	80.4	84.2	3.8 **	1.6
Average total matchable savings in *learn* $ave account ($)	1,056	1,121	65 ***	25
Average matchable savings per month ($)	29	31	2 ***	1
Average non-matchable savings ($)	95	139	44 **	21
Average proportion saved of the maximum matchable (% of $1,500)	70.4	74.8	4.3 ***	1.7
Proportion who saved maximum matchable amount (%)	51.1	57.3	6.2 ***	2.0
Average closing balance in *learn* $ave account ($)	712	785	73 **	35
Matched Withdrawals (during first 40 months)				
Proportion who used matched credits at least once (%)	56.4	60.4	4.0 *	2.0
Average number of matched withdrawals	2.2	2.2	0.0	0.1
Average amount of matched credits used ($)	1,786	1,873	87	77
Average proportion of matched credits used (%)	42.2	44.3	2.1	1.8
Proportion who used all matched credits earned (%)	23.9	23.9	0.0	1.7
Sample size	1,195	1,193		

Source Participant Management Information System

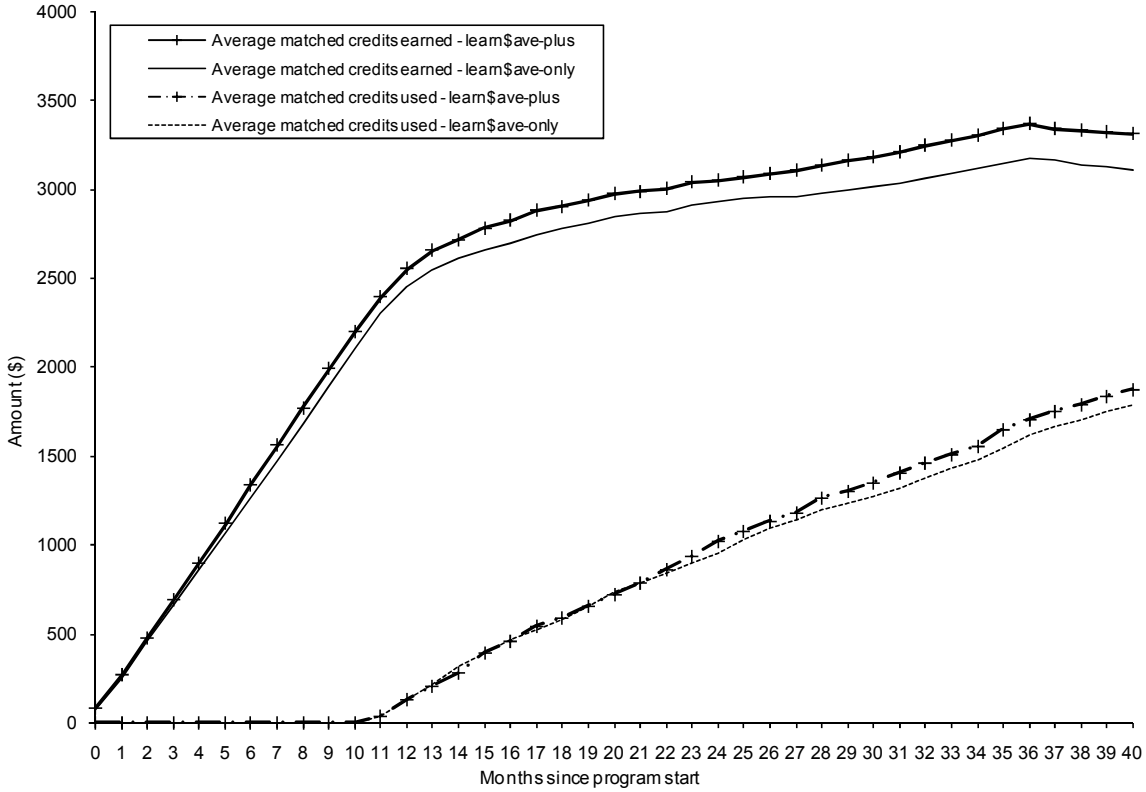
Notes Two-tailed t-tests were applied to differences in measures between the program groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Financial management training and case management services may also affect how and when participants use the matched credits they accumulate. The financial management training contained a saving goal-setting element, while the case management services reinforced goal attainment so may have accelerated use of credits. The bottom half of Table 2.5 reveals that the services made an even smaller difference in matched withdrawals than they did for matched deposits. The only statistically significant impact the services had on withdrawals involved the proportion who used matched credits at least once (four percentage points higher for those who received the services). However, this is a small difference. There is virtually no difference in the average number of withdrawals and level and proportion of matched credits used between the two program groups during the 40-month period. However, given that the *learn*$ave-only group earned a greater number of matched credits, it is possible that the services may have had an influence on the use of those credits in the last eight months of the cash-out period, which would be revealed in the final *learn*$ave report.

Finally, Figure 2.6 confirms that the difference that the services made grew somewhat over time but remained quite small. As the top two bars of the figure indicate, from month 29 onward, the difference in average accumulated matchable savings was at least $50 (statistically significant at the 5 per cent level) and grew slowly from month to month,

indicating the impact of the services on saving was also increasing gradually. However, the bottom two bars of Figure 2.6 indicate that, while the difference in average credits used between program groups also increased over time, it remained very small at month 40.

Figure 2.6 Average Matched Saving Credits Earned and Used, by Month and Program Group



Source Participant Management Information System
Notes Sample size: 2,388.

Differences in Participation by Saving Stream

Participants with different saving goals (education/training or micro-enterprise) may behave differently. The top portion of Table 2.6 indicates that participants in the education stream saved somewhat more than the micro-enterprise stream, but the differences were relatively small. Education stream participants had a greater average number of months of active saving (1.1 months more); had a higher proportion who qualified for matched credits, i.e., saved for 12 or more months (about 84 versus 77 per cent); made higher monthly matchable deposits ($2 more) and had about a $60 higher balance; and had a higher average proportion of maximum matchable savings saved (about 73 versus 69 per cent).[2]

[2] Note that the differences between the two streams largely reflect pre-existing differences in participants' characteristics instead of the effects of different saving goals. Indeed, most of the differences shown in the table are not statistically significant after adjustment for the pre-existing differences in participants' characteristics. It is also possible that there are other, unobserved differences between the two streams even after adjustment.

Table 2.6 *learn*$ave Activities, by Saving Stream, During First 36 and 40 Months

	Education Stream	Micro-Enterprise Stream	
Proportion who Opened a *learn* $ave Account	93.9	91.0	
***learn* $ave Saving Activities (during the 36-month saving period)**			
Average number of active saving months	14.0	12.9	***
Average proportion of months actively saved (%)	38.8	35.9	***
Proportion who actively saved in 12 or more months (%)	83.6	77.0	***
Average total matchable savings in *learn* $ave account ($)	1,100	1,041	*
Average matchable savings per month ($)	31	29	*
Average non-matchable savings ($)	122	95	
Average proportion saved of the maximum matchable amount (% of $1,500)	73.4	69.4	*
Proportion who saved maximum matchable amount (%)	54.0	55.5	
Average closing balance in learn$ave account ($)	737	794	
Matched Withdrawals (during the first 40 months)			
Proportion who are eligible for matched withdrawals (%)	83.6	77.0	***
Average number of months it took to become eligible (among those eligible)	16.1	17.3	***
Proportion who used matched credits at least once (%)	61.5	45.0	***
Proportion of those eligible for matched withdrawal who used credits at least once (%)	73.5	58.4	***
Proportion who used the maximum amount of credits[1] (%)	19.0	25.7	***
Average number of matched withdrawals	3.9	2.6	***
Average amount of matched credits used per participant ($)	1,878	1,624	***
Average proportion of earned matched credits used (%)	44.7	37.2	***
Proportion who used all matched credits earned (%)	22.9	28.3	**
Average amount withdrawn per matched withdrawal ($) (among those who withdrew)	1,539	3,356	***
Average amount withdrawn per person over the period ($) (among those who withdrew)	3,047	3,612	***
Financial Management Training (*learn* $ave-plus only, during first 40 months)			
Proportion received financial management training (%)	91.4	86.7	**
Proportion received 9 or more hours (%)	86.7	83.3	
Proportion received 15 or more hours (%)	81.2	76.4	*
Average number of hours spent in training[2]	14.4	14.4	
Sample size			
All participants	1,931	456	
***learn* $ave-plus**	959	233	

Source Participant Management Information System

Notes [1] Participants who used $4,450 or more matched credits are considered to have used the maximum amount.

[2] Among those who received financial management training.

Two-tailed t-tests were applied to differences in measures between the saving streams.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

The middle portion of Table 2.6 shows some interesting differences in matched withdrawals by saving stream. The percentage of education stream participants who had used credits in the 40 months was higher than that of the micro-enterprise stream participants. Education stream participants also had a higher average number of withdrawals, but the percentage of them who used the maximum amount of matched credits was lower. Of those who had used matched credits, the average amount withdrawn per withdrawal by participants in the education stream was less than half that of micro-enterprise stream participants ($1,539 versus $3,356), and the average matched credits used per person who used the credits was

lower among education stream participants ($3,047 versus $3,612). These results indicate that educational use of matched credits was of higher frequency but of lower amount than business development use was. People need larger though less frequent sums of money to purchase or start a small business than they do to enroll in education or training.

The final section of Table 2.6 presents statistics on financial management training by saving stream among *learn*$ave-plus participants. The differences between streams were not substantively significant.

In Summary

The evidence presented above on *learn*$ave account activity covering the entire 36-month saving eligibility period plus 4 additional months reveals a number of interesting key findings.

First, the results show that a large number of deposits in *learn*$ave accounts occurred early in the saving period, and that many participants exercised their use of accumulated savings credits quite early in the period. A possible explanation is that, for these participants, *learn*$ave may have accelerated their plans to take courses to further their education, or it may have simply provided them with a subsidy for an activity that they would have undertaken anyway, thus representing a potential windfall gain.

Indications are of an overrepresentation of new immigrants, participants with higher education and younger participants. Indeed, individuals with these characteristics were much more likely than others to reach the maximum savings of $1,500 eligible for matched credits and to make early withdrawals.

On the other hand, the intermediate results presented in this chapter also show that about a half the participants had not saved the maximum amount. This suggests that, for some participants, saving for education may have proved to be challenging or circumstances in their life have caused them to abandon this goal.

The results also point to the need to pay particular attention to the behaviour of sub-groups, suggesting that participants' response to *learn*$ave may differ considerably according to personal characteristics. More in-depth analysis will be conducted for the final report to see if better targeting and/or modifications of the design of this type of program would be appropriate.

The other important finding is that *learn*$ave financial management training and case management services did not greatly influence *learn*$ave deposit and cash-out activity. While there is evidence that the *learn*$ave-plus participants accumulated more savings than *learn*$ave-only participants, the difference is small in substantive terms. One potential reason may be that the financial management training curriculum had been too basic for the nature of the clientele who signed up for *learn*$ave.

Chapter 3: Impacts on Budgeting, Savings, Net Worth, and Hardship

The objective of this chapter is to determine whether or not expected scenarios regarding budgeting, savings and other net worth components, and hardship held true for *learn*$ave participants up to month 40.

First, the generous matched saving incentive was expected to encourage participants to alter their budgeting behaviour, including setting financial goals in order to increase their *learn*$ave deposits. This should be particularly true for participants who had access to financial management training, which was expected to help them set and reinforce savings goals and manage their budgets so that they could more easily achieve those goals.

Second, evidence will be presented on the hypotheses that *learn*$ave participation will lead to an increase in participants' net savings and total net worth. The increased budgeting and matched credits were expected to lead to greater savings, particularly in the earlier period of the project. These are savings in the broadest sense of the word, i.e., an increase over time in the sum of chequing/savings and *learn*$ave account balances and values of other financial assets. Because savings could come from a variety of sources – income, increased borrowing, reduced financial investments, or disinvestment in non-financial assets such as household goods and property – it is important to monitor the participants' total net worth as well as its composition.

Finally, the chapter will present evidence of whether or not this process of saving for and receiving matched credits, along with the resulting changes in financial behaviour, caused undue hardship for participants.

Impacts on Budgeting and Financial Goal Setting

Budgeting and financial goal setting were expected to be improved as a result of participation in *learn*$ave. In order to find the cash to deposit in *learn*$ave accounts, participants would need to do a minimum of budgetary planning. Furthermore, one key objective of the financial management training and case management services was to increase the proportion of participants who set financial goals and budgeted in order to achieve those goals. However, it could also be argued that life itself provides opportunities to learn these skills when paying bills or saving toward a goal. Consequently, it is an open question whether or not *learn*$ave will increase the financial goal setting and budgeting of the program groups beyond what the control group learns through life alone.

The results in Table 3.1 show that the matched credits, alone and in combination with the added services, had positive impacts on setting financial goals. At month 40, the *learn*$ave-only group was, on average, more than 4 percentage points more likely to have set financial goals than the control group and the *learn*$ave-plus group was about 12 percentage points on average more likely to have done so. These positive impacts were similar to those observed at 18 months.

Table 3.1 Impacts on Budgeting at 40 and 18 Months – Incidence, All Participants – Adjusted

	At 40 Months				At 18 Months			
	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
% who set financial goals	53.6	4.4 *	7.6 ***	12.0 ***	56.2	5.1 **	7.4 ***	12.4 ***
% who had a household budget	47.6	4.3 *	2.2	6.5 **	44.6	6.0 **	5.1 **	11.1 ***

Source Calculations from 40-month and 18-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey, and 748, 920, and 915, respectively, for the 18-month survey. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

The *learn*$ave credits also had a positive impact on budgeting, albeit reduced from what it was at 18 months. The *learn*$ave-only group was about 4 percentage points more likely to have had a budget at month 40 than the control group, while the *learn*$ave-plus group was about 7 percent more likely. This suggests that the matched credits were a major impetus behind the budgeting, with the services not playing a significant incremental role. The results of these impacts were not quite as strong as they were at 18 months.

Impacts on Saving

Results are presented in this section to test the *learn*$ave hypothesis that matched credits and accompanying services would increase participants' total net savings. Here savings are defined as changes over time in the value of total financial assets, measured as the sum of bank/*learn*$ave accounts, longer-term investments such as bonds and stocks, and retirement savings, of which participants could hold only minimal amounts of at baseline[1]. The expectation was that program group participants would be motivated to put money aside to a greater extent than the control group, not just in their *learn*$ave account but in all savings vehicles. This issue is examined from the perspectives of both level and saving incidence. The rationale behind IDAs is that matched saving credits and accompanying financial training and saving goal reinforcement should increase not only the total amount of funds put aside, as per the *learn*$ave hypotheses, but also the number of people who (regularly) put aside funds, i.e., saving incidence (Sherraden 1991).

The results indicate that *learn*$ave had no impact on the total net savings up to month 40. As shown in Table 3.2, between baseline and month 18, the *learn*$ave matched credits increased average financial savings by $583 ($32 per month) and the combined impact of the credits and services was slightly larger. However, from baseline to month 40, neither

[1] To qualify for *learn*$ave, participants could not hold liquid assets in excess of 10 per cent of their income or $3,000.

program group experienced any real gains in financial savings[2]. This implies that average financial assets declined over the intervening period between months 19 and 40. In fact, during this period, other results not shown indicate that average financial assets of the *learn*$ave-only group fell by $1,222 ($56 per month) relative to the control group while those of the *learn*$ave-plus group fell by $640 ($29 per month). One plausible explanation is that *learn*$ave participants postponed some consumption or bought cheaper goods in the early months thus saving more than the control group in order to earn high-return matched credits. They then saved less than the control group during the latter months when they were withdrawing their savings and cashing out their credits to purchase education or starting a small business. The end result is that *learn*$ave had no impact on the total net savings of program participants over the entire period during which matched credits were available. This conclusion is supported by data on self-reported savings over the year prior to the 40-month survey, which show that the impact of *learn*$ave on average net savings was negative (see Table 3.3, first row).

Table 3.2 Impacts on Savings (Change in Financial Assets) at 18 Months and 40 Months ($), All Participants – Adjusted

	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
Baseline to 18 months	583 **	91	674 ***
18 months to 40 months	-1222	582	-640
Baseline to 40 months	-639	673	34

Source Calculations from 40-month survey data.

Note Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey, and 748, 920, and 915, respectively, for the 18-month survey.
Sample sizes vary for individual measures because of missing values.
Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.
Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table 3.3 Self-Reported Savings over Past Year, at 40 Months, All Participants – Adjusted

	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
Amount saved in past year ($)	2,569	-561 **	176	-384
Saved in past year (%)	52.2	2.1	3.7	5.8 **
Did not save in past year (%)	47.8	-2.1	-3.7	-5.8 **

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey. Sample sizes vary for individual measures because of missing values.
Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.
Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

[2] Broader savings measures, such as the change over time in total net worth, also did not reveal any statistically significant differences in savings among research groups at either month 18 or month 40.

The results further indicate, however, that *learn*$ave matched credits and services increased saving incidence, i.e., the proportion of participants who reported saving during the year prior to the 40-month survey. Participants in the *learn*$ave-plus group were 5.8 percentage points more likely to have reported they saved in the previous year than the control group, as shown in row 2 of Table 3.3. This suggests that the combination of matched saving credits and services was successful in turning some non-savers into savers. However, this increased saving activity did not translate into increased amounts of savings, as noted above.

Impacts on Level and Composition of Net Worth

As participants may be expected to alter the composition of their asset and debt portfolios in response to the *learn*$ave matched saving incentive in order to increase their savings, it is necessary to document what happened to their entire net worth, measured as the sum of financial and non-financial assets, net of debts.

Control Group Performance

Before looking at impacts, it is instructive to examine what happened to the control group, which represents how the program groups would have done without *learn*$ave and whose outcomes are compared to the program groups'. Table 3.4 shows that, by month 18, control group members were on average beginning to make modest gains[3]. They had average total assets of about $19,600 and debts of about $15,300 – so that their average net worth was just close to $4,300. Over the next 22 months, the control group made substantially more progress. By month 40, their average total assets had more than doubled to about $48,200 and their debts to about $31,500. As a result, the average net worth of the control group was about $16,800 at month 40 – almost 4 times what it was at month 18. These results show that, in the absence of *learn*$ave, the average program group participant would have experienced increased net worth. These participants would have acquired, and experienced rapid growth in the value of, assets and liabilities in a wide variety of areas such as property, vehicles, household goods, and a multitude of financial assets and loans. In other words, these "average" participants were not permanently locked out of the financial system and into a static condition without savings, debts, and net worth. Rather, their baseline asset-poverty was a temporary state from which they quickly emerged without government assistance. However, these trends should be seen in the context of a growing economy where assets, particularly homes, were growing in value.

[3] These figures are based on data collected by a telephone survey from participants and therefore contain at least some inevitable element of respondent recall error. However, there is no reason to believe there would be any differences in errors across research groups, which implies this will have no systematic effect on the impact estimates.

Table 3.4 Impacts on Asset and Debt Components of Net Worth at 40 and 18 Months ($), All Participants – Adjusted

	At 18 Months	At 40 Months			
	Control Group Mean	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
ASSETS					
Financial Assets					
Bank + *learn* $ave accounts	1,358	1,923	508 *	-134	374
Formal retirement savings plans	399	2,539	-891 **	359	-531
Other financial assets	783	1,053	-256	447 *	191
Total Financial Assets	**2,540**	**5,515**	**-639**	**673**	**34**
Non-Financial Assets					
Vehicles	1,107	2,566	135	-97	38
Value of goods in house	4,225	7,241	-2,693 **	-279	-2,972 ***
Home and other property	10,984	31,732	6,200	-1,667	4,533
Business assets	703	1,165	322	110	431
Total Non-Financial Assets	17,019	42,704	3,965	-1,934	2,030
Total Assets	**19,560**	**48,219**	**3,326**	**-1,261**	**2,065**
LIABILITIES					
Credit cards	1,202	1,718	-308	48	-260
Student loans	4,224	4,828	903	-177	726
Mortgages	8,329	20,880	1,700	877	2,577
Business debts and liabilities	533	368	42	-156	-114
Other debts and liabilities	1,012	3,644	405	-775	-369
Total Liabilities	**15,301**	**31,438**	**2,743**	**-183**	**2,559**
NET (Assets-Liabilities)					
Net property assets	2,654	10,853	4,500	-2,544	1,956
Net business assets	170	797	279	266	545
Net worth minus household goods	34	9,541	3,276	-799	2,477
Total Net Worth	**4,259**	**16,781**	**583**	**-1,078**	**-495**

Source Calculations from 40-month and 18-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey,and, for the control group, 748 for the 18-month survey. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

Still, what is true of the average participant may not necessarily be true of all, or, even most, participants. Assets and net worth tend to be concentrated among a minority, as data from national surveys indicate (Morissette and Zhang 2006). Indeed, preliminary results suggest that many *learn*$ave participants have substantially less net worth than the average. To explore this issue, further analysis of the incidence and distribution of assets, liabilities, and net worth will be conducted in the next round of analysis and the results presented in the final report.

The relatively small size of the *learn*$ave saving maximum should also be noted. At 40 months, the average assets of the participants in all groups were more than 30 times the *learn*$ave maximum saving amount of $1,500, while the average net worth of participants was more than 10 times that amount. Thus any reasonable increases in average assets, net

worth, or savings caused by *learn*$ave will be relatively small compared to the value of other assets and liabilities and, consequently, will have a relatively minor effect on the lives of many program group members. For the same reason, any reasonable impact of *learn*$ave credits would be difficult to detect amid the natural variability of these substantially larger assets and liabilities.

Impacts on Net Worth

Returning to *learn*$ave impacts, there is no evidence that the matched credits or services had any effect on the average total net worth of participants up to month 40. The net worth impact estimates shown in the last row of Table 3.4 are not statistically significant, as are the estimates of impacts on the levels of total financial assets, total non-financial assets, total assets, and total liabilities shown elsewhere in the table.

However, there have been changes in the composition of financial assets. Table 3.4 indicates that the matched credits increased the balance in bank and *learn*$ave accounts by about $500, on average, while average retirement savings plans fell by about $900. This reduction in retirement savings for the *learn*$ave-only group seems to have been dampened by the addition of financial management training and case management services.

The results further indicate that *learn*$ave served to lower the average value of household assets such as appliances and furniture. At month 40, the *learn*$ave-plus group owned household goods worth, on average, close to $3,000 less than the control group. This impact is much more substantial than at month 18 when the difference was only $900 (not shown in table). The impact for the *learn*$ave-only group was similar. These are the largest impacts in Table 3.4 and the clearest indication that *learn*$ave caused less spending on consumption-like goods, by buying either fewer or cheaper goods.

Finally, Table 3.4 reveals no significant effects on liabilities. Thus, there is no evidence that participants incurred greater debt just to take advantage of the generous saving matched rate of *learn*$ave.

Hardship Effects

The *learn*$ave model assumes that, in order to set money aside for their *learn*$ave accounts, participants would reduce their current level of consumption. If this meant reduced spending on basic necessities, then greater savings could lead to increased hardship for participants. But it is also possible that participants would increase their "consumption efficiency" and manage to achieve the same level of well-being with more efficient spending or simply by reducing consumption of certain goods and services that have not much consequence on their daily lives.

Table 3.5 shows that the impact of *learn*$ave on hardship levels was for the most part not significant. While the combined effect of *learn*$ave credits and services was not increased hardship in the year prior to the 40-month survey, the *learn*$ave matched credits exerted small but offsetting hardship effects, raising incidence of borrowing to meet needs (by 4.4 percentage points) but lowering use of the food bank (by 2.1 percentage points). Both these results suggest that, in the year prior to month 40, there was no evidence of substantial hardship caused by the *learn*$ave-induced changes in financial behaviour described above.

On the other hand, it should be noted that, while hardship incidence did decline from month 18 to 40, about a third of participants continued to experience some hardship at month 40.

Table 3.5 Impacts on Hardship Experienced in Previous Year, at 40 Months – Incidence, All Participants – Adjusted

	At 40 Months				At 18 Months			
	Control Group Mean	Impacts of Financial Incentive	Added Impacts of Services	Impacts of Incentive & Services	Control Group Mean	Impacts of Financial Incentive	Added Impacts of Services	Impact of Incentive & Services
% who had difficulty meeting expenses	23.9	2.1	-2.4	-0.3	33.5	-1.3	-1.6	-2.9
% who had to borrow to meet needs	17.1	4.4 **	-3.3 *	1.1	25.3	-1.5	0.3	-1.2
% who used a foodbank	5.6	-2.1 *	1.6	-0.6	5.8	0.8	0.9	1.7
% who declared bankruptcy	0.7	0.7	-1.1 **	-0.4	0.9	-0.7 *	0.3	-0.4
% who had overdue bills	4.2	-1.3	1.7 *	0.4	3.8	-0.5	0.2	-0.3
% who had at least one of above items	31.9	2.5	-2.8	-0.3	41.3	-1.3	-0.2	-1.4
Number of hardship items (average)	0.5	0.04	-0.03	0.00	0.7	0.0	0.0	0.0

Source Calculations from 40-month and 18-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey, and 748, 920, and 915, respectively, for the 18-month survey. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

In Summary

Both the *learn*$ave credits alone and in combination with the services had a positive impact on setting financial goals at month 40. The impact was driven mainly by the matched credits, suggesting that the act of saving and dealing with household finances, quite apart from instruction on how to do so, can increase the incidence of budgeting.

The results do not support the hypothesis that *learn*$ave would increase overall savings for participants, at least up to month 40. Total financial assets, a measure of overall savings levels, rose over the initial 18 months and declined in the latter 22 months, matching the current pattern of saving early and cashing-out later observed in Chapter 2. However, it is noteworthy that the matched credits and services together increased the proportion of those who reported saving in the previous year, a time when the end of the cash-out period loomed and one would have expected there to be less saving. This finding possibly corroborates contentions made by original IDA proponents that matched saving schemes like IDAs would increase saving incidence.

There was no evidence as well that *learn*$ave had increased the average net worth of participants, as it rose to a similar extent in all three research groups, driven in large part by

increased house values over the period. The rapid rise in net worth across all research groups, including the control group, suggests the transitory nature of asset-poverty, at least for the average participant, which will be further investigated for the final report. This also demonstrates the value of a randomly assigned control group, as the effect of *learn*$ave would have been highly overestimated by comparing the program groups' net worth at month 40 to the lower values at baseline.

While *learn*$ave did not increase the level of net worth until now, it did alter its composition. The *learn*$ave matched credits led to higher average bank/*learn*$ave account balances and reduced retirement savings. The credits also lowered average values of household assets suggesting participants were "buying smarter," likely to free up funds for their high-return *learn*$ave accounts.

There was no evidence that *learn*$ave had caused participants undue hardship. Despite the changes in budgeting, consumption, and investment behaviour brought on by *learn*$ave, program group participants for the most part did not experience higher levels of debt or financial difficulties relative to the control group.

Chapter 4: Impacts on Education, Labour Market Outcomes, and Small Business Start-up

This chapter focuses on the main objective of the Individual Development Accounts (IDAs) tested in *learn*$ave, which is to encourage participants, by means of matched saving credits and financial management training and case management services, to save for and participate in their education or a small business start-up as a way to increase their human capital and economic prospects. At 18 months following enrolment, education and self-employment impacts had not yet been observed, as reported in the early impacts report (Leckie et al., 2008). However, by 40 months, these impacts should be observed, as participants have had up to another 22 months to use earned matched credits for education or small business start-up.

The first three sections of this chapter present evidence on *learn*$ave impacts on education and training for participants in the education stream. The first is concerned with attitudes toward education; the second, with education and training participation; and the third, with labour market outcomes. The final section presents results for impacts on education outcomes, employment, and self-employment for the micro-enterprise stream.[1]

Impacts on Attitudes Toward Education

Improved attitudes toward education are expected through two avenues. First, it is hypothesized that the act of saving, induced by the matched credits, will encourage participants to think more about their education and training needs, which in turn would alter their attitudes toward education and training. Second, the *learn*$ave financial management training and intensive case management services, provided only to the *learn*$ave-plus group, are hypothesized to directly enhance attitudes toward education, as their focus is on helping participants identify their goals and the education needed to meet them.

To assess participants' attitudes toward education, survey respondents were asked on four-point scales whether they strongly disagree, disagree, agree, or strongly agree with each of four attitudinal statements on education, focused on the link between education and employment. The first observation from the results of the survey questions on attitudes toward education, presented in Table 4.1, is that a large majority of *learn*$ave participants, whether they belonged to the control or program groups, had a positive attitude toward education. This is not surprising, as most[2] education-stream participants who volunteered for *learn*$ave must have been interested in participating in education or training.

A second observation is that *learn*$ave continued to exert a positive impact on participants' attitudes toward education. Participants in the program groups were significantly more likely to have favourable attitudes toward education than those in the

[1] Participants in the micro-enterprise stream can use their matched credits for **either** micro-enterprise and/or education/training, which is why both education and self-employment impacts are observed for this group.

[2] Since there was a 20 per cent quota for the micro-enterprise stream at each site, it is possible that some of those who ended up in the education stream may not have been primarily interested in education.

control group in all attitudinal questions, despite the latter group's highly positive responses.[3] This impact is similar to what it was at 18 months, sometimes stronger and sometimes weaker, depending on the question.

The third observation is that the improved attitudes toward education are attributed primarily to the matched saving credit and less so to the financial management training and case management services, as there were few significant differences between the *learn*$ave-only and *learn*$ave-plus groups' responses to the attitudinal questions. This suggests that actions taken toward attaining a goal may be more important factors in attitudinal change than instruction and external reinforcement of goals.

Turning to the detail presented in Table 4.1, the first panel indicates that, at 40 months, about 90 per cent of the control group agreed or strongly agreed that getting a good job depends on one's education. The financial incentive (matched saving credits) increased the chances even further that participants would believe there is a positive link between education and a good job. The *learn*$ave-only group was 5.7 percentage points more likely than the control group to strongly agree that "getting a good job depends on my education," and 1.6 points less likely to strongly disagree with this statement. There were no significant differences between the *learn*$ave-plus and *learn*$ave-only groups, indicating that *learn*$ave services did not play a significant additional role in engendering positive responses to this question.

[3] Owing to random assignment, the education attitudes of the *learn*$ave-only, *learn*$ave-plus, and control groups were assumed to be identical at baseline and therefore differences at 40 months should be attributable to the *learn*$ave treatment.

Table 4.1 Impacts on Attitudes Toward Education -- Percentage Distribution at Months 18 and 40, Education Stream – Adjusted

Statement and Level of Agreement	At 40 Months: Control Group Mean	At 40 Months: Impact of Financial Incentive	At 40 Months: Added Impact of Services	At 40 Months: Impact of Incentive & Services	At 18 Months: Control Group Mean	At 18 Months: Impact of Financial Incentive	At 18 Months: Added Impact of Services	At 18 Months: Impact of Incentive & Services
Getting a good job depends on my education								
Strongly disagree	1.9	-1.6 ***	0.4	-1.2 **	1.8	-1.0 *	-0.1	-1.1 *
Disagree	6.4	-1.3	0.4	-0.8	10.1	-4.4 ***	0.7	-3.6 **
Agree	51.7	-2.9	1.5	-1.3	54.6	-3.3	-1.3	-4.6 *
Strongly agree	40.0	5.7 *	-2.3	3.4	33.4	8.6 ***	0.7	9.3 ***
I need more schooling to find a good job								
Strongly disagree	2.9	-1.7 **	0.0	-1.7 **	1.3	-0.6	0.0	-0.6
Disagree	20.5	-4.4 *	2.9	-1.5	14.6	-4.7 ***	0.1	-4.6 ***
Agree	50.7	-1.3	4.0	2.8	51.3	0.7	3.1	3.9
Strongly agree	25.9	7.4 ***	-6.9 ***	0.5	32.9	4.5 *	-3.1	1.4
No matter how much education I get, I will most likely end up with a low-paying job								
Strongly disagree	27.3	-0.5	-1.8	-2.3	23.4	1.7	1.2	2.9
Disagree	57.2	2.3	-0.9	1.4	55.0	6.2 **	-1.9	4.3
Agree	12.0	0.5	1.9	2.4	18.4	-5.9 ***	0.5	-5.5 ***
Strongly agree	3.5	-2.3 ***	0.8	-1.5 *	3.1	-1.9 **	0.2	-1.7 **
It is not worth going into debt to go to school								
Strongly disagree	7.9	4.0 **	-0.3	3.7 *	11.8	1.9	-4.1 **	-2.2
Disagree	65.0	-1.9	0.6	-1.3	56.1	5.6 **	4.4 *	10.0 ***
Agree	23.6	-2.0	0.6	-1.4	28.2	-6.7 ***	-0.1	-6.8 ***
Strongly agree	3.4	-0.2	-0.9	-1.1	3.9	-0.8	-0.1	-0.9

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 483, 683, and 662, respectively, for the 40-month survey, and 605, 748, and 738, respectively, for the 18-month survey. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

A similar pattern was exhibited for the statement "I need more schooling to find a good job." Again, even though a large majority (87 per cent) of the control group agreed or strongly agreed with this statement, *learn*$ave improved upon this already high incidence. The *learn*$ave-only group was 7.4 per cent more likely to strongly agree, and 6.1 per cent less likely to disagree or strongly disagree with this statement than the control group. This impact was somewhat stronger than it was at 18 months (4.5 and 5.3 percentage points, respectively). However this time, unlike at 18 months, the services played a significant

negative role, as there was a -6.9 percentage point difference between the *learn*$ave-only and *learn*$ave-plus groups in the proportion who strongly agreed with the statement. This result is difficult to explain. A possible explanation is that the financial management training increased participants' confidence that they could find jobs by means other than education.

The *learn*$ave-only group was also more likely to see the future value of their education than the control group. Again, the control group scored strongly on this measure: most members (about 85 per cent) disagreed with the statement "No matter how much education I get, I will most likely end up with a low-paying job." Only 3.5 per cent of the control group strongly agreed with the statement. As for impacts, there was a -2.3 percentage point difference between the *learn*$ave-only and control groups in the proportion who strongly agreed, indicating that the matched credits reduced an already low proportion even further.

The final panel of Table 4.1 indicates that *learn*$ave had a positive impact on participants' tolerance of student debt. Although almost three-quarters of the control group disagreed or strongly disagreed with the statement "It is not worth going into debt to go to school," the proportion of the program group participants disagreeing was even higher, by 4 percentage points.

Impacts on Education and Training Participation

One of the main goals of *learn*$ave is to encourage participants to pursue further post-secondary education. This section focuses on the extent to which this objective was attained by the 40-month mark following enrolment into *learn*$ave. Unlike the point-in-time estimates presented in the preceding section with regard to education attitudes, impacts presented here are incidence and mean dollar estimates covering the 40-month period since enrolment in the project. Results in this section are for education stream participants only.

Note that the results presented here are partial results; participants still have another eight months to cash out their earned matched credits. A more complete picture, covering the final eight months and an additional six months in the post-intervention period, will be provided in the final report, in which results from the 54-month survey will be included.

Note also that participants in the *learn*$ave-only and *learn*$ave-plus groups can pursue a wide variety of education and training using their matched credits — provided that it is at an accredited institution. This consists of both (1) education taken as part of a program toward a degree, diploma, or certificate and (2) individual courses outside of a formal education program.

The first thing to observe about the results presented in Table 4.2 is that a large majority of the control group had participated in some education or training over the first 40 months. About 80 per cent of the control group entered education or training of some kind, with about 54 per cent enrolled in courses as part of a certificate/degree program and about 44 per cent in courses outside of a program. These participation rates may seem rather high compared to the usual statistics on the incidence of education and training among the adult population as a whole. However, it is important to realize that the *learn*$ave surveys asked participants whether or not they had taken education or training since the time of enrolment in the project, i.e, in the preceding 40 months, whereas national surveys from which statistics on the

incidence of education and training are usually derived ask people to report education activities over the preceding 12 months only.[4] Furthermore, as mentioned earlier, *learn*$ave participants had already expressed an interest in education and training by volunteering for the project in the first place. It is therefore not surprising to observe a higher rate of adult education enrolment among *learn*$ave participants, including those who had been randomly assigned to the control group.

Table 4.2 Impacts on Participation in Education and Training, During the first 18 and 40 Months, Education Stream – Adjusted

	During First 40 Months				During First 18 Months			
	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
Overall (Program or Individual Course)								
Enrolled in any education/training since baseline (%)	78.6	4.7 **	2.7	7.4 ***	65.9	-1.3	1.9	0.5
Educational Programs								
Enrolled in courses toward a degree, diploma or certificate (%)	54.4	8.2 ***	3.8	12.0 ***	44.3	1.9	1.1	3.1
Program type (first program) (%)								
English as a second language (ESL)	4.8	-0.3	1.4	1.1	4.8	-1.0	1.3	0.3
High school	2.4	1.9 *	-1.0	0.9	2.5	1.1	-1.0	0.2
apprenticeship	6.1	0.0	-1.0	-1.0	5.5	0.1	-1.6	-1.5
Community college	28.5	2.5	3.0	5.6 **	20.0	-1.6	1.9	0.3
University	16.8	5.5 **	2.5	8.0 ***	12.6	3.2 *	0.5	3.7
Completed program (%)	31.8	1.3	3.1	4.3	12.3	0.8	-0.4	0.4
Individual Courses, not Part of a Program								
Enrolled in other (non-program) education courses, seminars, etc. (%)	44.3	1.7	1.8	3.5	29.5	-3.2	-0.2	-3.4
Completed one or more courses (%)	37.9	-2.1	1.3	-0.8	24.5	-5.4 **	1.1	-4.3

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 483, 683, and 662, respectively, for the 40-month survey, and 605, 748, and 738, respectively, for the 18-month survey. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

[4] Results from the Statistics Canada 2003 Adult Literacy and Life Skills Survey (ALL), part of the International Adult Literacy and Skills Survey, indicate that the rate of participation in adult education and training for medium/highly literate Canadians 16-65 years of age was 50 per cent in 2002. However, the *learn*$ave results are for those at all literacy levels (though the fact that *learn*$ave participants were highly educated suggests they would be highly literate as well) and the ALL results cover those 16-17 years of age who might be expected to have lower adult learning participation rates (whereas the *learn*$ave age criterion was 18 years and over). See Rubenson, Desjardins, and Yoon (2007). This issue will be further explored using relevant data from the latest Adult Education and Training Survey.

Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

The second interesting finding from Table 4.2 is that *learn*$ave is encouraging increased education and training enrolment. The *learn*$ave matched credits contributed to increased enrolment by 4.7 percentage points, with the addition of services bringing the impact to 7.4 percentage points. This represents a clear improvement over the impacts observed at 18 months.

The results further indicate that *learn*$ave affected participation in post-secondary education (PSE) programs but not courses.[5] The matched credits alone and the credits and services combined had a significant impact on enrolment in educational programs leading to a certificate of some kind (by 8.2 and 12 percentage points, respectively). Moreover, the overall impact was on PSE participation: university (by 8 percentage points) and college (by 5.5 percentage points). The large impact at the university level is interesting as about a half the participants already had a university education at baseline, suggesting several participants were using *learn*$ave to upgrade their university education. The estimated impacts represent large proportional or incremental effects, relative to the control group's, of about 48 per cent (8.0/16.8) and 20 per cent (5.6/28.5), respectively. The incremental impact on participation in education programs overall is also substantial, at 22 per cent (12.0/54.4); on education programs or training of any kind, it is about 9 per cent (7.4/78.6). A small impact of 1.9 percentage points is observed for participation in high school programs, though this is large relative to the control group's high school enrolment rate of 2.4 per cent. No impacts were observed for ESL (English as a second language) or apprenticeship programs, or for individual courses.

Education Participation Impacts by Subgroup

Much larger impacts on education and training participation were found for particular subgroups of *learn*$ave participants. Table 4.3[6] shows impact results for participation in education programs toward a certificate, diploma, or degree were broken down by selected policy-relevant subgroups as defined by the participants' baseline characteristics, namely age, labour force status, household income in the year prior to entry in the project, immigration status, and saving regularity. More detailed results are presented in Appendix C.

- **Labour force status at baseline**: Those who worked for pay or were self-employed experienced large gains from *learn*$ave of 18.1 and 16.0 percentage points, respectively. The fact that it was only those with jobs who benefited from *learn*$ave suggests that those without a job were not able to find the resources to enter a program, despite the need and best intentions to do so. Straitened circumstances may have forced a change in education plans.

[5] This runs counter to results from the evaluation of the American Dream Demonstration IDA at Tulsa, OK, which found impacts for non-program courses but not for education programs (Mills *et al.*, 2004).

[6] Note that significant differences are observed both (1) for categories of a subgroup (e.g., men and women) based on whether or not there is a significant difference between the program and control groups, indicated by asterisks in the table, and (2) between categories of a subgroup variable (e.g., less than 30 years old versus over 40 years old), represented by daggers in the table.

- **Household income in the year prior to baseline**: It is interesting that the program enrolment of individuals at all low-income levels benefited from *learn*$ave to some extent, though it appears that those in the very lowest income category benefited the most (16.5 percentage points). Only the latter group was affected by *learn*$ave services (8.3 percentage points), implying that it is the particularly low-income people (with less than $10,000 a year) who benefited from financial training and more intensive case management.
- **Immigrant status at baseline**: While the Canadian-born members of the control group were the least likely to have entered an education program over the 40 months (41.5 per cent), comparative program group members enjoyed large gains in enrolment from *learn*$ave (18.9 percentage points), with the impact driven mainly by the matched credits (17.2 percentage points). Enrolment in education programs of new immigrants, who represent about half the participant pool, was also positively affected by *learn*$ave (9.7 percentage points), a likely motivation being to upgrade or get PSE education taken abroad recognized. But it was the matched credits and the services combined that produced the impact, suggesting that the services were more important for immigrants than for the Canadian-born in increasing PSE enrolment.
- **Education attainment level at baseline**: Interestingly, the education program enrolment rate of control group members was similar across all levels of educational attainment (between 51 and 56 per cent). It is a sign of success, however, that program group participants at the lowest level of education (with no PSE certification), who are arguably most in need of further education and whom research has shown have the lowest incidence levels of adult education (Myers and de Broucker, 2006), experienced the largest impact (17.5 percentage points) from *learn*$ave. It is also interesting to note that even those with a university degree experienced gains in this respect (11.9 percentage points), likely to upgrade or "Canadianize" their degree. The fact that the participation rate of those with college certification of some kind was not significantly affected by *learn*$ave suggests this group may have realized they already had practical knowledge and needed no more education or were unable to qualify for it.
- **Saving regularly at baseline**: Control group members who were regular savers at baseline were less likely to enter an education program than those who were not regular savers (43.3 versus 57.3 per cent). However, it was the regular savers who were more likely to benefit from *learn*$ave (25.8 per cent, which in fact is the largest gain shown in the table), with the matched credits again being the driving force (21.8 per cent).[7] This result speaks to the link between saving and achieving goals. It also shows that non-savers can be induced to save and enrol in education or training programs through a combination of credits and services (8.8 percentage points).

[7] Despite their statistical significance, the estimated impacts should be interpreted with some caution based as they are on a small non-random sample of those who were regular savers at baseline (n=278).

Table 4.3 *learn*$ave Impacts on Education Program Enrolment at 40 Months, by Selected Characteristics at Baseline (%), Education Stream – Adjusted

Baseline Characteristics	Sample Size	Control Group	Impact of Financial Incentive	Added Impact of Services	Total Impact of Incentive + Services
All	1828	54.4	**8.2**	3.8	**12** ***
Age					
Less than 30 years	652	63.8	7.1	5.4	**12.5** ***
Between 30 and 40 years	863	50.7	**8.2** **	2.9	**11** ***
Over 40 years	313	45.2	10.8	2.6	**13.4** **
Labour Force Status			†		††
Work for pay	1054	48.6	**13.3** ***	4.8	**18.1** ***
Self-employed	177	52.8	9.1	6.9	**16** *
Jobless: Unemployed/Out of labour force	596	64.6	-0.5	0.7	0.2
Household Income (in year prior to application)					
Less than $10,000	587	52.6	**8.2** *	**8.3*** *	**16.5** ***
$10,000 to $19,999	745	57.6	6.5	3.7	**10.2** **
$20,000 and over	496	51.7	**11.2** *	-1.8	**9.3** *
Highest Level of Education					
Some PSE or HS certificate or less	465	50.9	**10.8** *	6.7	**17.5** ***
degree	365	52.6	6.2	-1	5.2
University degree	998	56.4	**8.3** **	3.6	**11.9** ***
Years Since Immigrating			†		
Born in Canada	598	41.5	**17.2** ***	1.7	**18.9** ***
Immigrated < 4 years ago	912	64.1	3.8	5.8	**9.7** **
Immigrated 4 + years ago	318	51.3	3.4	1.8	5.2
Saving Regularity			††		††
Saved regularly	278	43.3	**21.8** ***	4	**25.8** ***
Did not save regularly	1541	57.2	4.9	3.9	**8.8** ***

Source Calculations from the 40-month survey data. See Appendix C Table 1 for detailed results.

Notes Significance levels: impacts of a specific subgroup category: *** = 1%, ** = 5%, * = 10%; differences between impacts of categories of a subgroup: ††† = 1%, †† = 5%, † = 10%.

Impacts on Education and Training Spending and Intensity

Both *learn*$ave matched credits and services encouraged participants to spend more on education and training, particularly in programs rather than courses (Table 4.4). Over the first 40 months of the project, *learn*$ave encouraged program group participants to spend, on average, $1,318 more on education programs leading to PSE certification; this comprises $1,178 in tuition and $141 in books and represents almost 50 per cent more than the control group's education program expenditures of $2,795. Further, the impact was derived from the matched credit incentives ($755) and the addition of the services ($564). Though the *learn*$ave financial management training and case management services did not have much incremental impact with regard to education enrolment, they may have encouraged members of the *learn*$ave-plus group to seek out higher payoff education, which tends to be more costly. As for education and training courses, the results indicate that matched credits increased average book expenditures by $54, which was the only significant impact for courses.

No impacts emerged on education grants and loans. This implies that *learn*$ave did not induce participants to pursue alternative sources of education funding in the form of greater student debt or grants. It will be interesting to see in the next round of analysis the extent to which participants are using their own resources, beyond their *learn*$ave savings, to go to school.

Table 4.4 Impacts on Expenditures and Intensity (Hours) in Education and Training, during first 40 Months, Education Stream – Adjusted

	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
Educational Expenditures ($)				
Total cost for programs and courses: tuition + books	3,409	802 **	599 **	1,401 ***
Total cost for programs: tuition + books	2,795	755 **	564 *	1,318 ***
Total cost for courses: tuition + books	614	56	27	83
Tuition fee for programs and courses	2,914	751 **	469 *	1,220 ***
Tuition fee for programs	2,337	758 **	420	1,178 ***
Tuition fee for courses	577	2	41	43
Book cost for programs and courses	495	51	130 ***	181 ***
Book cost for programs	457	-3	143 ***	141 ***
Book cost for courses	38	54 ***	-14	40 **
Total amount of grants	1,067	-181	6	-175
Educational loans for programs and courses[1]	3,046	-238	307	69
Educational loans for programs[1]	3,013	-250	239	-11
Educational loans for courses	34	12	68	80
Educational Intensity (Hours)				
Amount of time on education for programs and courses	656	48	38	86
Amount of time on education for programs	528	38	52	90 *
Amount of time on education for courses	128	10	-14	-4

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 483, 683, and 662, respectively. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

[1] Loan amounts for education programs are underestimates due to data capture problems for some 18-month survey respondents.

The results also indicate that *learn*$ave (credits and services) increased the average time spent by *learn*$ave-plus participants in education programs by 90 hours. This impact is not surprising in light of the impacts reported above for education program enrolment and spending. Note that there is real potential for greater intensity impacts in the future, as only about a third of participants had completed their programs at the time of the survey. More effects should be observed in the results of the final follow-up survey at 54 months.

Labour Market Outcomes

Ultimately, the objective of *learn*$ave is to increase the economic well-being of participants by increasing their employment and earnings. The offer of incentives should lead to greater savings that, in turn, lead to more education and training. This incremental activity should result in increased employment and earnings further down the road. However, few employment impacts were expected to be observed by 40 months, since few participants would have completed their education and training financed under *learn*$ave by this point and have been in a position to benefit from it. Indeed, only about 40 per cent had completed a course or program since baseline. In fact, at this juncture, there was a real possibility of seeing employment declines with participants being forced to reduce hours at work (possibly to zero) in order to go to school. Even for those who had completed their education and training, it is likely there would not have been sufficient time for most of them to find a better job and experience wage gains.

The results indicate that, indeed, *learn*$ave has not so far had labour market impacts for the education stream (Table 4.5). There were no significant differences (positive or negative) among research groups in terms of current labour force status[8] or for employment earnings or working hours. About 80 per cent of participants in each group were employed or self-employed at the time of the 40-month interview and earned about $2,300 to $2,400 on average over the four weeks before the survey interview. Employment and earnings gains might eventually be experienced as a result of the increased education enrolment observed above, but most of these will not manifest until after the end of this project.

Table 4.5 Impacts on Employment at 40 Months, Education Stream – Adjusted

	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
Current Labour Force Status (% distribution)				
Working for pay	76.2	-3.0	-0.7	-3.8
Self-employed	3.3	1.2	0.4	1.6
Unemployed	8.9	1.3	0.3	1.6
Not in the labour force	11.7	0.6	0.0	0.6
Working for pay or self-employed	79.4	-1.8	-0.3	-2.2
Not working	20.6	1.8	0.3	2.2
Earnings and Hours (in the last four weeks)				
Total earnings ($)	2,389	-14	-142	-157
Average weekly hours worked	36.2	1.2	-0.9	0.3

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 483, 683, and 662, espectively. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

[8] The labour force measures used here are loosely based on official Statistics Canada definitions of these concepts. See http://www.statcan.ca/english/freepub/71-543-GIE/2007001/part2.htm (accessed: October 22, 2007).

Micro-enterprise Stream Results

This section focuses on participants in the micro-enterprise stream, for whom self-employment would be the major expected outcome. It also presents evidence on a number of outcomes shown earlier for the education stream with respect to education attitudes and participation in education or training, as micro-enterprise stream participants had the choice of using their matched credits for education and training as well as business start-up.[9]

The evidence indicates that *learn*$ave did have the expected impact of increasing incidence of self-employment for the micro-enterprise stream (Table 4.6). The matched saving credits increased the chances that a program group member had a self-employment job during the first 40 months by 13.9 percentage points and two or more self-employed jobs by 5.9 percentage points. The credits also increased the chances that a self-employed job would be incorporated (and therefore stable) by 14 percentage points. On the other hand, the *learn*$ave services decreased the chances of having two or more self-employment jobs by 5.8 percentage points, completely nullifying the impact of the credits. This suggests that the services may be encouraging participants to persevere in their job or to be more thorough in planning and financing the business they start up through *learn*$ave. The services also reduced the chances of incorporation, by 9.5 percentage points, which is difficult to explain.

Table 4.6 also indicates that *learn*$ave services had a negative impact on income and intensity of self-employment. On average, the services reduced income from self-employment jobs by almost $3,700 and average weekly hours in the self-employment jobs by 5.4. Potential explanations for this result are that the services may have forced participants to plan and save more than they would have prior to starting a business and therefore had less time in the job. They may also have discouraged unprepared people from starting a business altogether by making them realize the required amount of money and planning was too much for them. Alternatively, the services may have delayed participants' decision to start a small business and other things intervened, such as the realization that they were not as committed as they should have been or they were offered a good paying job. Also, some undertook education (see below).

[9] Note that these estimates are less accurate since the sample size for this stream is fairly small (about 20 per cent of survey respondents).

Table 4.6 Impacts on Self-employment during First 40 Months, Micro-enterprise Stream – Adjusted

	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
Overall Self-employment Incidence				
Having any self-employment jobs since baseline (%)	42.8	13.9 **	-6.5	7.4
0 self-employment jobs	58.2	-11.9 *	6.1	-5.7
1 self-employment job	38.5	6.0	-0.3	5.7
2 or more self-employment jobs	3.3	5.9 **	-5.8 **	0.0
Formally incorporated (%)	16.6	14.0 ***	-9.5 *	4.4
Income and Intensity of Self-employment Jobs				
Total income from self-employment jobs ($)	8,847	-74	-3,696 *	-3,770 *
Length of time on self-employment jobs (months)	12.6	2.0	-3.6	-1.6
Hours per week on self-employment jobs (hours)	9.4	3.3	-5.4 **	-2.1
Paid Staff in Self-employment Jobs				
Having paid staff (%)	7.0	1.3	-3.5	-2.2
Total payroll ($)	931	375	-529	-155

Source Calculations from 40-month survey data.

Notes The sample sizes for the control, *learn*$ave-only and *learn*$ave-plus groups are 124, 150 and 151, respectively. However, excluded from the table are 35 cases who skipped the questions about self-employment by mistake, comprising 13 in the *learn*$ave-only group, 14 in the *learn*$ave-plus group, and 8 in the control group. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences among research groups.

Statistical significance levels are indicated as * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

In the previous chapter, results for assets and debts revealed some positive impacts from *learn*$ave for the entire participant pool. This section presents results on the form of assets and debts pertinent specifically to the micro-enterprise stream: business assets and debts. The expectation would be that *learn*$ave leads to greater business assets for this stream. Table 4.7, however, reveals that *learn*$ave had no statistically significant effects on business assets, liabilities, or net business assets.[10]

[10] Among the measures shown are "goodwill," which was computed as the difference between (1) the current equity of the business (excluding debts) and (2) the book value of the business assets at purchase. Note that in the case of goodwill, the impacts were barely insignificant and may turn out to be significant in the next round of analysis.

Table 4.7 Impacts on Business Assets and Liabilities at 40 and 18 Months ($), Micro-enterprise Stream – Adjusted

	At 18 Months	At 40 Months			
	Control Group Mean	Control Group Mean	Impact of Financial Incentive	Added Impact of Services	Impact of Incentive & Services
Business Assets					
Business assets (book value)	1,226	2,585	-770	2,306	1,536
Goodwill[1]	147	-762	4,187	-2,209	1,978
Total	1,373	1,823	3,417	97	3,514
Total Business Debts and Liabilities	1,087	734	742	-786	-44
Net Business Assets (assets less debts)	287	1,089	2,675	883	3,558

Source Calculations from 40-month and 18-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 124, 150, and 151, respectively, for the 40-month survey, and, for the control group, 143 for the 18-month survey.

Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences in characteristics among research groups.

Statistical significance levels are indicated as * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

[1]Computed as the difference between (1) the current equity of the business (excluding debts) and (2) the book value of the business assets at purchase.

Turning to education impacts, *learn*$ave had a positive impact on the educational attitudes of micro-enterprise stream participants. In some cases, the impact of the matched credits was lower for this stream than the education stream. For example, the credits did not affect the proportion of micro-enterprise stream participants agreeing with the statement about schooling being necessary for a good job, but increased the proportion of education stream participants agreeing by 7.4 per cent (see Table 4.1). In other cases, the impacts appeared larger than for the education stream. For example, the credits had a positive impact of 10.1 percentage points on the proportion of micro-enterprise stream participants who strongly agreed with the statement that getting a good job depended on one's education, compared to 5.7 per cent of the education stream.

No significant impacts of *learn*$ave on participation in education or training were observed for participants in this stream. None of the differences in enrolment between research groups was significant. However, in all research groups, the education/training participation rate was, as expected, considerably lower for the micro-enterprise stream (who could use their credits for education but whose primary motive was to start a business) than for the education stream (who could use their credits for only education). For example, 34 per cent of the control group members in the micro-enterprise stream had participated in an education or training program since baseline, compared to 54 per cent of control group members in the education stream.

Finally, *learn*$ave acted to lower micro-enterprise participants' earnings and hours in their non-self-employment jobs. The negative impacts were about $500 on total employment earnings over the four weeks prior to the survey and three hours weekly on average. This is may be due to the fact that these people spent more time in their self-employment jobs sponsored under *learn*$ave. There were no impacts on participants' current labour force status.

In Summary

At 40 months after project start-up, there are indications that a major objective of *learn*$ave — to encourage low-income people to participate in education and training — is being met. It would appear that the increased bank/*learn*$ave account balances and enhanced education attitudes observed at 18 months in the previous impacts report and again at 40 months have led to increased enrolment in education and training.

This increased enrolment has taken place mostly in university and college programs, not courses. This is good news: *learn*$ave is having an impact not only on the quantity of education, but also on its quality. Indeed, completion of PSE programs are more likely to pay off in terms of improved labour market outcomes than the completion of individual courses at lower education levels. Furthermore, most of the impact was derived from the matched credits, as the services have not (so far) played much of an additional role.

Subgroup analysis of education enrolment impacts reveals several interesting findings. First, both the Canadian-born participants and new immigrants (at baseline) realized gains as a result of *learn*$ave, with *learn*$ave allowing the former to catch-up somewhat with the higher participation rates of the latter. Secondly, the most important gains in participation were recorded among those with no post-secondary education certification, which is also good news as this group is the most in need of skills upgrading and may end up benefiting the most. Thirdly, both regular savers and non-regular savers at baseline benefited from *learn*$ave. However, the former realized much greater gains, suggesting a strong link between saving regularly and education goal attainment. Fourthly, those who were working at baseline benefited from the matched credits much more than those who were not working. Finally, the matched credits positively affected participants' education enrolment at all low-income levels, with the combination of credits and services having the greatest impact at the lowest income category. Also, the extra assistance provided by the financial management training and case management incrementally benefited that income category, but not any other subgroup.

As expected, no employment impacts were observed for the education stream at this time. There likely was not enough time for large numbers of participants to have completed the education and training started under *learn*$ave and translate their increased human capital into improved labour market outcomes. Some of these impacts may be captured with in the final 54-month survey. However, most will not be experienced and detectable within the timeframe of this project.

In contrast, and as expected, the micro-enterprise stream did experience real impacts in terms of self-employment incidence and legal incorporation of business, all driven by the matched credits. However, there was no evidence of gains in terms of business assets.

Chapter 5: Conclusions

The *learn*$ave project was designed to test the effectiveness of a matched saving incentive in encouraging low-income adults to save for education or training or for starting a small business. The results of this intermediate impacts report covered the full 36 months allowed for participants to save in their *learn*$ave account to earned matched saving credits and provided a good indication on the incremental impact of *learn*$ave on participation in education and training at the 40-month mark.

One key finding is that there appears to be some appetite among low-income Canadians for investing in education and training whether or not they receive help to do so from governments. Indeed the report shows that about 4 in 5 members of the control group participated in education or training of some kind in the 40 months following the beginning of the project.

The other key finding is that *learn*$ave has contributed to increase the rate of participation of education stream low-income adults in education or training by about 5 percentage points for the *learn*$ave-only group and 7 percentage point for the *learn*$ave-plus group. No such impacts had been observed in the early impacts report covering the first 18 months, as there had not been sufficient time for most people to earn and then use matched saving credits to pay for courses and education programs.

The increased enrolment over the 40 months has taken place mostly in university and college programs. For such programs, leading to a certificate of some kind, participants in the *learn*$ave-plus group increased their participation rate by a notable 12 percentage points over the control group. This impact was widespread, occurring across all age and low-income categories and for those who, at baseline, had a university degree or no post-secondary certification, were Canadian born or new immigrants, or were regular savers or not. While the *learn*$ave matched credits were the major impetus behind these education program enrolment impacts, *learn*$ave financial management training and case management services played a more substantive role for some participants, in particular for those in the lowest income group (less than $10,000 household income) and lowest education levels.

For participants engaged in the micro-enterprise stream, these intermediate results also showed that *learn*$ave matched credits benefited them, leading to a higher incidence of self-employment jobs and incorporation of business.

It is important to recall that this report presented results for participants who had eight more months to use their earned matched credits. As the deadline to use the credits for the purpose of education or small business start-ups approaches at 48 months, the use of the credits could accelerate, leading possibly to even greater education and micro-enterprise start-up impacts than those observed at 40 months. Whether or not these take place will be revealed in the final *learn*$ave report, which will present effects on participants six months after the cash-out period will have ended.

Another set of important findings coming out of this report concerns savings effects. It seems that *learn*$ave has not, to date, had the hypothesized positive impact on the overall

amount of savings recorded over the full period of saving eligibility (measured as the growth in financial assets over time). However, *learn*$ave credits appear to have had an impact on the incidence of saving as well as budgeting. Whether or not *learn*$ave has in fact improved saving habits beyond that which was needed merely to qualify for *learn*$ave credits remains to be seen and will be the subject of further analysis for the final report.

These interim results point as well to the finding that *learn*$ave has not, after 40 months, had a positive effect on net worth, but has induced changes in assets composition. The matched credits encouraged participants to hold fewer or cheaper household goods and less retirement savings investments. The lower average value of household assets suggests that participants were "buying smarter" to free up funds for their high-return *learn*$ave accounts. Yet, the changes in investment and consumption induced by *learn*$ave have not caused participants undue hardship.

An additional finding of interest is that, for the average participant in all three research groups, net worth increased over time at roughly the same pace. This suggests that asset-poverty may be transitory with or without an asset-building intervention like *learn*$ave. However, the results presented are for the average participant and subsequent distributional analysis will be conducted in the final report to discover if this is true for all categories of participants.

Finally, the rapid increase in the control group's average net worth and their high education and training enrolment rates over the first 40 months of the project underline the need for a random assignment experiment such as *learn*$ave to evaluate this type of social intervention. If the impact of *learn*$ave had been estimated simply by comparing the net worth of the program groups at the beginning of the project to their much higher values at month 40, one might have concluded wrongly that *learn*$ave had a substantial impact on total net worth. Similarly, program group participants exhibited high levels of in enrolment in education programs or courses since the beginning the project. Measuring impacts simply on the basis of this gain would have vastly over-estimated *learn*$ave's contribution, as the control group, too, experienced high enrolment rates over the period.

Appendix A: *learn*$ave Glossary

Term	Description
Active saving month	A month in which a participant has deposited at least $10. Participants must have 12 active saving months to qualify for matched credits.
Case management	See Enhanced case management.
Cash-out period	Participants' must use all their earned matched credits by month 48 after starting in the project.
Eligibility period	The length of time since the program start that it took a participant to qualify for matched credits.
Enhanced (or intensive) case management	Beyond what program group participants receive in terms of basic administrative help from *learn*$ave sites, *learn*$ave-plus participants also receive encouragement to meet savings targets, assistance to identify and address problems in meeting those targets, and referrals to appropriate agencies to deal with other problems.
Financial management training, or Financial training	Training on the principles of money management, including strategies for budgeting, spending, and the use of credit, plus assistance in developing realistic goals based on existing skills and education.
learn$ave account closing balance	The total amount deposited in a *learn*$ave account, net of matched and unmatched withdrawals.
Legitimate uses/purposes	The purposes for which the matched credits can be used, namely education or training at an accredited institution (as indicated on the Canada Student Loan Program list) or to start a small business.
Matched credits (earned), or matched saving credits	Amount of matched credits earned from matchable deposits in a *learn*$ave account (maximum = $4,500).
Matched credits used/cashed out	Credits withdrawn, used, or cashed out for legitimate purposes.
Matchable savings/deposits	The amount deposited in a *learn*$ave account qualifying for matched credits, monthly and total (matched withdrawals do not reduce this amount, but unmatched withdrawals do).
Matched withdrawal amount	Sum of earned matched credits and matchable savings withdrawn in a matched withdrawal (maximum = $6,000; $1,500 in savings + $4,500 in credits).
Matched withdrawals	Withdrawal, usage, or cash out of some or all of deposits and matched credits for legitimate purposes.

Maximum matchable savings/deposits/amount	Deposits in *learn*$ave account of up to $250 in a month or $1,500 in total during the saving period that earn matched credits.
Non-matchable/excess savings/deposits	The amount deposited in a *learn*$ave account that does not qualify for matched credits (in excess of the maximum).
PMIS (Participant Management Information System)	The administrative data system that keeps track of participants' deposit and withdrawal activity in *learn*$ave accounts.
Saving period	The 36-month period participants have to qualify for matched credits.
Services	The financial management training and enhanced case management provided to *learn*$ave-plus participants.
Unmatched withdrawals	Withdrawals for reasons other than accredited education or small business start-up.

Appendix B: Detailed *learn*$ave Impacts on Savings, Net Worth, and Education

This appendix presents the detailed results for the adjusted estimates of *learn*$ave impacts. As noted in the body of the report, impact estimates (computed as the difference in outcomes between research groups) were adjusted using regression to control for a few socio-demographic differences among research groups and to bring greater precision to the estimates by taking advantage of the wealth of available information.

The table numbers correspond to the original table in the body of text. For example, Table B3.1 is the detailed version of Table 3.1 in Chapter 3. Note that there is no table in this appendix corresponding to Table 3.2, nor is there one for Table 4.3, the detailed version of which appears in Appendix C, which presents subgroup results.

Table B.3.1 Impacts on Budgeting at 40 Months – Incidence

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
% who had a household budget	51.9	54.1	47.6	4.3 *	(2.6)	2.2	(2.4)	6.5 **	(2.6)
% who set financial goals	58.1	65.6	53.6	4.4 *	(2.6)	7.6 ***	(2.4)	12.0 ***	(2.6)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Standard errors (S.E.) of estimated impacts are in parentheses.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

Table B.3.3 Impacts on Self-Reported Savings over Past Year, at 40 Months, All Participants – Adjusted

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
Amount saved in past year ($)	2,009	2,185	2,569	-561 **	(243)	176	(224)	-384	(245)
Saved in past year (%)	54.3	58.0	52.2	2.1	(2.7)	3.7	(2.4)	5.8 **	(2.7)
Saved regularly in past year (%)	30.8	33.2	29.6	1.2	(2.5)	2.4	(2.3)	3.6	(2.5)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Standard errors (S.E.) of estimated impacts are in parentheses.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

Table B.3.4 Impacts on Asset and Debt Components of Net Worth at 40 Months ($), All Participants – Adjusted

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
ASSETS									
Financial Assets									
Bank + *learn* $ave accounts	2,431	2,297	1,923	508 *	(275)	-134	(250)	374	(274)
Formal retirement savings plans	1,648	2,007	2,539	-891 **	(432)	359	(387)	-531	(426)
Other financial assets	798	1,245	1,053	-256	(273)	447 *	(251)	191	(273)
Total Financial Assets	4,876	5,549	5,515	-639	(621)	673	(565)	34	(618)
Non-Financial Assets									
Vehicles	2,701	2,604	2,566	135	(263)	-97	(246)	38	(266)
Value of goods in house	4,548	4,269	7,241	-2,693 **	(1,253)	-279	(942)	-2,972 ***	(1,091)
Home and other property	37,933	36,266	31,732	6,200	(4,340)	-1,667	(4,014)	4,533	(4,335)
Business assets	1,487	1,596	1,165	322	(768)	110	(608)	431	(862)
Total Non-Financial Assets	46,669	44,735	42,704	3,965	(4,783)	-1,934	(4,290)	2,030	(4,774)
Total Assets	51,545	50,284	48,219	3,326	(4,844)	-1,261	(4,343)	2,065	(4,836)
LIABILITIES									
Credit cards	1,410	1,458	1,718	-308	(250)	48	(216)	-260	(243)
Student loans	5,731	5,554	4,828	903	(560)	-177	(516)	726	(560)
Mortgages	22,580	23,457	20,880	1,700	(2,951)	877	(2,540)	2,577	(2,876)
Business debts and liabilities	411	254	368	42	(158)	-156	(147)	-114	(160)
Other debts and liabilities	4,049	3,274	3,644	405	(565)	-775	(521)	-369	(575)
Total Liabilities	34,180	33,997	31,438	2,743	(3,116)	-183	(2,669)	2,559	(3,052)
NET (Assets - Liabilities)									
Net property assets	15,353	12,809	10,853	4,500	(2,743)	-2,544	(2,470)	1,956	(2,845)
Net business assets	1,076	1,342	797	279	(706)	266	(536)	545	(794)
Net worth minus household goods	12,817	12,018	9,541	3,276	(3,263)	-799	(2,752)	2,477	(3,388)
Total Net Worth	17,365	16,287	16,781	583	(3,648)	-1,078	(2,964)	-495	(3,706)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey.

Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Standard errors (S.E.) of estimated impacts are in parentheses.
Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table B.3.5 Impacts on Hardship Experienced in Previous Year, at 40 Months – Incidence, All Participants – Adjusted

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
% who had difficulty meeting expenses	26.0	23.6	23.9	2.1	(2.2)	-2.4	(2.0)	-0.3	(2.2)
% who had to borrow to meet needs	21.6	18.2	17.1	4.4 **	(2.1)	-3.3 *	(1.9)	1.1	(2.1)
% who used a foodbank	3.5	5.1	5.6	-2.1 *	(1.1)	1.6	(1.0)	-0.6	(1.1)
% who declared bankruptcy	1.4	0.4	0.7	0.7	(0.5)	-1.1 **	(0.5)	-0.4	(0.5)
% who had overdue bills at month 40 or 18	2.9	4.5	4.2	-1.3	(0.0)	1.7 *	(0.0)	0.4	(0.0)
% who had at least one of above items	34.5	31.7	31.9	2.5	(0.0)	-2.8	(0.0)	-0.3	(0.0)
Number of hardship items (average)	0.6	0.5	0.5	0.0	(0.0)	0.0	(0.0)	0.0	(0.0)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 607, 833, and 814, respectively, for the 40-month survey. Sample sizes vary for individual measures because of missing values.
Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.
Standard errors (S.E.) of estimated impacts are in parentheses.
Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table B.4.1 Impacts on Attitudes towards Education -- Percentage Distribution at Month 40, Education Stream - Adjusted

Statement and Level of Agreement	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
Getting a good job depends on my education									
Strongly disagree	0.3	0.7	1.9	-1.6 ***	(0.6)	0.4	(0.5)	-1.2 **	(0.6)
Disagree	5.1	5.6	6.4	-1.3	(1.4)	0.4	(1.3)	-0.8	(1.4)
Agree	48.9	50.4	51.7	-2.9	(3.0)	1.5	(2.7)	-1.3	(3.0)
Strongly agree	45.7	43.4	40.0	5.7 *	(3.0)	-2.3	(2.7)	3.4	(3.0)
I need more schooling to find a good job									
Strongly disagree	1.1	1.2	2.9	-1.7 **	(0.8)	0.0	(0.7)	-1.7 **	(0.8)
Disagree	16.1	19.0	20.5	-4.4 *	(2.3)	2.9	(2.1)	-1.5	(2.3)
Agree	49.4	53.5	50.7	-1.3	(3.0)	4.0	(2.8)	2.8	(3.0)
Strongly agree	33.3	26.4	25.9	7.4 ***	(2.7)	-6.9 ***	(2.5)	0.5	(2.7)
No matter how much education I get, I will most likely end up with a low-paying job									
Strongly disagree	26.8	25.0	27.3	-0.5	(2.6)	-1.8	(2.4)	-2.3	(2.6)
Disagree	59.5	58.6	57.2	2.3	(3.0)	-0.9	(2.7)	1.4	(3.0)
Agree	12.5	14.4	12.0	0.5	(2.0)	1.9	(1.8)	2.4	(2.0)
Strongly agree	1.2	2.0	3.5	-2.3 ***	(0.9)	0.8	(0.8)	-1.5 *	(0.9)
It is not worth going into debt to go to school									
Strongly disagree	12.0	11.7	7.9	4.0 **	(1.9)	-0.3	(1.7)	3.7 *	(1.9)
Disagree	63.1	63.7	65.0	-1.9	(3.0)	0.6	(2.7)	-1.3	(3.0)
Agree	21.6	22.2	23.6	-2.0	(2.6)	0.6	(2.3)	-1.4	(2.6)
Strongly agree	3.3	2.4	3.4	-0.2	(1.1)	-0.9	(1.0)	-1.1	(1.1)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn$ave*-plus groups are 483, 683, and 662, respectively.
Sample sizes vary for individual measures because of missing values.
Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.
Standard errors (S.E.) of estimated impacts are in parentheses.
Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table B.4.2 Impacts on Participation in Education and Training, During First 40 Months, Education Stream – Adjusted

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
Overall (Program or Individual Course)									
Enrolled in any education in first 40 months (%)	83.3	86.0	78.6	4.7 **	(2.2)	2.7	(2.0)	7.4 ***	(2.2)
Educational Programs									
Enrolled in courses toward a degree, diploma or certificate (%)	62.6	66.4	54.4	8.2 ***	(2.8)	3.8	(2.6)	12.0 ***	(2.8)
Program type (first program) (%)									
English as a second language (ESL)	4.4	5.9	4.8	-0.3	(1.3)	1.4	(1.2)	1.1	(1.3)
High school	4.3	3.3	2.4	1.9 *	(1.1)	-1.0	(1.0)	0.9	(1.1)
Registered apprenticeship	6.1	5.1	6.1	0.0	(1.4)	-1.0	(1.3)	-1.0	(1.4)
Community college	31.1	34.1	28.5	2.5	(2.7)	3.0	(2.5)	5.6 **	(2.8)
University	22.3	24.8	16.8	5.5 **	(2.4)	2.5	(2.2)	8.0 ***	(2.4)
Completed program in 18 months (%)	33.1	36.2	31.8	1.3	(2.8)	3.1	(2.6)	4.3	(2.8)
Individual Courses, not Part of a Program									
Enrolled in other (non-program) education courses, seminars, etc. (%)	46.1	47.8	44.3	1.7	(3.0)	1.8	(2.7)	3.5	(3.0)
Completed one or more courses (%)	35.8	37.0	37.9	-2.1	(2.9)	1.3	(2.6)	-0.8	(2.9)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 483, 683, and 662, respectively.
Sample sizes vary for individual measures because of missing values.
Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.
Standard errors (S.E.) of estimated impacts are in parentheses.
Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table B.4.4 Impacts on Expenditures and Intensity (Hours) in Education and Training during First 40 Months, Education Stream – Adjusted

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
Educational Expenditures ($)									
Total cost for programs and courses: tuition + books	4,211	4,810	3,409	802 **	(331)	599 **	(303)	1,401 ***	(332)
Total cost for programs: tuition + books	3,550	4,113	2,795	755 **	(327)	564 *	(299)	1,318 ***	(328)
Total cost for courses: tuition + books	670	697	614	56	(99)	27	(90)	83	(99)
Tuition fee for programs and courses	3,665	4,134	2,914	751 **	(299)	469 *	(274)	1,220 ***	(300)
Tuition fee for programs	3,095	3,515	2,337	758 **	(294)	420	(269)	1,178 ***	(295)
Tuition fee for courses	578	619	577	2	(89)	41	(81)	43	(89)
Book cost for programs and courses	546	676	495	51	(54)	130 ***	(49)	181 ***	(54)
Book cost for programs	455	598	457	-3	(52)	143 ***	(47)	141 ***	(52)
Book cost for courses	92	78	38	54 ***	(17)	-14	(16)	40 **	(17)
Total amount of grants	886	892	1,067	-181	(179)	6	(164)	-175	(180)
Educational loans for programs and courses[1]	2,808	3,115	3,046	-238	(439)	307	(402)	69	(442)
Educational loans for programs[1]	2,763	3,002	3,013	-250	(435)	239	(398)	-11	(437)
Educational loans for courses	45	113	34	12	(58)	68	(53)	80	(58)
Educational Intensity (Hours)									
Amount of time on education for programs and courses	704	742	656	48	(55)	38	(50)	86	(55)
Amount of time on education for programs	566	618	528	38	(52)	52	(48)	90 *	(52)
Amount of time on education for courses	138	124	128	10	(22)	-14	(20)	-4	(22)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 483, 683, and 662, respectively. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Standard errors (S.E.) of estimated impacts are in parentheses.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

[1] Loan amounts for education programs are underestimates due to data capture problems for some 18-month survey respondents.

Table B.4.5 Labour Market Impacts at 40 Months Education Stream – Adjusted

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	***learn* $ave-only**	***learn* $ave-plus**	**Control**	**Diff**	**S.E.**	**Diff**	**S.E.**	**Diff**	**S.E.**
Current Employment Status (%)									
Working for pay	73.1	72.4	76.2	-3.0	(2.6)	-0.7	(2.4)	-3.8	(2.6)
Self-employed	4.4	4.8	3.3	1.2	(1.2)	0.4	(1.1)	1.6	(1.2)
Unemployed	10.2	10.5	8.9	1.3	(1.8)	0.3	(1.6)	1.6	(1.8)
Not in the Labour Force	12.2	12.3	11.7	0.6	(1.9)	0.0	(1.7)	0.6	(1.9)
Working for pay or Self-employed	77.6	77.2	79.4	-1.8	(2.4)	-0.3	(2.2)	-2.2	(2.4)
Not Working	22.4	22.8	20.6	1.8	(2.4)	0.3	(2.2)	2.2	(2.4)
Earnings and Hours (over last 4 weeks)									
Total earnings ($)	2,375	2,232	2,389	-14	(100)	-142	(93)	-157	(100)
Average weekly hours worked	37.4	36.5	36.2	1.2	(1.0)	-0.9	(0.9)	0.3	(1.0)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn$ave*-plus groups are 483, 683, and 662, respectively.
Sample sizes vary for individual measures because of missing values.
Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.
Standard errors (S.E.) of estimated impacts are in parentheses.
Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.

Table B.4.6 Impacts on Self-employment during First 40 Months, Micro-enterprise Stream – Adjusted

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
Overall Self-employment Incidence									
Having self-employment jobs since baseline (%)	56.7	50.2	42.8	13.9 **	(6.0)	-6.5	(5.7)	7.4	(6.0)
0 self-employment job since baseline	46.4	52.5	58.2	-11.9 *	(6.1)	6.1	(5.8)	-5.7	(6.0)
1 self-employment job since baseline	44.5	44.1	38.5	6.0	(6.1)	-0.3	(5.8)	5.7	(6.1)
2 or more self-employment job since baseline	9.2	3.4	3.3	5.9 **	(2.9)	-5.8 **	(2.7)	0.0	(2.9)
Formally incorporated (%)	30.6	21.0	16.6	14.0 ***	(5.4)	-9.5 *	(5.1)	4.4	(5.3)
Income and Intensity of Self-employment Jobs									
Total income from self-employment jobs ($)	8,773	5,077	8,847	-74	(1,993)	-3,696 *	(1,885)	-3,770 *	(1,974)
Length of time on self-employment jobs (months)	14.6	11.0	12.6	2.0	(2.9)	-3.6	(2.8)	-1.6	(2.9)
Hours per week on self-employment jobs (hours)	12.7	7.3	9.4	3.3	(2.3)	-5.4 **	(2.2)	-2.1	(2.3)
Paid Staff in Self-employment Jobs									
Having paid staff (%)	8.3	4.8	7.0	1.3	(3.2)	-3.5	(3.1)	-2.2	(3.2)
Total payroll ($)	1,305	776	931	375	(815)	-529	(770)	-155	(807)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 124, 150, and 151, respectively. However, excluded from the table are 35 cases who skipped the questions about self-employment by mistake, comprising 13 in the *learn*$ave-only group, 14 in the *learn*$ave-plus group, and 8 in the control group. Sample sizes vary for individual measures because of missing values.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Standard errors (S.E.) of estimated impacts are in parentheses.

Two-tailed t-tests were applied to differences between research groups.

Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Rounding may cause slight discrepancies in sums and differences.

Table B.4.7 Impacts on Business Assets and Liabilities at 40 Months ($), Micro-enterprise Stream – Adjusted

	Means - Research Groups			Impact of Financial Incentive		Added Impact of Services		Impact of Incentive & Services	
	learn $ave-only	*learn* $ave-plus	Control	Diff	S.E.	Diff	S.E.	Diff	S.E.
Business Assets									
Business assets (book value)	1,815	4,121	2,585	-770	(2,042)	2,306	(2,109)	1,536	(2,020)
Goodwill[1]	3,425	1,216	-762	4,187	(2,568)	-2,209	(2,178)	1,978	(3,172)
Total	5,240	5,337	1,823	3,417	(3,285)	97	(2,448)	3,514	(3,195)
Total Business Debts and Liabilities	1,476	690	734	742	(709)	-786	(651)	-44	(706)
Net Business Assets (assets less debts)	3,764	4,647	1,089	2,675	(2,886)	883	(2,075)	3,558	(2,790)

Source Calculations from 40-month survey data.

Notes Overall sample sizes for the control, *learn*$ave-only, and *learn*$ave-plus groups are 124, 150, and 151, respectively.
Sample sizes vary for individual measures because of missing values.
Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.
Standard errors (S.E.) of estimated impacts are in parentheses.
Two-tailed t-tests were applied to differences between research groups.
Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.
Rounding may cause slight discrepancies in sums and differences.
[1]Computed as the difference between (1) the current equity of the business (excluding debts) and (2) the book value of the business assets at purchase.

Appendix C: Detailed *learn*$ave Subgroup Impacts on Participation in Education Programs

This appendix presents results of the subgroup analysis of education program impacts, providing the detail for Table 4.3 in Chapter 4 of the report. This is in response to questions regarding whether the impacts are distributed evenly across each subgroup or concentrated among certain subgroups. It is quite possible that *learn*$ave may be better suited to some participants, for example, the higher educated, than others. This information would aid policy makers considering full implementation of the demonstration project to better target those groups where program impact is the greatest, and/or identify the program's weaknesses and groups for whom the program is less effective.

The subgroup variables by which the impacts were compared were selected for their potential policy relevance. To maintain the experimental nature of the analysis, the subgroup variables had to be defined based on characteristics measured before random assignment (i.e., at baseline or in the year prior). They comprise the following: age, gender, marital status, labour forces status, household income, highest level of education, years since immigrating, and saving regularity.

Two tests were used for the subgroup comparisons. A t-test determined if *learn*$ave has had any impact on each category of each subgroup variable. In the case of the gender trait, for example, a two-tailed t-test enabled the evaluators to determine if *learn*$ave has had an impact on the education program enrolment of men and/or women (i.e., if the impact on the balances of men and/or women was significantly different from zero). However, this does not enable determination of whether or not *learn*$ave's impact on program enrolment of women was different from that of men's. Therefore, a q-test was run to determine whether or not the impact varied among categories of subgroup variables, e.g., between men and women, or was due to random chance. Traditionally, an F-statistic would be used for this purpose, but it is not appropriate when subgroups are of unequal size and variance. Since these adjustments are not available in Statistical Analysis System (the software program used in this analysis), it was necessary to develop a routine that would compute the q-statistic.

The impact on each subgroup in the following table is calculated, as it was for the sample as a whole, as the difference in mean outcome between each pair of research groups: *learn*$ave-only versus control (impact of the matched saving credit), *learn*$ave-plus versus *learn*$ave-only (additional impact of the financial management training and case management services), and *learn*$ave-plus versus control (the total impact of the *learn*$ave credits and services). The asterisks indicate the degree of statistical significance of the impacts for categories of subgroup variables, based on a two-tailed t-test (* = 10 per cent; ** = 5 per cent, *** = 1 per cent). The daggers indicate the degree of statistical significance of the differences in impacts between categories of subgroup variables, based on a q-test († = 10 per cent, †† = 5 per cent, ††† = 1 per cent).

Table C.1 *learn*$ave Impacts on Participation in Education Programs, by Subgroup, Education Stream – Adjusted

Subgroup (at enrolment)	Sample Size	Outcome Levels - Research Groups: *learn* $ave-only	*learn* $ave-plus	Control	Impact of Financial Incentive	Standard Error		Added Impact of Services	Standard Error		Impact of Incentive & Services	Standard Error	
All	1,828	62.6	66.4	54.4	8.2 ***	(2.8)		3.8	(2.6)		12.0 ***	(2.8)	
Age and Gender													
Age							n.s.			n.s.			n.s.
Less than 30 years	652	70.9	76.3	63.8	7.1	(4.8)		5.4	(4.3)		12.5 ***	(4.8)	
Between 30 and 40 years	863	58.8	61.7	50.7	8.2 **	(4.0)		2.9	(3.8)		11.0 ***	(4.1)	
Over 40 years	313	56.0	58.6	45.2	10.8	(6.8)		2.6	(6.4)		13.4 **	(6.6)	
Gender							n.s.			n.s.			n.s.
Male	797	55.6	60.7	50.4	5.2	(4.2)		5.1	(3.9)		10.3 **	(4.2)	
Female	1,031	68.0	70.8	57.4	10.6 ***	(3.8)		2.8	(3.4)		13.4 ***	(3.8)	
Employment and Income													
Labour Force Status							†			n.s.			††
Work for pay	1,054	61.8	66.7	48.6	13.3 ***	(3.7)		4.8	(3.4)		18.1 ***	(3.7)	
Self-employed	177	61.9	68.8	52.8	9.1	(8.9)		6.9	(8.5)		16.0 *	(8.8)	
Unemployed or Out of labour force[a]	596	64.1	64.8	64.6	-0.5	(4.8)		0.7	(4.5)		0.2	(4.9)	
Household Income (in year prior[b])							n.s.			n.s.			n.s.
Less than $10,000	587	60.7	69.1	52.6	8.2 *	(5.0)		8.3 *	(4.5)		16.5 ***	(5.0)	
Between $10,000 and < $20,000	745	64.1	67.9	57.6	6.5	(4.4)		3.7	(4.0)		10.2 **	(4.5)	
$20,000 and over	496	62.8	61.0	51.7	11.2 **	(5.4)		-1.8	(5.0)		9.3 *	(5.3)	
Highest Level of Education							n.s.			n.s.			n.s.
Some PSE or less[c]	465	61.6	68.4	50.9	10.8 *	(5.6)		6.7	(5.1)		17.5 ***	(5.6)	
Non-university degree, diploma or certificate	365	58.8	57.9	52.6	6.2	(6.1)		-1.0	(5.9)		5.2	(6.3)	
University degree	998	64.7	68.3	56.4	8.3 **	(3.8)		3.6	(3.5)		11.9 ***	(3.9)	
Years Since Immigrating							†			n.s.			n.s.
Born in Canada	598	58.7	60.4	41.5	17.2 ***	(4.9)		1.7	(4.5)		18.9 ***	(4.9)	
Immigrated less than 4 years ago	912	67.9	73.8	64.1	3.8	(4.0)		5.8	(3.6)		9.7 **	(4.0)	
Immigrated 4 or more years ago	318	54.8	56.6	51.3	3.4	(6.9)		1.8	(6.1)		5.2	(7.0)	
Regularity of Saving							††			n.s.			††
Saved regularly	278	65.0	69.0	43.3	21.8 ***	(7.2)		4.0	(6.6)		25.8 ***	(7.1)	
Did not save regularly	1,541	62.1	66.0	57.2	4.9	(3.1)		3.9	(2.8)		8.8 ***	(3.1)	

Source Calculations from 40-month survey data.

Notes Sample sizes vary for individual measures because of missing values.

The subgroups are defined according to characteristics at the time of enrolment in the study, i.e., at baseline.

Impacts, estimated as differences in outcomes between research groups, have been regression-adjusted.

Two-tailed t-tests were applied to differences between the program and control groups. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; and *** = 1 per cent.

q-tests were applied to differences in estimated impacts among categories of a subgroup variable. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; and ††† = 1 per cent. "n.s." indicates that the variation in impacts among categories is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

[A] Includes student, at home, retired, looking for work, and unemployed.

[B] Baseline annual income is household income in the calendar year prior to application. For those who immigrated to Canada in the year prior to application, annual income is based on a formula that includes foreign income, Canadian income, and money brought into Canada.

[C] May have some post-secondary education, but did not receive a degree, diploma, or certificate.

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