When Financial Incentives Pay for Themselves:
Interim Findings From the Self-Sufficiency Project's Applicant Study

Charles Michalopoulos

Tracey Hoy

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Other SRDC reports on the Self-Sufficiency Project (SSP):

Creating an Alternative to Welfare: First-Year Findings on the Implementation, Welfare Impacts, and Costs of the Self-Sufficiency Project. Tod Mijanovich and David Long. December 1995.

The Struggle for Self-Sufficiency: Participants in the Self-Sufficiency Project Talk About Work, Welfare, and Their Futures. Wendy Bancroft and Sheila Currie Vernon. December 1995.

Do Financial Incentives Encourage Welfare Recipients to Work? Initial 18-Month Findings from the Self-Sufficiency Project. David Card and Philip K. Robins. February 1996.

When Work Pays Better Than Welfare: A Summary of the Self-Sufficiency Project's Implementation, Focus Group, and Initial 18-Month Impact Reports. March 1996.

How Important Are "Entry Effects" in Financial Incentive Programs for Welfare Recipients? Experimental Evidence from the Self-Sufficiency Project. David Card, Philip K. Robins, and Winston Lin. August 1997.

Do Work Incentives Have Unintended Consequences? Measuring "Entry Effects" in the Self-Sufficiency Project. Gordon Berlin, Wendy Bancroft, David Card, Winston Lin, and Philip K. Robins. March 1998.

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Does SSP Plus Increase Employment? The Effect of Adding Services to the Self-Sufficiency Project's Financial Incentives. Gail Quets, Philip K. Robins, Elsie C. Pan, Charles Michalopoulos, and David Card. May 1999.

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SSP Plus at 36 Months: Effects of Adding Employment Services to Financial Work Incentives. Ying Lei and Charles Michalopoulos. July 2001.

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Contents

Tables and Figures

Preface

This is the latest in a series of reports on the Self-Sufficiency Project (SSP), a test of a "making work pay" strategy to encourage work among long-term welfare recipients. This report presents interim findings from the "applicant study" — one of the three experiments that make up SSP.

The primary purpose of the applicant study was to determine whether new applicants for welfare would stay on welfare longer in order to qualify for the earnings supplement being offered by SSP. This financial incentive was available only to single parents who had been receiving income assistance (IA) for at least a year. The results of the first applicant analysis, published in 1998 in a report titled *Do Work Incentives Have Unintended Consequences? Measuring "Entry Effects" in the Self-Sufficiency Project*, showed that few people increased the length of time they received income assistance in order to meet SSP's qualifying condition.

The second purpose of the applicant study was to determine whether SSP would have any effect on the subsequent employment, earnings, income, and welfare receipt of this group. Early results published in the 1999 report *When Financial Work Incentives Pay for Themselves: Early Findings from the Self-Sufficiency Project's Applicant Study* were encouraging. Despite the small increase in the number of people who extended their time spent on income assistance to become eligible for SSP, the financial incentive provided by the SSP supplement reduced IA benefits and increased tax payments by enough to keep total public expenditures at about the same level. Furthermore, the increased earnings resulting from increased full-time employment generated a large increase in total family income.

Now, 48 months after the beginning of the study, substantial impacts are still being observed. Compared with control group members, the number of program group members working full time is statistically significantly higher. Earnings of program group members are also higher, thereby reducing the proportion of program group members with income below Statistics Canada's low income cut-off. Furthermore, the increase in employment and earnings has been achieved with no net increase in transfer payments. The resulting reductions in IA payments and increases in tax revenues have offset the cost of the SSP supplement payments.

The final chapters of the SSP story have not yet been written. However, the findings from the SSP applicant study, along with those from the other components of the Self-Sufficiency Project, have already been making a valuable contribution to social policy development in Canada.

John Greenwood
Executive Director

Acknowledgements

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At SRDC, SSP director John Greenwood provided invaluable guidance at all stages of the analysis and writing for this report. Saul Schwartz and Kelly Foley closely reviewed drafts of the report and strongly influenced its focus, particularly the presentation of the more technical results. Barbara Greenwood Dufour performed the final round of editing and formatting and coordinated the translation and production of the document.

At MDRC, many people contributed to the report. As director of MDRC's work on the project, Gordon Berlin contributed valuable insights, particularly concerning the policy implications of the findings. Nkem Dike assisted in all aspects of the work — checking and creating data files, calculating impacts, and creating and editing exhibits. Bryan Ricchetti and Cathy Cousear assisted in checking and creating data files, while Debbie Greenberger assisted in calculating impacts and creating exhibits. Tara Cullen and Colleen Parker verified the accuracy of the exhibits and text. Robert Weber edited the report, and Stephanie Cowell did the word processing.

The Authors

Introduction

Policy-makers have struggled for decades with the problem of designing an income support system that provides an adequate safety net while promoting economic self-sufficiency. Government safety net programs like income assistance (IA) pit one of these objectives against the other; any increase in the generosity of the program directly reduces the incentives to work and leave the program. Several recently tested policies may have shown a way out. By providing extra income supplements only to working parents, these policies have encouraged welfare recipients to work, increased their income, and benefited their children. A drawback of most of these policies, however, is that they cost the government money. This report describes results from a policy that may be different in this regard: the Self-Sufficiency Project (SSP) for welfare applicants.

Conceived and funded by Human Resources Development Canada (HRDC), managed by the Social Research and Demonstration Corporation (SRDC), and evaluated by the Manpower Demonstration Research Corporation (MDRC) and SRDC, SSP offered a *temporary earnings supplement* in the form of a monthly cash payment to single parents who had been on income assistance for at least one year and who left income assistance for full-time work. The supplement was paid on top of earnings from employment for up to three years, as long as the person continued to work full time and remained off income assistance. While collecting the supplement, the single parent received an immediate payoff from work; for a person working full time at the minimum wage, total income before taxes was about twice her earnings.[1]

To measure the effects of its supplement offer, SSP was designed as a social experiment using a rigorous, random assignment research design. In the SSP "applicant study," a group of more than 3,000 single parents in Vancouver and the lower mainland of British Columbia who had recently been approved to receive income assistance were selected from the IA rolls. One half of these people were assigned at random to a program group, which was offered the opportunity to receive SSP supplement payments, while the remainder formed a control group. Those assigned to the program group were informed that if they stayed on welfare for a full year, they would become eligible for the SSP earnings supplement. Those who did stay on income assistance for a year were then told that they could receive the SSP earnings supplement if they stopped receiving income assistance and began working full time (30 or more hours per week) during the second year after random assignment.

An earlier report (Michalopoulos, Robins, & Card (1999)) compared outcomes for the program and control groups through 30 months and found some remarkable results. SSP increased employment, earnings, and income for recent IA applicants, but it did so without costing the government extra cash transfer payments. In other words, the earnings supplement was paid for by reductions in welfare payments and by the higher payroll and income taxes that resulted from the earnings generated by the program's work incentive. This report

[1]The feminine pronoun is used throughout this report because the vast majority of single parents receiving income assistance are women.

extends the results of the earlier report through four years after random assignment and argues that SSP continued to have substantial effects, though the effects declined somewhat over time.

The Findings in Brief

The major findings of this report are as follows:

- **By supplementing earnings to make work pay, the Self-Sufficiency Project (SSP) substantially increased employment**. During the fourth year after random assignment, the program group worked full time for 5.4 months on average, compared with 4.3 months for the control group, for an impact of more than one month. The SSP supplement offer also increased the average number of months of employment per year from 6.0 months for the control group to 6.7 months for the program group.
- **By requiring full-time work, SSP substantially increased earnings**. Because SSP required people to work full time to receive the supplement (and because SSP had such a large effect on employment at high-wage jobs), it generated large increases in earnings. During the fourth year after random assignment, program group members earned $11,950, compared with $10,333 for control group members — an increase of $1,617 for the year, or about 16 per cent over the control group level of earnings.
- **SSP led to no increase in net public transfer payments**. One of the most remarkable findings of the earlier report on applicants was that the supplement offer paid for itself through higher taxes on the earnings generated by the program. This result continued to hold with longer follow-up. During the last six months of the follow-up period, program group members received $129 per month in supplement payments. At the same time, program group members received $69 less in monthly income assistance (IA) payments than control group members, on average, and they paid an estimated $56 per month more in payroll and income taxes than control group members. The combination of increased tax revenues and reduced IA payments more than offset the cost of SSP supplement payments.
- **Most employment resulting from SSP was stable**. A number of other studies have found that earnings supplements have encouraged or allowed welfare recipients to find stable employment. SSP's supplement offer for welfare applicants is no different. The program increased the proportion of people who ever worked full time by about 10 percentage points, but it increased the proportion who stayed at full-time work for more than a year by about nine percentage points.
- **SSP reduced poverty by a substantial amount**. SSP encouraged people to work using the "carrot" of financial incentives, not the "stick" of reduced welfare benefits. As a result, SSP's large effect on earnings reduced by more than six percentage points the proportion of families below Statistics Canada's low income cut-off. However, the program's effects on poverty were substantially lower than at the 30-month point (when it reduced poverty by 11 percentage points), and a majority of program group members still had income below the low income cut-off.

- **The pattern of SSP's effects for applicants changed over time in an expected way**. The program's impacts on employment, earnings, and income peaked near the beginning of the third year, after all people who were going to initiate supplement payments by finding full-time work had done so. The program's effects on employment, IA use, and income declined during the third and fourth years, however, as control group members became more likely to go work. This "control group catch-up" was expected, since SSP was expected to encourage some people who would have gone to work without the supplement offer to go to work sooner.

Description of SSP and the Applicant Study

THE SUPPLEMENT OFFER

To receive SSP's earnings supplement, an individual had to do two things (summarized in the accompanying text box). First, she had to remain on income assistance (IA) for at least a year. This restriction targeted Self-Sufficiency Project (SSP) benefits to a disadvantaged population who normally experience difficulty in the labour market. At the same time, this requirement substantially reduced the incentive for people to enter the welfare system to receive the supplement. If someone stayed on income assistance for a year, she then had to begin working full time (30 or more hours per week) and stop receiving income assistance. The restriction of the supplement to full-time work was intended to limit the ability of parents to use income from the supplement to cut back their work effort, as occurred in several other policies that have been studied. Sample members who followed both of these steps could receive supplement payments for three years starting with the month they first began receiving the supplement, as long as they worked 30 or more hours per week and remained off income assistance in a given month. Program group members could return to income assistance at any time if they met the normal eligibility requirements of income assistance, but they could not receive income assistance and SSP simultaneously.

SSP's supplement offer was quite generous. It paid parents who worked 30 or more hours per week an amount equal to half the difference between their actual earnings and a target level of earnings. In 1994 target earnings were set at $30,000 in New Brunswick and $37,000 in British Columbia, although they have been adjusted slightly over time to reflect changes in the cost of living and in the generosity of income assistance. A participant in British Columbia who worked 35 hours per week at $7 per hour earned $12,740 per year and collected an earnings supplement of $12,130 per year (($37,000 – $12,740)/2), for a total gross income of $24,870. In comparison, if that participant had decided to receive income assistance without working, she would have had annual income of only $17,111. When tax obligations and tax credits are taken into account, most families had incomes $3,000 to $7,000 per year higher with the earnings supplement program than if they had worked the same number of hours without the supplement. (Operational details of the supplement program are described in more detail in Mijanovich and Long (1995) and Lin, Robins, Card, Harknett, and Lui-Gurr (1998).)

Key Features of the Earnings Supplement for Applicants

- **Full-time work requirement**. Supplement payments were made only to eligible single parents who worked full time (an average of at least 30 hours per week over a four-week or monthly accounting period, whether in one or more jobs) and who were not receiving income assistance.
- **Substantial financial incentive**. The supplement was calculated as half the difference between a participant's earnings from employment and an "earnings benchmark" set by SSP for each province. The benchmark for each province was set at a level that would make full-time work pay better than income assistance for most recipients. During the first year of operations, the benchmark was $37,000 in British Columbia. The benchmark was adjusted over time to reflect changes in the cost of living and generosity of income assistance and was $37,625 in 1996. The supplement was reduced by 50 cents for every dollar of increased earnings. Unearned income (such as child support), earnings of other family members, and number of children do not affect the amount of the supplement. The supplement was roughly equal to the earnings of many low-wage workers (before taxes and work-related expenses).
- **Targeted at long-term recipients**. Eligibility for the supplement was limited to long-term welfare recipients (with at least one year of IA receipt). As a result, members of the applicant experiment had to stay on income assistance for the first year after entering the study to establish eligibility for the supplement.
- **One year to take advantage of the offer**. If an IA recipient became eligible to receive the supplement at the end of the first year, she was informed that she could sign up for the supplement if she found full-time work within the next 12 months (in other words, in the second year). If she did not sign up within 12 months, she could never receive the supplement.
- **Three-year time limit on supplement receipt**. A person could collect the supplement for up to three calendar years from the time she began receiving it, as long as she was working full time and not receiving income assistance.
- **Voluntary alternative to welfare**. People could not receive IA payments while receiving the supplement. No one was required to participate in the supplement program, however; after beginning supplement receipt, people could decide at any time to return to income assistance, as long as they gave up supplement receipt and met the eligibility requirements for income assistance. They could also renew their supplement receipt by going back to work full time at any point during the three-year period in which they were eligible to receive the supplement.

THE APPLICANT STUDY

The SSP applicant study included a group of parents who had recently started receiving income assistance in the lower mainland of British Columbia after having been away from the IA program for at least six months. The goals of the evaluation were to understand the *difference* that the supplement offer made in families' employment, earnings, income, and welfare receipt, above and beyond the incentives and services available to families who were not offered SSP; and to

understand how much it would cost the government to run such a program, again, above and beyond the cost of the welfare system that the government would operate instead.

To accomplish these goals, parents in the applicant study were assigned to two groups. A *program group* received SSP's supplement offer; that is, these single parents were eligible to receive the supplement, provided that they met the requirements described above. A *control group* did not receive the offer but could continue to receive income assistance and any related services and incentives. To determine the effects of the supplement offer, outcomes for members of the two groups were compared. To make sure that differences between the groups reflect the effects of SSP's policies, parents were assigned to program and control groups *at random* — that is, without regard to their preferences or personal characteristics.

The original objective of the SSP applicant study was to ask whether the requirement to receive welfare for a year would encourage some people to stay on welfare longer. Earlier reports (Berlin, Bancroft, Card, Lin, & Robins, 1998; Card, Robins, & Lin, 1998); compared IA use by the program and control groups in the year after random assignment. As expected, members of the program group were more likely to receive income assistance in the year after random assignment and were more likely to meet the criteria for SSP eligibility (that is, to have received income assistance for 11 of the 12 months following their first month on income assistance). The difference in the proportions of the program group and control group who met the SSP eligibility rule was small, however — about three percentage points.[2]

The applicant study also provides a means of investigating the effects of SSP on families' employment, income, and other economic outcomes after the first year. To conduct this investigation, participants in the applicant study are being followed for a period of six years, with surveys approximately 12, 30, 48, and 72 months after random assignment. This report provides results from administrative records and from a 48-month follow-up survey. Thus, this report describes the effects of SSP for welfare applicants during the first four years of the study, or at least two years after all individuals who received supplement payments began receiving them.

OTHER STUDIES IN SSP

The SSP demonstration contains one other major study. The SSP "recipient study" included a group of about 6,000 single parents in British Columbia and New Brunswick who had already been on income assistance for at least a year. As in the "applicant study," one half were randomly assigned to the program group and were offered the SSP supplement, and the other half formed the control group. Comparisons of the two groups in the first three years after random assignment show that SSP doubled the rate of full-time employment while lowering the proportion on income assistance by 13 percentage points (Michalopoulos, Card, Gennetian, Harknett, & Robins, 2000). Relative to the control group, those who were offered SSP had higher average monthly earnings, lower IA payments, higher total government transfers (including IA and earnings supplement payments), and higher family incomes. Moreover, elementary-school-age children in the program group performed better on

[2]It is also possible that the supplement offer would convince some people to *begin* receiving welfare. This type of entry effect was not tested in the applicant study. However, if people who are already receiving welfare are unlikely to extend their welfare spells because of the supplement, it is even less likely that people not receiving welfare would apply for benefits because of the supplement.

cognitive tests and behaved better than their control group counterparts (Morris & Michalopoulos, 2000).

The applicant and recipient studies answer two different but related questions. A program like SSP would enrol primarily long-term recipients in its first years of operation. Results from the recipient study therefore provide the best estimate of the effects of a program like SSP at its inception. If a program like SSP were implemented nationally, in contrast, all new welfare recipients would be informed of their potential eligibility when they applied for welfare. In other words, they would resemble members of the SSP applicant study. Results from the applicant study therefore provide estimates of the effects of an established earnings supplement program.

Although the SSP recipient study had some impressive results, nearly two thirds of the people who were offered the supplement were unwilling or unable to accept the offer by finding full-time work. A smaller second study, known as "SSP Plus," investigated whether combining the supplement offer with a package of job-finding services would help more people take advantage of the supplement. It did. In the SSP Plus study, about half the people who were offered the supplement took it up, and the dual program had somewhat larger impacts on employment and earnings outcomes than were found in the main recipient study (Quets, Robins, Pan, Michalopoulos, & Card, 1999; Lei & Michalopoulos, 2001).

BASELINE CHARACTERISTICS

Between February 1994 and February 1995, 3,316 IA applicants agreed to participate in the study and completed a baseline interview. They were then randomly divided between the program group (1,648 members) and the control group (1,668 members).[3] Not all of the original sample members completed the subsequent 12-month, 30-month, and 48-month surveys. In this report, the analysis is limited to the 2,774 participants who responded to the 48-month survey, including 1,390 control group members and 1,384 program group members.[4] Appendix A contains an investigation of the potential biases created by the presence of non-respondents, using administrative records data available for the full applicant sample.

Table 1 presents information on the baseline (that is, pre-random assignment) characteristics of participants in the applicant study, shown separately for the program and control groups. Information is drawn both from IA records and from the baseline interview. Nearly all members of the applicant sample are female, and nearly two thirds have a high school diploma (and about half of these also have some post-secondary education). A typical member of the applicant sample had one or two children and had some work experience but

[3]As is discussed in Card, Robins, and Lin (1998), an additional 59 people completed the baseline interview and were randomly assigned, but they were later removed from the study because they had not been off income assistance for enough months or were already off income assistance before they completed the baseline interview. In addition, 830 applicants did not complete a baseline interview or did not sign an informed consent form agreeing to be part of the study, and eight people were randomly assigned but withdrew from the study. According to Statistics Canada interviewers, many people did not complete the interview because they had already left income assistance. Among people who were still receiving income assistance but refused to participate, many felt that they would be off income assistance very quickly (some were receiving income assistance because they were waiting to receive unemployment insurance benefits) and were reluctant to take part in an experiment designed for welfare participants. The exclusion of these short-termers from the sample is likely to have resulted in overstated estimates of impacts, because none of these short-termers would have been likely to respond to the SSP offer.

[4]Response rates for the 48-month survey were 83.33 per cent for the control group and 83.98 per cent for the program group. The difference in response rates is not statistically significant.

had not worked in the recent past. The average applicant had spent only three months on income assistance in the two years prior to entering the study. Because there are few differences in baseline characteristics between the program and control groups, Table 1 also verifies that random assignment worked in constructing similar groups for comparison.

Table 1: Characteristics of Report Sample Members — Program and Control Groups in the SSP Applicant Study

Baseline Characteristic	Program Group	Control Group	Difference (Impact)	Standard Error
IA history				
Average number of months of IA in last two years	3.2	3.0	0.2	(0.1)
Average monthly IA payment at random assignment ($)	918	934	-16	(15)
Work history				
Ever worked for pay (%)	97.5	96.4	1.1 *	(0.7)
Worked in month before random assignment (%)	23.1	22.4	0.7	(1.6)
Personal characteristics				
Female (%)	91.0	92.7	-1.7	(1.0)
Under age 25 (%)	15.5	15.1	0.4	(1.4)
Less than high school education (%)	35.8	37.2	-1.3	(1.9)
High school graduate, no post-secondary education (%)	42.9	40.6	2.3	(1.9)
Some post-secondary education (%)	21.3	22.2	-1.0	(1.6)
First Nations ancestry (%)	7.2	8.6	-1.3	(1.0)
Immigrant (%)	30.2	29.4	0.9	(1.7)
Physical limitation (%)	19.1	19.7	-0.6	(1.5)
Emotional limitation (%)	5.5	8.2	-2.8 ***	(1.0)
Family structure				
Average number of children (up to age 18)	1.5	1.6	0.0	(0.0)
Never married (%)	22.3	25.0	-2.6	(1.6)
Sample size (total=2,774)	**1,384**	**1,390**		

Sources: Calculations from baseline survey data and IA administrative records.

Notes: Sample sizes vary for individual measures because of missing values.
Two-tailed t-tests were applied to differences in characteristics between the program and control 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.

Effects on Employment and Welfare

PREDICTED EFFECTS OF THE SUPPLEMENT OFFER

The design of the Self-Sufficiency Project (SSP) supplement offer essentially divided people's decisions into three periods. In the year after random assignment, people could *establish eligibility* for the supplement by staying on welfare for 11 of the 12 months following their acceptance into the welfare system (or 12 of 13 months in total, including their first month on welfare). Those who established eligibility in this way faced another important period: in the second year after random assignment, they could *initiate supplement receipt* by finding qualifying full-time work and not receiving income assistance (IA). The period after the second year represents a type of steady state of *ongoing supplement receipt* in SSP. During this time, people who had initiated supplement payments could continue to receive them. However, those who left welfare for more than a month in the first year and thereby did not establish eligibility could never initiate supplement receipt and could never receive the supplement. Likewise, those who established eligibility in the first year but did not find full-time work in the second year could never receive the supplement.[5]

These three periods shape the expected effects of the supplement offer. During the first year, when program group members could establish eligibility for the program, they had an incentive to stay on welfare longer than control group members. To understand this, consider someone who had been on welfare for 11 consecutive months and then was offered a full-time job that would have made her ineligible for welfare. If she was in the control group, she sacrificed little financially by taking the full-time job. If she lost the job later, she could reapply for income assistance and resume receipt of benefits. If she was in the program group, however, she potentially risked a great deal. If she left welfare after 11 months and stayed off for two consecutive months, she forever relinquished her chance at SSP's generous earnings supplement. Knowing this, she may have taken a gamble by staying on welfare the additional month to qualify for the supplement, hoping that she would be able to find another full-time job later. Thus, the main effect of SSP during the first year should have been an increase in use of income assistance. If receiving income assistance kept people from taking jobs, there might also have been an accompanying decrease in employment.

During the second year, people who had established eligibility for the supplement could initiate supplement receipt by leaving income assistance for full-time work. During this second year, therefore, the program should have increased employment — particularly full-time employment — as well as earnings, and it should have decreased use of income assistance.

[5]Because supplement payments were limited to three years, no individual could receive supplement payments after the fifth year after random assignment. This provides a fourth period in the SSP applicant study, but this period did not occur until after the follow-up period described in this report.

In the second year the supplement offer should also have increased the number of people receiving some form of cash assistance — either SSP supplement payments or income assistance. People who left income assistance to receive the supplement would still be receiving cash assistance — but in the form of the supplement payments rather than income assistance. In addition, some people who initiated supplement receipt would have left income assistance even without the supplement offer. The supplement offer allowed them to continue receiving cash assistance even though they would have stopped receiving cash assistance without the offer.

Even though people who planned to take up the supplement offer had the first year to prepare to work full time, it would still have taken them some time to find full-time work in the second year. Therefore, SSP's effects should have gradually increased during this year, and they should have been much larger at the end of the year than at the beginning.

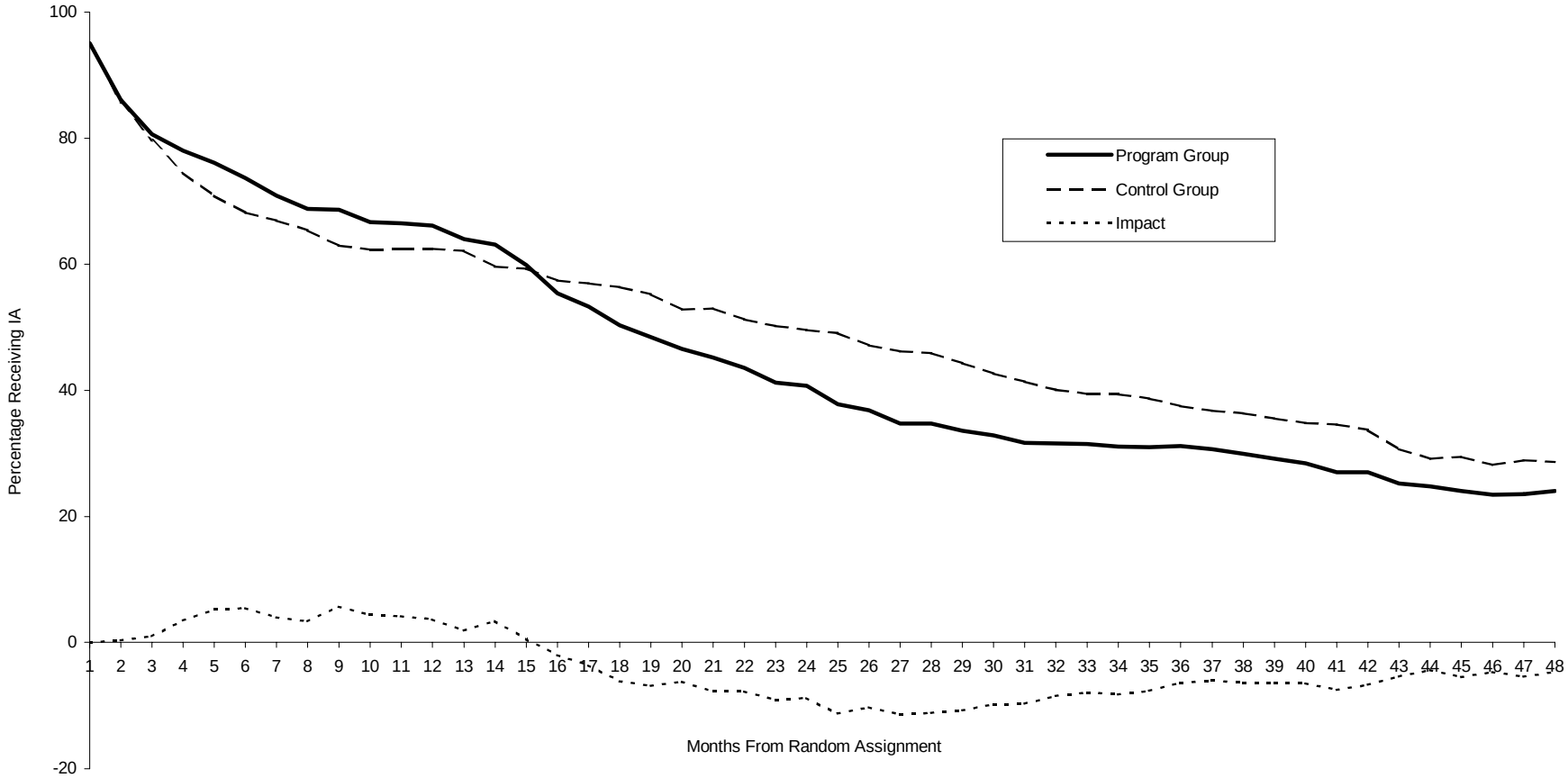
SSP's effects are likely to have been largest during the third year after random assignment, when the program entered a period in which people could no longer initiate supplement payments but in which all who began receiving the supplement in the second year could continue receiving it. However, the program's effects are likely to have been smaller in the fourth year than in the third year due to a phenomenon often referred to as *control group catch-up*. People entered the SSP applicant study immediately after they applied for and were approved to receive income assistance. Some event precipitated their application for income assistance; for example, they might have lost a job, obtained a divorce, or given birth to a child. Some control group members who lost jobs before entering the study are likely to have found new jobs after some time. If these people had been in the program group, however, the incentive might have encouraged them to find work sooner. As a consequence, SSP's effects would be quite large initially, before control group members had found new work but after the supplement offer had encouraged program group members to find work. Its effects are likely to have diminished over time, however, as more control group members went to work.

ESTABLISHING ELIGIBILITY

The three periods described above can be seen in Figure 1, which shows the proportion of program and control group members on income assistance by month, for the four years starting at the time of random assignment. Also shown in the figure is the *impact* of the program, which is simply the difference between the program and control groups in the proportion on income assistance.

At the time of random assignment, the program and control groups were equally likely to be receiving income assistance. In fact, since people in the study had recently been approved to receive income assistance, nearly 100 per cent of both groups were doing so at the time of random assignment. (All members of the sample were receiving income assistance when they completed the baseline interview. However, some time elapsed before the interview was completed and random assignment occurred. In the intervening time a handful of people stopped receiving income assistance.)

Figure 1: Percentage Receiving Income Assistance, by Months From Random Assignment, in the SSP Applicant Study



Source: Calculations from IA administrative records.

In the year after random assignment, when program group members were establishing eligibility for the supplement by remaining on income assistance for an entire year, a small gap emerged between the two groups. As expected, members of the program group were more likely than members of the control group to receive income assistance during this year. The difference between the two groups reached a peak in Month 9, when 68.6 per cent of the program group and 63.0 per cent of the control group received income assistance. This approximately six percentage point gap is an estimate of the entry effect (or, more precisely, the delayed exit effect) caused by the supplement offer. During that first year 59.0 per cent of the program group remained on income assistance for 11 of the 12 months after they began receiving welfare, and they thus established eligibility for the supplement. In comparison, 54.7 per cent of control group members remained on welfare for such a period, providing another indication of the program's delayed exit effect.

In interpreting the results in Figure 1 (as well as other results in this report), keep in mind that they apply only to the 2,774 people who responded to the 48-month questionnaire — about 85 per cent of the applicant sample. In contrast, estimates of the delayed exit effect reported by Berlin et al. (1998) and Card et al. (1998) used the entire applicant sample. Because the earlier reports used the complete sample, the estimates reported there are more accurate than the estimates presented here. The delayed exit effect among people who responded to the 48-month interview is reported here to help understand the program's impacts on employment, earnings, and income, which are discussed later in the report.

Starting near the end of the first year after random assignment, program group members who had established eligibility for the supplement could have initiated supplement receipt.[6] Because program group members could not receive IA and SSP supplements at the same time, this should have caused the program group to be less likely to receive income assistance than the control group. As shown in Figure 1, such a difference emerged beginning in about Month 16. By Month 25, which corresponds to the end of the 12-month window for taking up the supplement, IA receipt by the program group was more than 11 percentage points *lower* than receipt by the control group.

The period after Month 25 represents the program's steady state. Individuals who had not initiated supplement receipt before this could never do so. As a result, the supplement offer lost its ability to encourage even more people to leave income assistance, and the precipitous decline in income assistance use among program group members became a slow, steady decline representing the usual forces that would result in people leaving income assistance: remarriage, aging of children into adulthood, taking a job. Moreover, the control group catch-up described earlier meant that members of the control group continued leaving income assistance, and at a faster rate than members of the program group. As a result, SSP's impact

[6]Most program group members (72.4 per cent of the sample) had been on income assistance for one month when they completed their baseline interview and were randomly assigned. With no break in IA receipt, these sample members would become eligible for SSP in Month 11 after random assignment and could potentially begin receiving SSP immediately. However, 18 per cent of the program group had been on income assistance for two months before random assignment; these sample members could begin receiving SSP as early as Month 10. A small group of sample members (two per cent of the sample) had been on income assistance for three months at random assignment and could begin SSP as early as Month 9. Only a handful of people had been on income assistance for more than three months prior to random assignment.

on IA receipt, while remaining strong, declined somewhat over time. By the last month of the follow-up period, 28.6 per cent of the control group were receiving income assistance, compared with 24.0 per cent of the program group — for a decline of 4.6 percentage points, or about 16 per cent.

SUPPLEMENT RECEIPT

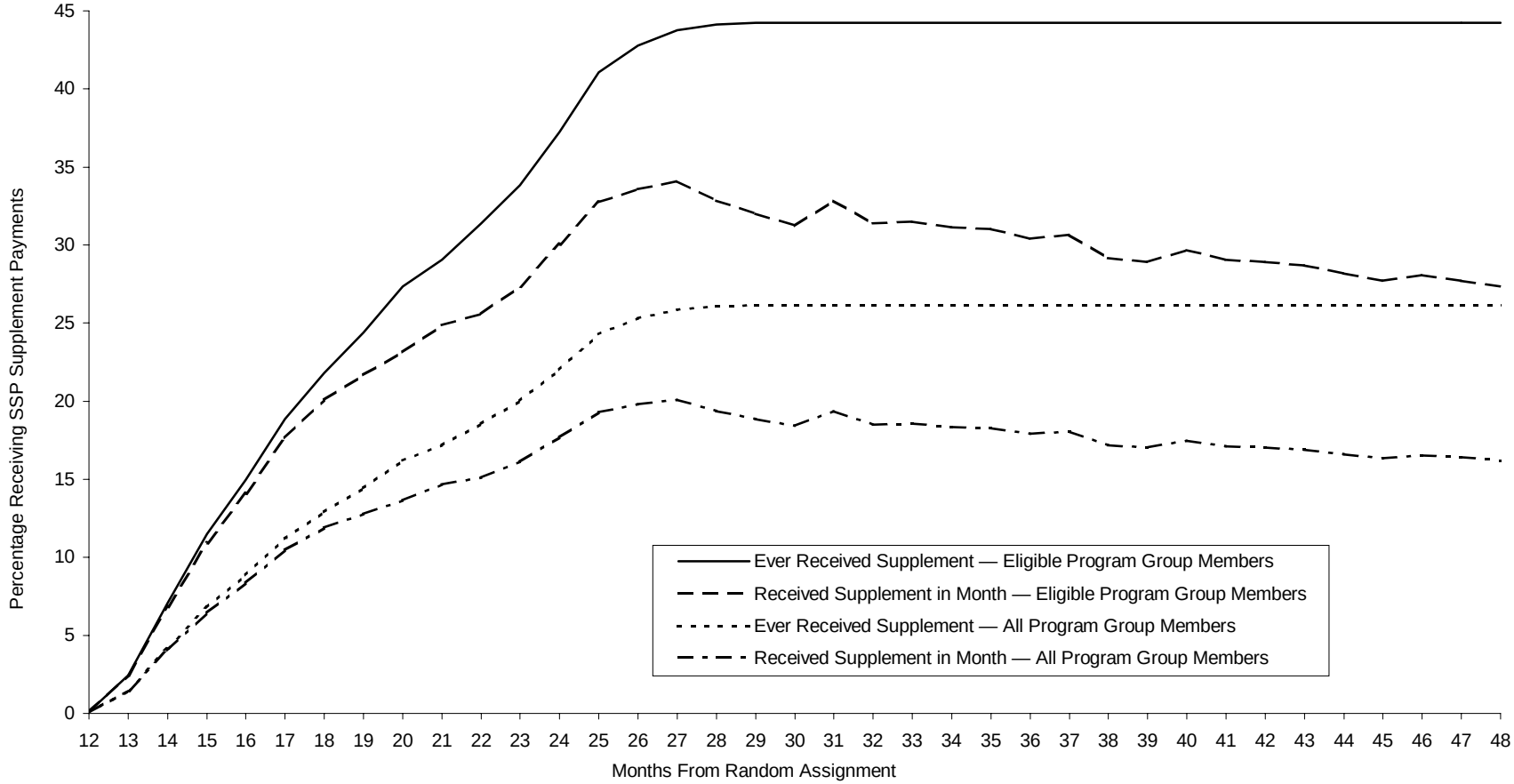
As Figure 1 indicates, during the second year, members of the program group left income assistance at a much faster rate than members of the control group. This can mean only one thing: some program group members had found full-time work and had initiated supplement receipt. Figure 2 shows how many of them ever received supplement payments and how many of them many received supplement payments in a given month. Since most people could not begin receiving the supplement until after the first year, the graph begins with Month 12 and continues until the end of the fourth year.

According to Figure 2, the proportion of the program group who had received at least one supplement payment gradually and steadily increased in the first year following eligibility notification, hitting a plateau of about 26 per cent in Month 27. This gradual increase was expected. During the year they had been on welfare, few program group members had worked, and many consequently needed time to find full-time work. The plateau after Month 27 was also expected: people who had not initiated supplement receipt by that time could never do so.

As mentioned earlier, only 59 per cent of the program group qualified for the supplement offer by staying on income assistance for a year or more. Since 26 per cent of the program group received at least one supplement payment, this implies that about 44 per cent (26/59) of program group members who were eligible for the supplement initiated supplement receipt. This compares favourably with results from the main SSP study of long-term welfare recipients, in which 35 per cent of the program group received supplement payments (Lin et al., 1998; Michalopoulos et al., 2000). It provides one indication that this group of recent welfare applicants was better able or more willing to find full-time work than the relatively disadvantaged long-term recipients. (See Michalopoulos et al. (1999) for a detailed comparison of the applicant and long-term recipient samples in British Columbia.)

Figure 2 shows that the proportion of the program group receiving SSP in any given month also increased throughout the second year and reached a peak, in Month 27, of about 20 per cent of the full program group. However, the proportion receiving supplement payments in a given month was always lower than the proportion who ever received at least one supplement payment. This difference indicates primarily the proportion of people who started and left a full-time job. The difference also reflects a small number of people who continued working full time but who could not receive the supplement because their earnings were too high.

Figure 2: Percentage of Program Group Members Receiving SSP Supplement Payments in the SSP Applicant Study



Source: Calculations from payment records from SSP's Program Management Information System.

Notice that the proportion of the program group receiving supplement payments was greater than the program's effect on IA receipt, which peaked at about 11 percentage points in Month 25 according to Figure 1. This may seem counterintuitive since all supplement recipients had to have stopped receiving income assistance. The reason for the difference is instructive. Some program group members stopped receiving income assistance *because* of the supplement offer. They are represented by the impact of the program on IA receipt, implying that 11 per cent of the program group had left income assistance because of the supplement in Month 25. Other program group members would have left income assistance for full-time work even without the supplement offer. The difference between the number who received the supplement and the program's impact on IA receipt indicates how many program group members fell into this category. In Month 25, for example, when the program's impact on IA receipt was 11 percentage points, about 19 per cent of the program group received a supplement payment. This implies that about eight per cent of the program group — or about 41 per cent (8/19) of supplement recipients that month — received a supplement payment even though they would have left income assistance without the supplement offer.

FULL-TIME EMPLOYMENT

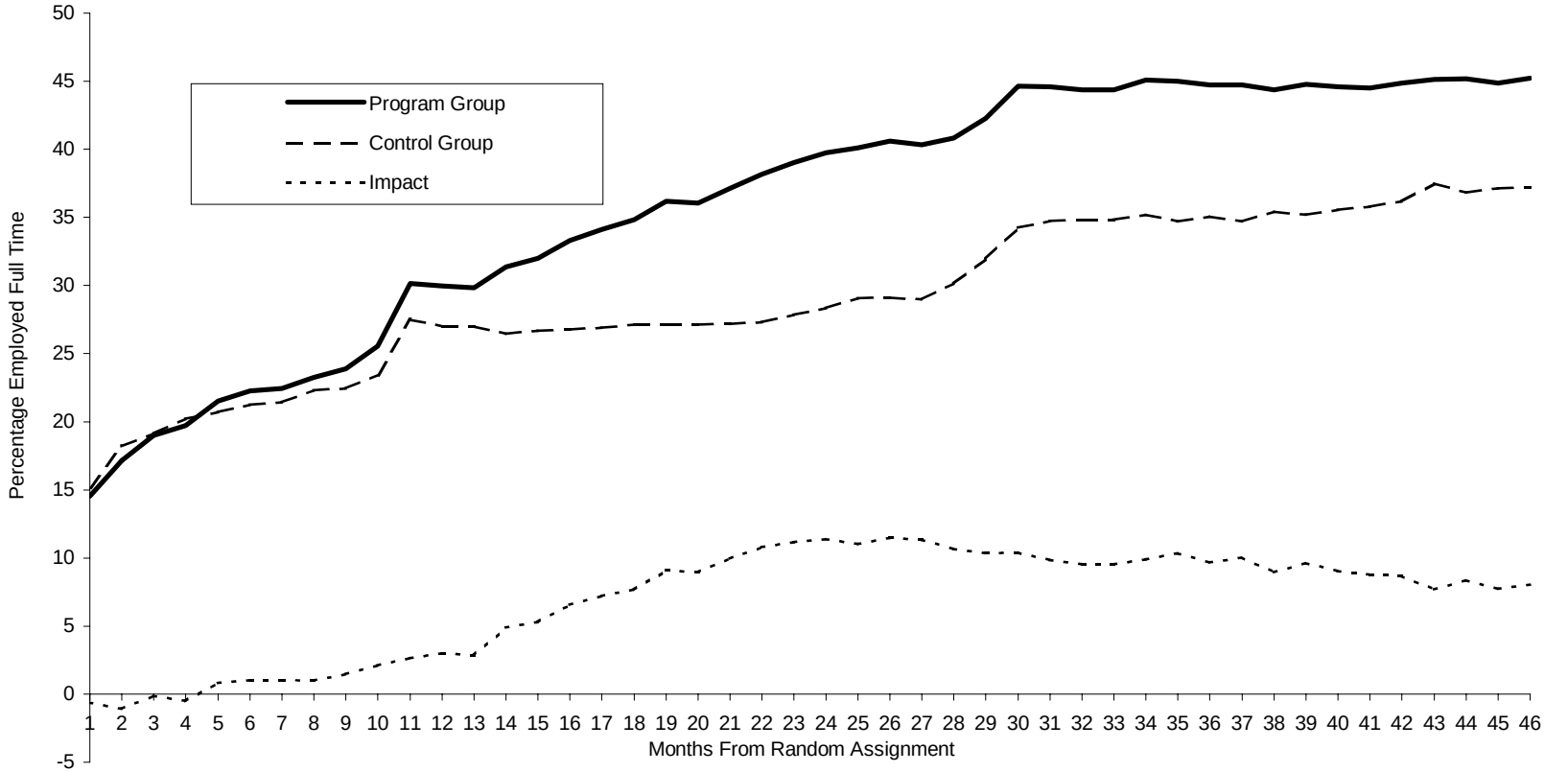
Although members of the program group received supplement payments because they worked full time, some people who received payments would have worked full time even if the supplement had not been offered to them. The rate of supplement receipt consequently does not reveal how much the program increased full-time employment. This is shown instead by Figure 3, which shows the proportion of the program and control groups who worked full time from the time of random assignment until the end of the follow-up period, and which also indicates the program's effect on full-time employment.

At random assignment, shortly after sample members had been accepted into the IA system, about 15 per cent of both groups were working full time. This similarity is expected in random assignment studies, since the goal is for the program and control groups to be comparable at random assignment, and this provides further evidence that any differences that emerged after random assignment were due to SSP's supplement offer.

During the first year after random assignment, as people qualified for the supplement by staying on income assistance, the groups remained quite similar. Full-time employment increased during the year, but it increased by about the same amount in both groups. Although members of the program group were slightly more likely than members of the control group to receive income assistance during this year, this does not appear to have caused them to be less likely to work full time. On the contrary; a small positive impact emerged towards the end of the year, with 30 per cent of the program group and 27 per cent of the control group being employed full time.

After recipients were notified of their eligibility status near the end of Year 1 and beginning of Year 2, and while they were initiating supplement payments in the second year after random assignment, full-time employment soared in the program group but increased only gradually in the control group. By Month 25 — the last month in which individuals could initiate supplement payments — 40.1 per cent of the program group worked full time, compared with only 29.1 per cent of the control group, for an impact of 11 percentage points.

Figure 3: Percentage Employed Full Time, by Months From Random Assignment, in the SSP Applicant Study



Sources: Calculations from baseline survey data and 12-month, 30-month, and 48-month follow-up survey data.

The program's effect peaked near the beginning of the third year, reaching about 12 percentage points in Month 26. Although the program's effect remained quite strong after that, it was gradually eroded by control group catch-up. Between the end of the second year and the end of the follow-up period, full-time employment in the program group increased by about five percentage points, from about 40 per cent to about 45 per cent. However, full-time employment for the control group increased by nearly nine percentage points, from about 28 per cent to about 37 per cent. As a result, the program's effect had diminished to about eight percentage points by the end of the follow-up period.

EARNINGS, WELFARE BENEFITS, AND SUPPLEMENT PAYMENTS

Table 2 summarizes the average impacts of SSP on several additional measures of employment, earnings, and cash transfers. For each outcome, the first two columns show the average outcome for the program group and the control group. The third column shows the impact of the program, calculated as the difference in outcomes between the two research groups. The outcomes are divided into the four periods described earlier that represent the distinct periods of the program: Year 1, when individuals could qualify for the supplement by staying on income assistance; Year 2, when those who had qualified for the supplement could initiate supplement receipt by finding full-time work; and years 3 and 4, when those who had initiated supplement receipt could continue receiving it by continuing to work full time.

Although the research design ensured that the program and control groups were roughly comparable at the time of random assignment, some small differences existed at that time, and other small differences were likely to have emerged after random assignment. Such differences would have been due to chance, and they are normal whenever a sample of individuals is used. To help distinguish differences that were due to chance from those that probably indicate a real effect of the program, Table 2 also shows two indicators of the statistical precision of the estimated impacts.

Asterisks next to an estimated impact indicate that it is *statistically significant*, which means that the impact was large enough that it is unlikely to have happened by chance. In other words, if an estimated impact is statistically significant, the program probably had a real effect on that outcome. Impact estimates without asterisks are not statistically significant, which means that the difference between the program and control groups was so small that it could have happened by chance. The fact that an impact is not statistically significant does not mean that the program definitely did not affect that outcome but, rather, that one cannot be confident that it affected that outcome.

The last column of the table shows the *standard error* (in parentheses), which is equivalent to the "margin of error" often published with public opinion poll results; this is a measure of the statistical uncertainty associated with the impact estimate. For example, there is a 95 per cent probability that the impact of an SSP program run over a long period of time (under the conditions that existed in British Columbia when the applicant study was conducted) would lie within the range defined by the estimated impact, plus or minus two standard errors. (For further discussion of statistical significance and standard errors, see Appendix A of Lin et al. (1998).)

Table 2: SSP Impacts on Employment, Earnings, Income Assistance, and Cash Transfers in the SSP Applicant Study

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
Year 1 (qualifying for the supplement)				
Average months of full-time employment[a]	2.7	2.6	0.1	(0.2)
Average months of part-time employment	1.5	1.5	0.0	(0.1)
Average months of employment	4.2	4.1	0.1	(0.2)
Average earnings ($)	5,196	5,408	-212	(369)
Average months of IA receipt	9.0	8.6	0.4 ***	(0.2)
Average IA payments ($)	8,654	8,479	175	(189)
Year 2 (initiating supplement receipt)				
Average months of full-time employment[a]	4.2	3.3	1.0 ***	(0.2)
Average months of part-time employment	1.5	1.6	-0.1	(0.1)
Average months of employment	5.8	4.9	0.9 ***	(0.2)
Average earnings ($)	8,730	7,096	1,634 ***	(461)
Average months of IA receipt	6.1	6.6	-0.5 ***	(0.2)
Average IA payments ($)	5,931	6,483	-552 **	(216)
Average months of receipt of IA or SSP	7.2	6.6	0.6 ***	(0.2)
Average payments from IA and SSP ($)	7,034	6,483	551 **	(219)
Year 3 (ongoing supplement receipt)				
Average months of full-time employment[a]	5.2	3.9	1.2 ***	(0.2)
Average months of part-time employment	1.4	1.6	-0.2 *	(0.1)
Average months of employment	6.6	5.6	1.0 ***	(0.2)
Average earnings ($)	11,214	8,970	2,244 ***	(493)
Average months of IA receipt	4.0	5.1	-1.1 ***	(0.2)
Average IA payments ($)	3,398	4,379	-981 ***	(183)
Average months of receipt of IA or SSP	6.2	5.1	1.1 ***	(0.2)
Average payments from IA and SSP ($)	5,252	4,379	873 ***	(190)
Year 4 (ongoing supplement receipt)				
Average months of full-time employment[a]	5.4	4.3	1.0 ***	(0.2)
Average months of part-time employment	1.3	1.7	-0.4 ***	(0.1)
Average months of employment	6.7	6.0	0.6 ***	(0.2)
Average earnings ($)	11,950	10,333	1,617 ***	(547)
Average months of IA receipt	3.3	4.0	-0.7 ***	(0.2)
Average IA payments ($)	2,014	2,496	-482 ***	(125)
Average months of receipt of IA or SSP	5.3	4.0	1.3 ***	(0.2)
Average payments from IA and SSP ($)	3,200	2,496	704 ***	(132)
Sample size (total = 2,774)	**1,384**	**1,390**		

Sources: Calculations from IA administrative records, payment records from SSP's Program Management Information System, and baseline survey, 12-month, 30-month, and 48-month follow-up survey data.

Notes: The estimates for each year, with the exception of earnings estimates, are calculated by averaging the four quarterly estimates. Yearly earnings are calculated by multiplying the average monthly earnings for that year by 12.

Sample sizes vary for individual measures because of missing values.

Two-tailed t-tests were applied to differences between the outcomes for the program and control 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]"Full-time employment" is defined as working 30 or more hours in at least one week during the month.

Year 1

Table 2 indicates that the program had few statistically significant effects on employment during Year 1. During that year, members of the program group worked full time for 2.7 months on average, but members of the control group worked full time for 2.6 months on average. This small difference stands in contrast to the higher rate of full-time employment for the program group that had emerged at the end of the first year (according to Figure 3), and it implies that the difference at the end of Year 1 is not indicative of the entire year.

There was also virtually no difference in part-time work during Year 1 — with members of both groups working 1.5 months on average — or in employment overall (4.2 months for members of the program group on average compared with 4.1 months for the control group on average). Members of the program group also earned about the same as members of the control group: $5,196 compared with $5,408. Although members of the program group earned about $200 less than the control group on average, the difference is not statistically significant, as indicated by the lack of asterisks next to the estimated impact.

Although the program did not significantly affect earnings and employment, it did significantly increase IA receipt in Year 1. This is another measure of the program's delayed exit effect during the first year. During the first year, program group members spent 9.0 months on income assistance on average, compared with 8.6 months on average for the control group. The small increase in use of income assistance translated into a very small increase in IA payments ($175 for the entire year), but the impact on IA payments is not statistically significant.

Year 2

As described earlier, program group members who became eligible for the supplement during Year 1 could initiate supplement receipt by leaving income assistance and going to work full time during Year 2. Therefore, the program was expected to begin having a positive effect on employment — especially full-time employment — during that year. It was also expected to begin having a negative effect on the use of income assistance. The second panel of Table 2 shows that it did have these effects.

In Year 2, the average person in the program group worked full time for 4.2 months, compared with 3.3 months on average in the control group. The supplement could have increased full-time employment in two ways. It could have persuaded people who would have worked part time without the supplement to take full-time jobs instead, or it could have persuaded people who would not have worked in the absence of the supplement offer to begin working full time. To the extent that it encouraged people to move from part-time to full-time work, the program would have reduced part-time employment. To the extent that it encouraged people who would not have worked to work full time, it would have increased employment overall.

Results in Table 2 imply that SSP increased full-time employment primarily by persuading people who would not have worked to begin working. In generating an increase of full-time employment of one month per person, it also generated an increase in any employment (part-time or full-time) of 0.9 months on average. In comparison, only a small

number of people who would have worked part time began working full time: months of part-time work were about the same for the program group as for the control group in Year 2.

SSP's increase in employment (especially full-time employment) should have generated a substantial increase in earnings. Table 2 indicates that it did. In Year 2, average earnings for the program group were $1,634 more than for the control group.

It is important to note that average earnings reported in Table 2 are earnings for all people in the study for the entire year, whether they were working (and therefore had positive earnings) or not working (and had no earnings), and whether they worked the entire year or only part of the year. For example, members of the program group in Year 2 earned $8,730, but these earnings were accumulated during 5.8 months on average. Consequently, the amount earned per month worked by program group members was $8,730/5.8, or about $1,500 per month.

Another interesting calculation is the average earnings per extra month of work. In Year 2, SSP increased earnings by $1,634 per person and increased employment by 0.9 months per person. Hence, for each extra month of work, the program increased earnings by about $1,800 ($1,634/0.9), or nearly $12 per hour for someone working 35 hours per week. The relatively high earnings per extra month of work provide an indication of the relatively high earnings ability of people in the applicant study. A later section will show how many people were earning relatively high and relatively low hourly wages.

People in the program group who worked full time can be divided conceptually into two groups: those who would have worked full time in the absence of the supplement offer (that is, if they had been assigned to the control group) and those who worked full time because of the supplement offer. The program's impact on full-time employment indicates the size of the second group. People in the program group who were not receiving income assistance in Year 2 can likewise be divided into two groups: those who would have stopped receiving income assistance even without the supplement offer (for example, because they took part-time jobs) and those who left income assistance because of the supplement. The program's impact on IA receipt reveals the size of this second group. If all people who worked full time because of the supplement also left income assistance because of the supplement, then the program would have reduced IA receipt by at least as much as it increased full-time employment. Table 2 shows, however, that the reduction in time spent on income assistance was only 0.5 months on average, or about half as large as the increase in time spent working full time.

The fact that the impact on IA receipt in Year 2 was smaller than the impact on full-time employment probably reflects delays that were built into the process of initiating supplement payments. After someone found full-time work, she did not receive a supplement payment until she was paid and provided pay stubs to SSP staff who processed her claim. In fact, SSP staff often waited until a person had received her first cheque before having her welfare benefits terminated. As will be discussed below, impacts of the program on full-time employment and IA use were more similar in years 3 and 4 than in Year 2, lending weight to the possibility that timing resulted in relatively small impacts on IA use during Year 2.

With the decrease in IA receipt came a decrease in payment amounts. During Year 2, the average person in the program group received $552 less in IA payments than the average person in the control group (or about $1,100 per month, which is close to the basic IA grant for a single parent with two children in British Columbia).

However, people who left income assistance to receive the supplement continued to receive some form of public assistance; they received supplement payments rather than income assistance. At the same time, some people who received the supplement would have left income assistance even if they had not been offered the supplement. They continued to receive public assistance because of the program, but they would have stopped receiving public assistance in the absence of the program. As a result, more people received public assistance of some form in the program group than in the control group. In Year 2, when the program reduced IA use by 0.5 months and reduced IA payments by $552 per person, it *increased* receipt of either income assistance or SSP by 0.6 months and increased combined payments from income assistance and SSP by $551 per person.

Year 3

The program's peak impacts generally occurred in Year 3, as shown in the third panel of Table 2. During Year 3, SSP increased full-time work by 1.2 months on average. In addition, it continued to increase full-time employment primarily by encouraging people who would not have worked otherwise to work full time: the program increased employment overall by 1.0 percentage points and decreased part-time work by only 0.2 percentage points. In other words, only about one in six people who moved to work full time because of the supplement offer moved there from part-time work. The relatively large effect on full-time employment resulted in a substantial increase in earnings of $2,244, or nearly $1,900 per month per person who began working full time because of the supplement ($2,244/1.2).

The program's impacts on transfer payments also peaked in Year 3. During this year, the program reduced IA receipt by 1.1 months on average. This is quite a substantial decrease considering that control group members were on income assistance for only 5.1 months on average in Year 3. The program also reduced IA payments by nearly $1,000 per program group member in the third year, or more than $1,600 per year per eligible program group member ($981/0.59).

Although the program reduced the number of months that program members received welfare, it increased the number of months they received transfers from either IA or SSP supplement payments. While control group members received cash transfers for 5.1 months on average, program group members received them for 6.2 months on average. This implies that the program group received supplement payments for 2.2 months on average in Year 3. In addition, the program increased the amount of cash transfers received from either IA or SSP supplement payments by $873 per person during the third year.

It is important to keep in mind that people who went to work because of the program paid payroll and income taxes to both the provincial and the federal governments. Thus, the cost of the program in terms of transfer payments was diminished somewhat by the extra taxes paid by the people who worked more and earned more because of the supplement offer. This issue will be addressed in a later section.

Year 4

During Year 4, when all individuals who had initiated supplement payments during Year 2 could continue receiving them, the program's impacts were expected to diminish due to control group catch-up. Recall that control group catch-up refers to the idea that many control group members would find work and leave income assistance on their own, but that the supplement encouraged their counterparts in the program group to find work and leave income assistance sooner. For example, someone who might have found work in Year 4 if she had been in the control group might have gone to work in Year 2 instead to receive the supplement. When control group members went to work, some probably worked full time, but others worked part time. This means that the program's impact on full-time employment was expected to diminish less than its impact on employment overall, but its impact on part-time employment might have increased. These results are shown in the bottom panel of Table 2.

Between years 3 and 4, full-time employment for the program group increased only slightly, from 5.2 to 5.4 months on average. In comparison, full-time employment for the control group increased from 3.9 to 4.3 months on average. As a result, the program's impact on full-time employment diminished somewhat, from 1.2 months in Year 3 to 1.0 months in Year 4. The fact that full-time employment for the program group continued to increase, however, implies that the diminishing impacts were not primarily because supplement recipients lost their jobs but because more control group members acquired them (that is, because of control group catch-up).

A similar change took place in overall employment. Between years 3 and 4, employment for the program group barely changed, from 6.6 months on average to 6.7 months on average. In comparison, employment for the control group increased more, from 5.6 to 6.0 months on average. The program's impact on employment consequently declined, from 1.0 months to 0.6 months.

Notice that the program's effect on employment declined more than its effect on full-time employment. This means that some control group members who went to work in Year 4 worked only part time, while some of their counterparts in the program group continued to work full time because of the supplement offer. It also means that the program's reduction in part-time work grew between years 3 and 4, from a reduction of 0.2 months on average in Year 3 to a reduction of 0.4 months on average in Year 4.

Declining impacts on employment and full-time employment meant that the program's impacts on earnings also declined, from $2,244 in Year 3 to $1,617 in Year 4. However, the impacts in Year 4 were substantial and are statistically significant. Since the impacts were likely concentrated among people who were eligible for the supplement, the impact on earnings was even more impressive for that smaller group: $2,741 per eligible program group member ($1,617/0.59). Take this one step further: the impact was likely to have been concentrated among those who took up the supplement. Per supplement recipient, the program's impacts on earnings were more than $6,000 per year ($1,617/0.26).

One outcome where the logic of control group catch-up appears not to have applied was receipt of cash transfers (either IA or SSP supplement payments). The program's impact on receipt of either IA or SSP supplement payments increased between years 3 and 4, from 1.1 months in Year 3 to 1.3 months in Year 4. In Year 4, the program also provided about

$705 more in cash transfer payments to the program group than to the control group, which was nearly as big an impact as in Year 3.

The reason for the increased impact on receipt of cash transfers is simple but instructive. Control group catch-up implies that some control group members eventually left income assistance but that the supplement offer encouraged some of their program group counterparts to leave income assistance sooner. When people in the control group eventually left income assistance and stopped receiving cash transfers, those program group counterparts continued to receive SSP supplement payments. Thus, the number of people receiving cash transfers fell more in the control group than in the program group, and the program's effect on receipt of cash transfers increased between Year 3 and Year 4.

This increase in use of cash transfers is an expected effect of offering a financial incentive like SSP and is not necessarily a negative consequence of the program. For these families, the supplement increased income and reduced poverty. If parents spent this extra money on food and other necessities or placed their children in higher-quality child care arrangements that cost more, for example, children in those families might also have benefited from the increase in cash transfers.[7]

EFFECTS BY SUBGROUP

In the SSP recipient study, impacts on full-time employment, income, and receipt of income assistance were remarkably consistent across a wide range of subgroups. Impacts were about the same for high school graduates and high school dropouts, for people working at random assignment and those not working at random assignment, for longer-term and shorter-term welfare recipients, for parents with young children and those with only older children, and for those with and without a physical disability — all measured at the time of random assignment.

Table 3 presents impacts of the program for the applicant study by subgroup for two outcomes measured over the 44 months following random assignment: total months worked full time; and cumulative income from earnings, IA, and SSP supplement payments since random assignment. As was true in the recipient study, impacts on full-time employment were similar for the various subgroups. The largest variation is by employment status at the time of random assignment. For example, the program had a relatively small impact (1.8 months) on full-time employment for people who were already working full time at random assignment. This is not surprising, since this group had the ability to find full-time work even without the supplement offer. In contrast to the recipient study, the largest effect was for people neither working nor looking for work at the time of random assignment; but even with the supplement offer, this group worked full time only about 10 months on average (6.3 + 3.8), or less than one fourth of the time.

[7]There are other costs associated with the program, of course, such as the cost of running the program. There are also other benefits, such as extra taxes paid by new workers and recipients of the supplement. These other costs and benefits are being ignored for the moment. A later section of the report presents impacts of SSP on payroll and income taxes and other transfer payments.

Table 3: SSP Impacts on Months Employed Full Time and Cumulative Income, by Subgroup

Subgroup	Sample Size	Total Full-Time Employment (Months)			Cumulative Income ($)		
		Control Group	Difference (Impact)	Standard Error	Control Group	Difference (Impact)	Standard Error
Age of sample member							
19–24 years old	423	8.2	3.9 ***	(1.2)	40,810	6,004 **	(2,476)
25–29 years old	606	11.5	3.7 ***	(1.1)	47,085	9,495 ***	(2,746)
30–39 years old	1,260	14.1	2.8 ***	(0.9)	53,577	6,314 ***	(2,122)
40 years old and over	483	14.4	2.1	(1.4)	52,128	4,595	(3,760)
Age of youngest child							
0–2 years old	697	9.8	3.2 ***	(1.0)	45,800	7,636 ***	(2,189)
3–5 years old	676	12.7	3.2 ***	(1.1)	48,975	7,312 **	(2,908)
6–11 years old	716	14.2	2.7 **	(1.2)	55,620	6,349 **	(2,856)
12 years old and over	462	16.3	3.5 **	(1.5)	52,537	7,984 **	(4,016)
Employment status at baseline							
Full-time	391	27.3	1.8	(1.4)	75,869	-50	(4,712)
Part-time	352	17.2	1.9	(1.6)	61,822	5,575	(4,496)
Not employed, looking for work	844	14.1	2.3 **	(1.0)	50,807	7,883 ***	(2,583)
Neither employed nor looking for work	1,194	6.3	3.8 ***	(0.7)	40,666	7,256 ***	(1,528)
Enrolled in education/training at baseline							
Yes	321	14.3	0.6	(1.6)	52,270	2,354	(3,876)
No	2,452	12.4	3.3 ***	(0.6)	49,435	7,196 ***	(1,453)
Marital status							
Never married	656	11.4	4.0 ***	(1.1)	46,596	6,323 ***	(2,426)
Separated/divorced	1,896	12.8	3.1 ***	(0.7)	51,222	7,116 ***	(1,687)
Number of children							
One child	1,364	12.2	3.8 ***	(0.8)	46,930	6,724 ***	(1,920)
Two children	857	12.6	3.0 ***	(1.0)	51,167	6,983 ***	(2,445)
Three or more children	428	10.8	1.9	(1.3)	52,331	5,241 *	(3,009)

Sources: Calculations from IA administrative records, payment records from SSP's Program Management Information System, baseline survey data, and 12-month, 30-month, and 48-month follow-up survey data.

Notes: A two-tailed t-test was applied to differences between the outcomes for the program and control 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.

Differences across subgroups are not statistically significant for either income or full-time employment, for any set of subgroups.

Impacts across the four employment subgroups were close enough to one another, however, that the differences could be due to chance. In fact, for all subgroups shown in Table 3, differences in impacts on full-time employment were close enough that they could be due to chance. Likewise, differences in impacts on income were close enough in all cases that they could be due to chance.

One interesting contrast between the applicant and recipient studies is the effect of the supplement offer on income for those already employed full time at the time of random assignment. In the recipient study, SSP had its largest effect on income for this group — more than $9,000 per year. This was because the group in the recipient study could initiate supplement payments immediately. In contrast, SSP did not change income at all for applicants who were employed full time at the time of random assignment, suggesting that this group was likely to leave welfare quickly and therefore never become eligible for the supplement.

Effects on Other Outcomes

The previous section showed that SSP achieved its main objectives: it encouraged people to find jobs and, importantly, to find full-time jobs of more than 30 hours per week. It also increased their earnings. However, by increasing people's income and full-time employment, SSP is likely to have had a range of other outcomes. This section explores several of them: wages and hours worked, income and poverty, stability of employment, expenditures on basic necessities and material hardship, marriage, and child care.

WAGES AND HOURS WORKED

A concern about policies that supplement earnings is that the income they provide may allow individuals to take jobs with lower wages than they otherwise would have accepted. These jobs may provide some other advantage, such as being closer to home or having more convenient hours. If SSP were having this effect, it could be detected by looking at the number of people earning high wages. In particular, fewer program group members than control group members would be receiving high wages.

In contrast to the fear that SSP encouraged low-wage work is the hope that it helped people move into high-wage work. The earnings supplement encouraged people to work full time more frequently, and steady, full-time work may be important for increased wage rates (Gladden & Taber, 1999; Corcoran & Loeb, 1999). If this were happening, many more program group members than control group members would be receiving high wages.

A related concern is that the income provided by earnings supplements allows individuals to reduce their hours of work. A person could work less, receive the supplement, and still end up with more income than without the supplement. SSP's 30-hour work requirement limited the ability to cut back work effort. Nevertheless, it is still possible that some who would have worked 40 hours per week in the absence of the supplement would work only 30 hours per week with the supplement. In fact, this pattern was seen in the New Hope project in Milwaukee, Wisconsin, which offered families in low-income neighbourhoods an earnings supplement and other work supports if at least one parent worked 30 hours or more per week (Bos, Huston, Granger, Duncan, Brock, & McLoyd, 1999).

Table 4 presents evidence on these issues by showing the distribution of wages and hours worked in Month 45 of the follow-up period, which was the last month with employment information for all 48-month respondents. According to Table 4, neither the hope of high wages nor the fear of depressed wages was fulfilled. During Month 45, the program increased employment by about four percentage points. At the same time, the program increased the number of people with relatively low-wage jobs: 8.1 per cent of the control group earned less than $8.00 per hour, compared with 10.0 per cent of the program group. However, it increased the number of people in low-wage jobs by *less* than it increased employment, which implies that some people who went to work because of the supplement received relatively high wages. In fact, more members of the program group had high-wage jobs than did members of the control group: 32.3 per cent of the program group earned $10 or more per

hour, compared with 30.1 per cent of the control group, but the difference is not statistically significant.

Table 4: SSP Impacts on the Distribution of Hourly Wages and Weekly Hours Worked, Month 45 in the Applicant Study

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
Hourly wage rate (% in each category)				
Not working	43.7	47.6	-3.9 **	(1.9)
Wage unreported[a]	4.6	6.0	-1.3	(0.9)
Less than $6.00	2.6	2.6	0.0	(0.6)
$6.00–6.99	0.8	0.8	0.0	(0.3)
$7.00–7.99	6.6	4.7	2.0 **	(0.9)
$8.00–8.99	5.6	5.1	0.5	(0.9)
$9.00–9.99	3.6	3.1	0.5	(0.7)
$10.00–14.99	17.1	15.1	2.0	(1.4)
$15.00 or higher	15.2	15.0	0.2	(1.4)
Hours worked per week (% in each category)				
Not working	43.7	47.6	-3.9 **	(1.9)
Hours per week unreported[a]	1.1	1.4	-0.3	(0.4)
Fewer than 30	10.3	13.7	-3.5 ***	(1.2)
30	5.0	3.6	1.4 *	(0.8)
31–34	2.5	2.5	-0.1	(0.6)
35	6.2	4.4	1.8 **	(0.9)
36–39	7.0	4.7	2.3 ***	(0.9)
40	17.6	14.9	2.7 *	(1.4)
More than 40	6.7	7.2	-0.5	(1.0)
Sample size (total = 2,774)	**1,384**	**1,390**		

Source: Calculations from 48-month follow-up survey data.

Notes: Two-tailed t-tests were applied to differences in outcomes between the program and control 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]Sample members in this category were employed during the month but did not report enough information about hours worked and/or earnings for the outcome in question to be calculated.

The bottom panel of Table 4 shows no evidence that SSP encouraged cutbacks in hours of work. People who went to work full time because of the program were about equally likely to be working 35 hours per week (a 1.8 percentage point increase), 36–39 hours per week (a 2.3 percentage point increase), or 40 hours per week (a 2.7 percentage point increase). And there is no evidence that people stopped working overtime because of the program: 6.7 per cent of the program group worked more than 40 hours per week, compared with 7.2 per cent of the control group, and the difference between the two groups is not significantly different than zero.

It should be noted that this is not definitive evidence that SSP did not encourage work cutbacks or lower-wage employment. It is possible, for example, that because of the supplement some people took jobs with wages that were lower than they otherwise would have accepted but that other people went to work at relatively high wages. Likewise, it is possible that some people who went to work because of the supplement worked more than 40 hours per week while others who would have worked more than 40 hours per week cut back their work effort. Table 4 shows only that the number of people who cut back their work effort or took

lower-wage jobs is smaller than the number who took relatively high-wage jobs or worked relatively long hours because of the supplement offer.

POVERTY AND NET PUBLIC EXPENDITURES

Earnings, IA payments, and SSP supplement payments were the primary sources of income for the SSP program group. However, a family's complete financial picture is not reflected in these payments alone, since they do not include such income sources as rent from boarders, child support, income from other household members, and other government transfer programs; and they do not take into account provincial and federal tax costs. Table 5 presents a fuller picture of income during the six months prior to the 48-month interview.

Table 5: SSP Impacts on Monthly Income and Net Transfer Payments in the Six Months Prior to the 48-Month Follow-Up Interview in the SSP Applicant Study

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
Sources of individual income ($)				
Earnings	1,003	880	123 ***	(46)
SSP supplement payments	129	0	129 ***	(8)
IA payments	258	327	-69 ***	(16)
Other transfer payments[a]	307	322	-15	(11)
Other unearned income[b]	142	157	-15	(13)
Projected taxes and net transfer payments ($)				
Projected income taxes[c]	250	194	56 ***	(14)
Net transfer payments[d]	533	546	-12	(30)
Total individual and family income				
Total individual income ($)	1,746	1,573	173 ***	(47)
Total individual income net of taxes ($)	1,529	1,423	107 ***	(35)
Total family income ($)[e]	2,085	1,890	195 ***	(65)
Percentage with income below the low income cut-off[f]	67.3	73.6	-6.3 ***	(2.4)
Sample size (total = 2,774)	**1,384**	**1,390**		

Sources: Calculations from 48-month follow-up survey data, IA administrative records, and payment records from SSP's Program Management Information System.

Notes: Sample sizes vary for individual measures because of missing values. This may cause slight discrepancies in sums and differences.

Two-tailed t-tests were applied to differences in outcomes between the program and control 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]Includes the Child Tax Benefit, the Goods and Services Tax Credit, Employment Insurance, and provincial tax credits.

[b]Includes alimony, child support, income from roomers and boarders, and other reported income.

[c]Includes projected Employment Insurance premiums and Canada Pension Plan premiums deducted at payroll, and projected income taxes. Payroll deductions and income taxes were projected from federal and provincial tax schedules, and data on earned and unearned income and SSP supplement payments; the actual taxes paid by sample members may differ from these projections.

[d]Includes public expenditures on SSP, IA payments, and other transfers, net of income tax revenue.

[e]Family income is measured by the sum of the sample member's income and the labour earnings of any other members in that person's family.

[f]Calculated by comparing annualized family income with the low income cut-off defined by Statistics Canada for the sample member's location and family size.

The first few rows of Table 5 show familiar results: SSP increased earnings and supplement payments while decreasing IA payments during the six months prior to the 48-month interview. Program group members received $129 per month from SSP supplement payments during this period. In addition, they earned $123 more than the control group and received $69 less in IA payments.[8]

Other transfer payments, such as Employment Insurance (EI) and various tax credits, were not a direct focus of SSP but may have been influenced by the program as earnings and employment status changed. The program encouraged many people to work full time, but some of those people lost their jobs at some point. If they began receiving EI when they lost their jobs, for example, the program might have increased EI payments. The fourth row of Table 5 indicates that this did not happen: there was no significant difference between the amount of other transfer payments (that is, other than IA or SSP supplement payments) received by the program and control groups.

Other income sources for the individual were also not targeted by SSP but could have been affected by changes caused by SSP. For example, the extra income from supplement payments might have allowed program group members to stop renting rooms to boarders, or might have allowed them to stop pursuing child support or alimony payments. The last row of the first panel of Table 5 shows that this did not occur: income from other sources was about the same for the program and control groups.

People who went to work because of the supplement offer also began paying income and payroll taxes. As mentioned above, one of the most remarkable findings from the earlier report on applicants (Michalopoulos et al., 1999) was that the program apparently increased tax payments enough to offset the cost of the SSP earnings supplements. The middle panel of Table 5 shows that this finding continued to hold for the six months prior to the 48-month interview. Members of the program group paid $250 in taxes per month on average, compared with $194 for members of the control group, for an impact of $56 per month. Adding together SSP supplement payments, IA payments, other transfers, and taxes shows that the program and control groups received nearly identical income from after-tax cash transfer payments: $533 for the program group and $546 for the control group. In other words, the extra government spending on supplement payments was offset by higher tax revenues.

Despite receiving no more in supplement payments than the control group, the program group did have more income because SSP increased their earnings. Together, the increased earnings and supplement payments, minus the reduced IA and other transfer payments, gave the average member of the program group $173 more income per month than the average member of the control group. After taxes, the increased income due to SSP was slightly less, at $107 per month.

[8]These results differ from those in Table 2 because they refer to the six-month period prior to the 48-month interview, while Table 2 shows results for the entire fourth year after random assignment. Results in Table 5 also do not correspond exactly to the quarterly results shown in Appendix B because the 48-month interview happened at different times for different people (for example, in Month 46 for some people, in Month 48 for other people, and so on) so that the six months prior to the interview represent different quarters for different people.

With increased income came reduced poverty. The last row of Table 5 indicates that the program reduced the number of people with income below Statistics Canada's low income cut-off by about six percentage points. It is important to note that even though SSP reduced poverty, most families had low income despite the supplement (about 67 per cent of the program group).

POSSIBLE REASONS FOR SSP'S COST-EFFECTIVENESS

One reason for the relative cost-effectiveness of SSP for applicants can be seen in the subgroup results (Table 4). People who were working full time at the time of random assignment were not affected by the program, presumably because they left welfare before establishing eligibility for the supplement. In contrast, in the recipient study, this was the group for which SSP was the most expensive. In the recipient study, program group members who were working full time at the time of random assignment received a considerable amount of income from the supplement even though it did not increase their employment. In other words, those most likely to be windfall recipients of the supplement in the recipient study were those most likely to leave welfare without ever establishing eligibility for the supplement.

The cost-effectiveness of SSP in this study also stems from the applicants' relative employability, which allowed them to earn fairly high wages. (In comparison, SSP resulted in higher transfer payments for the more disadvantaged long-term welfare recipients in the main SSP study of welfare recipients.) When SSP began, a single parent with two children in British Columbia was eligible to receive about $14,000 per year in welfare and another $3,000 or so in tax credits if she did not work. If SSP convinced this parent to begin working full time, then the supplement offer would save the government money, but the amount of money saved would depend on how much the mother could earn per hour.

A supplement taker who earned $6 per hour — a typical wage rate among people who went to work because of the supplement offer in the recipient study — and who worked 35 hours each week would stop receiving the $14,000 annual IA benefit. However, her annual earnings of $10,920 ($6 per hour x 35 hours per week x 52 weeks per year) would qualify her for more than $13,000 in SSP supplement payments (($37,000 – $10,920)/2). At the same time, her tax liability would increase by nearly $4,000. Thus, the government would save about $5,000 ($14,000 in IA savings + $4,000 in tax savings – $13,000 in supplement payments) when this low-wage parent moved to work in order to receive the supplement.

A supplement taker who earned $12 per hour — a typical wage rate in the applicant study — would again lose about $14,000 in IA payments. However, her annual earnings of $21,840 (or twice the earnings of the parent earning $6 per hour) would qualify her for supplement payments totalling only $7,580 (($37,000 – $21,840)/2). In addition, her tax liability would increase by nearly $6,000. As a result, the government would save more than $12,000 when this low-wage parent moved to work in order to receive the supplement — or nearly three times as much savings as when the typical low-wage parent in the recipient study, described above, went to work.

An important question is whether SSP's cost-effectiveness was particular to the sample of people who entered the applicant study or whether it is likely to apply to other groups of welfare applicants. To investigate this, Michalopoulos et al. (1999) compared results from the

applicant study with results for a comparable group of long-term welfare recipients in the main SSP study. This comparable group earned somewhat lower wages than people in the applicant study, and the SSP offer to this group did result in greater cash transfer payments. However, the number of comparable long-term recipients was relatively few, so that differences between them and the group in the applicant study are not always statistically significant. In other words, results from the applicant study are probably somewhat more favourable than they would normally be, but it is difficult to say how much more favourable they are.

STABLE EMPLOYMENT

As described earlier, about 26 per cent of the applicant program group received at least one supplement payment, but no more than 20 per cent received a supplement payment in any particular month (and, in most months, less than 20 per cent received supplement payments). In other words, many people who worked full time and received supplement payments at some point were not working full time at other times.

It is possible that some people found full-time work, took up the supplement, and continued working throughout the follow-up period, while a second group also found full-time work and took up the supplement but lost their jobs quickly and worked very little. It is also possible, however, that most people who took up the supplement worked some but not all of the time after they began receiving the supplement.

Distinguishing between these two extreme possibilities (or determining that the truth is somewhere in the middle) may provide an important indicator of the long-term effects of the supplement offer. People who worked full time consistently may have had a greater ability to stay at work after the supplement was no longer available, which may imply that the program will continue to have positive effects even after people are no longer eligible to receive the supplement. In contrast, if most people cycled between working and not working, the program may be less likely to have long-term effects.

Table 6 shows three versions of the effects of SSP on stable full-time employment. The first panel of the table shows to what extent full-time employment lasted more than a year. The second panel examines the extent to which the program increased the likelihood that someone worked 75 per cent of the time. The third panel repeats the analysis of the first panel but focuses on all employment rather than just full-time employment.

The first panel of Table 6 begins by repeating a familiar result: SSP increased full-time employment. While 54.0 per cent of the program group ever worked full time in the first 18 months following supplement eligibility, 43.6 per cent of the control group did, for an impact of 10.4 percentage points.

To investigate whether people who went to work because of SSP stayed employed full time, the next two rows of Table 6 report two composite outcomes: (1) the proportion of the program and control groups who found full-time jobs but stayed employed full time for *a year or less* and (2) the proportion who found full-time jobs and stayed employed full time for *more than a year*.

Table 6: SSP Impacts on Employment Stability and Months of Full-Time Employment in the 48 Months After Random Assignment in the SSP Applicant Study

Employment Outcome	Program Group	Control Group	Difference (Impact)	Percentage Change
First spell of full-time employment (%)				
Employed full time in months 13 to 29	54.0	43.6	10.4 ***	23.8
First spell lasted 1 to 12 months[a]	20.8	19.2	1.6	8.3
First spell lasted 13 or more months	33.2	24.4	8.8 ***	36.0
Stability of full-time employment (%)				
Employed full time in months 13 to 29	54.0	43.6	10.4 ***	23.8
Not employed full time or unstable full-time employment in months 30 to 44	20.1	19.5	0.6	3.0
Stable full-time employment in months 30 to 44	33.9	24.1	9.8 ***	40.6
Not employed full time in months 13 to 29	46.0	56.4	-10.4 ***	-18.4
Not employed full time or unstable full-time employment in months 30 to 44	42.1	51.9	-9.8 ***	-18.9
Stable full-time employment in months 30 to 44	3.9	4.5	-0.6	-12.5
Stability of employment (%)				
Employed in months 13 to 29	67.0	59.9	7.1 ***	11.8
Not employed or unstable employment in months 30 to 44	21.0	20.9	0.0	0.1
Stable employment in months 30 to 44	46.0	39.0	7.0 ***	18.0
Not employed in months 13 to 29	33.0	40.1	-7.1 ***	-17.6
Not employed or unstable employment in months 30 to 44	31.4	38.1	-6.8 ***	-17.8
Stable employment in months 30 to 44	1.7	1.9	-0.3	-14.4
Sample size (total = 2,774)	**1,384**	**1,390**		

Sources: Calculations from baseline survey data and 12-month, 30-month, and 48-month follow-up survey data.

Notes: Two-tailed t-tests were applied to differences between the outcomes for the program and control groups.

Rounding may cause slight discrepancies in sums and differences.

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

Stable full-time employment is defined as working full time for more than 12 months in months 30–44.

[a]Measured from date of random assignment for those working at random assignment.

It is possible that all people who were encouraged by SSP to work full time might have lost their jobs quickly and stopped working full time after a year or less. In that case, the impact of the program on the proportion who worked full time for more than a year would be zero, and the impact on the proportion who worked for a year or less would equal the impact on full-time employment overall (10.4 percentage points).

At the other extreme, all people who worked full time because of the supplement offer might have worked full time for a more than a year after going to work. In that case, the impact of the program on full-time employment that lasted more than a year would be the same as the impact on full-time employment (10.4 percentage points), and the impact on full-time employment that lasted a year or less would be zero.

Results in SSP were closer to the second extreme. Most, but not all, of the initial full-time employment generated in SSP resulted in full-time employment that lasted more than a year. While 33.2 per cent of the program group went to work full time and stayed there for more than a year, only 24.4 per cent of the control group did the same. In other words, SSP increased full-time employment that lasted more than a year by 8.8 percentage points, or nearly as much as its 10.4 percentage point increase in full-time employment.

The second panel of Table 6 investigates the same issue with a less extreme version of stable employment: whether someone worked during most of the follow-up period after first going to work full time. In particular, the second panel asks whether the people who worked full time in months 13 to 29 (that is, a bit longer than the period when people were qualifying for the supplement) were able to stay employed full time for at least 12 of the 15 months from months 30 to 44. The results are similar to those in the first panel: the impact of SSP on stable full-time employment is nearly the same as its impact on any full-time employment — 9.8 percentage points, compared with 10.4 percentage points.

Even though SSP encouraged a substantial amount of full-time employment, it would have had little effect on stable employment overall if it merely encouraged people who would have found stable part-time work to find stable full-time work instead. The last panel of Table 6 addresses this issue by showing the effect of the program on the proportion of people who found any job between months 12 and 29 and who then were able to work in each of the next 12 months once they found work. The results are similar to the results for stable full-time employment. In particular, the impact of SSP on employment that lasted longer than a year is nearly the same as its impact on any employment: 7.0 percentage points, compared with 7.1 percentage points.

These results are somewhat inconsistent with other studies that have found that welfare recipients who leave welfare for work often lose their jobs quickly and return to welfare (Strawn & Martinson, 2000). However, they are consistent with results from the SSP recipient study and evaluations of other welfare policies that have supplemented the earnings of people who went to work (Michalopoulos et al., 2000; Miller, Knox, Gennetian, Dodoo, Hunter, & Redcross, 2000; Hendra, Michalopoulos, & Bloom, 2001; Michalopoulos, 2001). This may reflect the fact that earnings supplements in SSP and the other programs provided a monthly incentive — in the form of the supplement payments — to people who initiated supplement payments. This monthly incentive could have motivated people to stay at a job that they might otherwise have considered leaving and to find a new job if they lost their first job. Moreover, it could have provided the financial means for them to find more stable child care or to weather short-term problems such as mechanical problems with their cars.

EXPENDITURES AND HARDSHIP

It seems reasonable to expect people to have used some of their extra income to spend more on necessities such as food, clothing, and housing. By doing so, they might have reduced hardships such as hunger and poor housing. In addition, people might have used their extra income to pay down debt or build assets that could help them get through future job loss. Table 7 explores these outcomes.

Table 7: SSP Impacts on Expenditures, Hardship, and Assets at Month 48 in the SSP Applicant Study

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
Expenditures ($/month)				
Spending on groceries	451	446	5	(10)
Spending on eating out	64	62	2	(3)
Spending on children's clothing	41	41	1	(1)
Spending on own clothing	20	19	2 **	(1)
Spending on child care	58	50	8	(6)
Rent	656	643	13	(12)
Hardship (%)				
Used food bank last three months	9.1	10.3	-1.2	(1.1)
Couldn't get groceries	27.2	29.7	-2.5	(1.7)
Gas or hydro turned off	1.9	2.2	-0.3	(0.5)
Savings				
Amount of savings ($)	654	577	77	(103)
Savings unreported (%)	11.7	12.1	-0.4	(1.2)
No savings (%)	22.7	23.8	-1.1	(1.6)
Savings of $1–499 (%)	45.4	46.2	-0.8	(1.9)
Savings of $500 and above (%)	20.2	17.9	2.3	(1.5)
Debt				
Amount of debt ($)	4,995	4,873	123	(372)
Debt unreported (%)	5.6	6.0	-0.5	(0.9)
No debt (%)	35.1	35.0	0.1	(1.8)
Debt of $1–2,499 (%)	22.3	22.2	0.0	(1.6)
Debt of $2,500 and above (%)	37.1	36.7	0.4	(1.8)
Sample size (total = 2,774)	**1,384**	**1,390**		

Source: Calculations from 48-month follow-up survey data.

Notes: Two-tailed t-tests were applied to differences between the outcomes for the program and control 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.

Sample sizes vary for individual measures because of missing values.

Sample members were asked at the 48-month interview how much they spent in an average week on groceries and eating out, and monthly expenditures were calculated by assuming 4.33 weeks per month. Sample members were also asked at the 48-month interview how much they spent per year on clothing (for both themselves and their children). This was converted to monthly estimates by dividing by 12. For other items, the precise questions on the 48-month survey were as follows. For use of a food bank: "In the past three months, have you or other members of your family used a food bank to obtain groceries for your household?" For monthly rent: "What do you and your family pay towards your monthly rent or mortgage?" For child care: "In the past month, how much did you pay for child care for all of your children?"

In general, there is little indication that SSP increased expenditures or savings or reduced material hardship for the applicant sample. Spending on groceries, clothing, child care, and rent was only slightly higher in the program group than in the control group. The program group was slightly less likely than the control group to have used a food bank recently, to

have had trouble getting groceries, or to have had their gas or hydro turned off, but these differences are so small that they are not statistically significant. Likewise, savings and debt were quite similar in the two research groups.

Although SSP generally did not help people spend significantly more on these basic necessities, families were spending most of their income on these items. As discussed earlier, the average program group member had about $1,500 per month in after-tax income, and the average control group member had about $1,400 per month in after-tax income (see Table 5). However, control group members were spending more than $1,250 on the basic necessities shown in Table 7, or more than 90 per cent of their disposable income, and program group members were spending nearly $1,300 per month on these necessities (or about 84 per cent of their after-tax income).

Moreover, spending on the few necessities did take up a sizable portion of families' extra income, even if the impacts are generally not statistically significant. Of the $107 in after-tax income that went to the average program group member (see Table 5), spending on the few items shown in Table 7 increased by about $31 because of the program. In other words, on average, families spent about 29 per cent of their extra after-tax income on only six items.

MARRIAGE

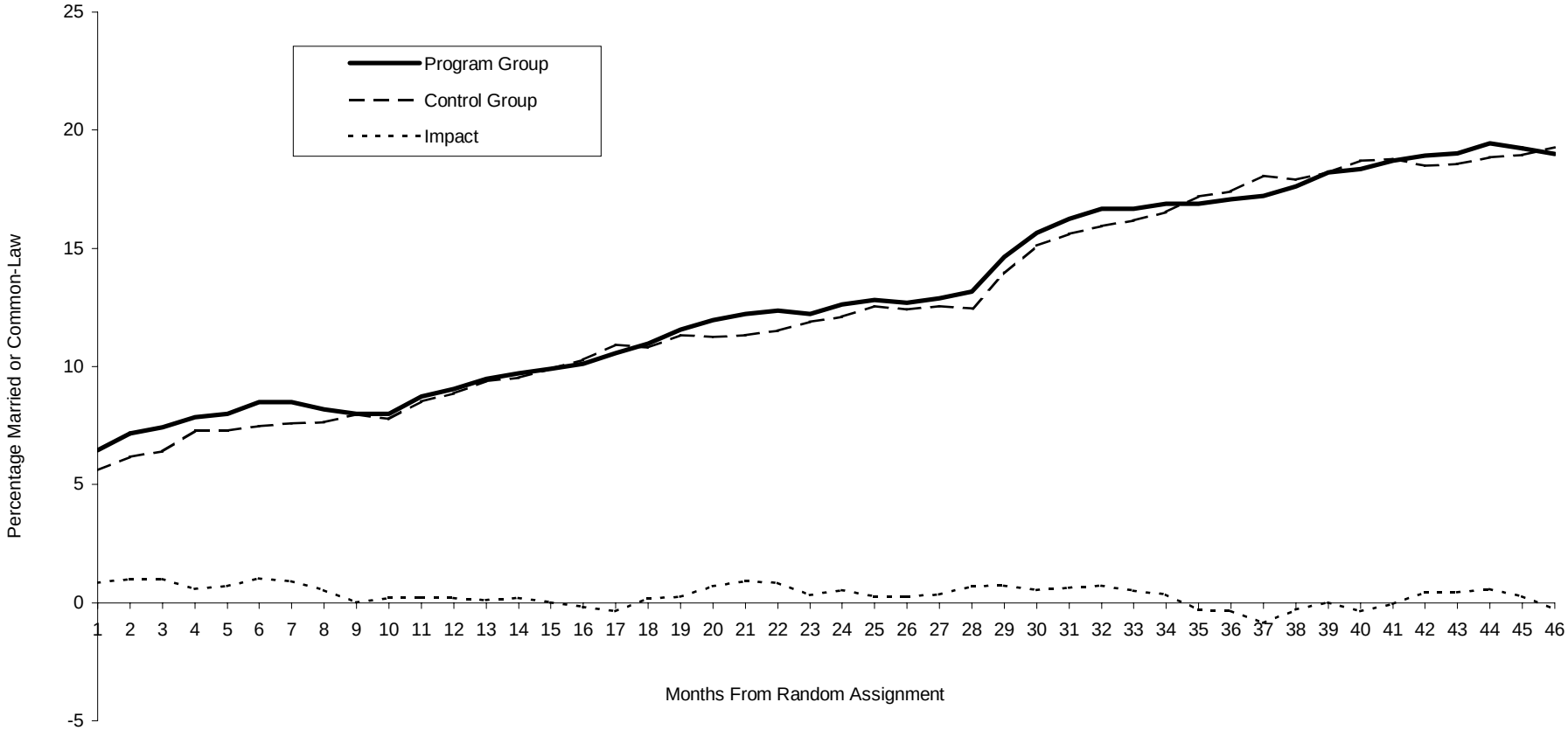
One of the more perplexing results from the main SSP study of long-term welfare recipients concerned marriage. In New Brunswick members of the program group were slightly more likely than members of the control group to marry during the follow-up period. At the same time, program group members in British Columbia were slightly *less* likely than their control group counterparts to marry. Moreover, the impact on marriage for the two provinces combined was almost exactly zero.

This set of results has been given two different interpretations. On the one hand, both the SSP earnings supplement and the work and earnings that SSP generated could have affected marriage. The positive impact in one province and negative impact in the other might reflect the very different cultural influences in the two provinces. On the other hand, the very small impacts in both provinces and the overall zero effect on marriage when the two provinces are combined may indicate that the impacts are a statistical fluke.

If the first explanation is correct, then we might expect a small negative effect on marriage in the applicant experiment in British Columbia. Figure 4 shows that that was not the case. Although the proportion of the two research groups who were married increased over time — from about five per cent at the time of random assignment to about 20 per cent at the end of the follow-up period — the increase was almost identical for the two groups. Moreover, the small and always insignificant impact was sometimes positive (contrary to the finding among long-term recipients) and sometimes negative. This suggests that SSP's incentives are unlikely to have an effect on marriage, either directly (because the supplement amount is not affected by marriage) or indirectly, through its effects on employment and income.[9]

[9]Further evidence comes from the SSP Plus experiment (Lei & Michalopoulos, 2001). Comparing individuals in the SSP Plus group with individuals in the regular SSP program reveals that the SSP Plus program resulted in substantially higher take-up of the supplement. However, rates of marriage were virtually identical for the two research groups.

Figure 4: Percentage Married or in Common-Law Unions, by Months From Random Assignment, in the SSP Applicant Study



Sources: Calculations from baseline survey data and 12-month, 30-month, and 48-month follow-up survey data.

It is also possible that differences in the people who enrolled in the recipient and the applicant studies explain differences in the program's effect on marriage. However, an examination of the program's effects on marriage for different subgroups is not consistent with this possibility. For example, among recipients, the program's largest reductions occurred among parents with two children. Among applicants, this is one of the few subgroups in which program group parents were significantly more likely to marry than control group parents. More generally, there is no subgroup in the recipient study for which the effects on marriage are significantly positive, while in the applicant study there is no subgroup for which the effects on marriage are significantly negative.

CHILD CARE

Over the last few decades, employment by mothers of young children has grown markedly. As a result, children have been spending substantially more time in the care of people other than their parents, and the market for child care has also steadily grown. For long-term welfare recipients, however, child care may represent a substantial barrier to working. Because many single parents on welfare have few skills and can earn little if they do work, they would have a hard time finding the means to pay for child care. Since they are single parents, moreover, most cannot rely on a partner or the parent of their children to provide care. The fact that they have been on welfare for a substantial amount of time may also indicate that they cannot rely on other free forms of care, such as care by a close relative or an older child.

SSP's impacts on use of child care are instructive, therefore, for a number of reasons. If members of the program group were no more likely to use formal child care than members of the control group, or if they were just as likely to use free care as members of the control group, these findings would undercut somewhat the notion that they could not work because free care was not available. On the other hand, if SSP substantially increased the use of formal child care, this finding might imply that people were being dissuaded from working by the need for this often expensive form of child care (or it might imply that members of the program group were using their extra income to buy better care for their older pre-school children).

Types of Child Care Arrangements

Table 8 presents the impacts of SSP on child care arrangements used for the youngest child in each family. At the 48-month interview, parents were asked whether they had used *any* formal child care arrangements or *any* informal child care arrangements in the 18 months prior to the interview. As a result, Table 8 presents some extremely crude measures of the effects of the program on use of child care, since it cannot differentiate use of an arrangement for the 18-month period from use of the arrangement for just one month.

According to Table 8, families in the program group were more likely to use some type of child care arrangement than were families in the control group. Moreover, the difference in use of child care was similar to the program's impact on employment near the end of the follow-up period (as indicated, for example, in Table 6).

Table 8: SSP Impacts on Child Care Use and Expenditures Prior to Month 48 in the SSP Applicant Study

Outcome	Program Group	Control Group	Difference (Impact)	Standard Error
Type of child care used (%)				
Any type of care	38.4	34.6	3.8 **	(1.9)
Formal care	16.0	14.5	1.5	(1.4)
Informal care	21.7	19.5	2.2	(1.5)
Extent of child care use				
Number of arrangements	0.5	0.4	0.0	(0.0)
More than two different arrangements (%)	2.6	2.9	-0.3	(0.6)
Average number of hours per week in past month	8.9	8.6	0.2	(0.8)
Stability of child care (%)				
Changed two or more times in past six months	1.6	1.7	-0.1	(0.5)
Any problems with care in past six months	18.6	17.3	1.4	(1.5)
Use of child care by age of youngest child at random assignment[a]				
Youngest child 0–2 years old				
Any type of care (%)	56.3	45.5	10.8 ***	(3.8)
Formal care (%)	26.0	20.5	5.5 *	(3.2)
Informal care (%)	34.0	28.5	5.5	(3.5)
Monthly cost excluding subsidy ($)	114	93	22	(17)
Youngest child 3–5 years old				
Any type of care (%)	45.5	41.4	4.1	(3.9)
Formal care (%)	20.3	19.3	1.0	(3.1)
Informal care (%)	30.8	25.4	5.4	(3.5)
Monthly cost excluding subsidy ($)	64	55	9	(11)
Youngest child 6–11 years old				
Any type of care (%)	20.6	21.3	-0.6	(3.1)
Formal care (%)	8.1	8.4	-0.3	(2.1)
Informal care (%)	12.0	12.8	-0.8	(2.5)
Monthly cost excluding subsidy ($)	37	25	12	(10)
Youngest child more than 12 years old				
Any type of care (%)	6.8	4.1	2.7	(3.0)
Formal care (%)	1.8	0.4	1.3	(1.0)
Informal care (%)	1.3	1.3	0.0	(1.1)
Monthly cost excluding subsidy ($)	13	6	7	(8)
Sample size (total = 2,774)	**1,384**	**1,390**		

Source: Calculations from 48-month follow-up survey data.

Notes: Two-tailed t-tests were applied to differences between the outcomes for the program and control 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]The sample sizes for each category of the age of youngest child at random assignment subgroup are as follows: youngest child 0–2, program group 350, control group 347; youngest child 3–5, program group 344, control group 332; youngest child 6–11, program group 358, control group 358; youngest child 12 and older, program group 227, control group 235.

For both research groups, use of informal care was slightly more prevalent than use of formal care. As a result, the program's impact on use of child care was split fairly evenly between informal care and formal care. These effects are much different than in the SSP study of long-term recipients. In that study, informal care was much more likely to be used than formal care, and the program's impact on use of care was concentrated in informal types of care. This probably reflects the greater earnings ability and greater income of members of the applicant sample, since formal care is typically more expensive than informal care.

Number and Stability of Child Care Arrangements

A troubling finding in the main SSP study of long-term recipients was the program's increase in the number of child care providers used and the instability of child care. The second and third panels of Table 8 indicate that these measures of instability were not significantly affected by SSP for welfare applicants. Perhaps this reflects the greater use of formal care by applicants, or the ability of applicants to find more stable child care because they could afford to spend more on it.

Child Care Arrangements by Age of Youngest Child at Random Assignment

The child care arrangements described in the first panel of Table 8 are likely to mask some important differences. School-age children are less likely to need care than preschool children, and adolescent children can probably care for themselves after school. While formal care is often thought to be the most appropriate care for children three to five years old, informal care may provide a more nurturing environment for infants.

The remainder of Table 8 presents the impacts of the program on child care arrangements for four age groups of children. To preserve the experimental nature of the comparison, the four age groups were defined on the basis of the age of the youngest child at random assignment. If a family has added children since random assignment, therefore, the youngest child in the family may be in a different age group than the one indicated in the table. Even if a family has not added children, the youngest child will be four years older at the time of the 48-month interview than at the time of random assignment. As a result, responses for a child born just prior to random assignment represent the child care arrangements used for that child between 30 and 48 months of age. Likewise, responses for a three-year-old at random assignment represent the child care arrangements when the child was approximately five to six years old.

As expected, SSP primarily affected the child care arrangements of children less than two years old at random assignment, and almost no families whose youngest child was an adolescent at random assignment used child care at all. Less expected is the similarity of the program's impacts on use of formal and informal care for the youngest age group and the second youngest age group. In both cases, about five per cent more of the children in the program group than in the control group were placed in informal care. The program had little impact, on the other hand, on the use of formal care for children in either age group.

Summary

The applicant study of the Self-Sufficiency Project (SSP) is testing a generous financial incentive program for income assistance (IA) recipients in British Columbia. The study was designed to provide information on the likely extent of "entry effects," that is, the possibility that people will prolong their stay on income assistance to become eligible for the SSP supplement. It also provides information on the likely impacts of an SSP-type program that has been in operation for a number of years. A companion study, the long-term recipient study, has the principal objective of providing information on the impacts of an SSP-like program in its early years of operation.

According to the analysis in this report, SSP is having substantial effects. Despite a small increase in the number of people who extended their length of stay on income assistance to become eligible for SSP, the financial incentive provided by the SSP supplement reduced IA benefits and increased tax payments by enough to keep total public expenditures at about the same level. Furthermore, the increased earnings resulting from increased full-time employment generated a large increase in total family income.

All the results presented in this report apply to the first four years of the applicant study, when participants are still eligible for supplement payments. After the fifth year of the study, the supplement will no longer be available, and the consequences of this change on individual behaviour are yet unknown. It is possible that the impacts will persist as the work experience gained by program group members helps them to continue to maintain their economic self-sufficiency. On the other hand, the sudden loss in income due to expiration of the supplement might force many people back on income assistance. The impacts on long-run individual behaviour and the long-run cost-effectiveness of SSP will be studied in future reports.

Appendix A:
Assessing the Effect of Survey Non-Response on Estimated Impacts

Recruitment into the Self-Sufficiency Project (SSP) applicant study began in February 1994 and was completed in February 1995. Each month, Statistics Canada used income assistance (IA) administrative records to identify all IA recipients in selected geographic areas in British Columbia who (1) were single parents, (2) were 19 years of age or older, and (3) had not received income assistance in the previous six months. Statistics Canada then selected a "fielding sample" to contact, interview, and invite to be part of SSP's applicant study.

Approximately 80 per cent of people selected for the initial applicant project sample completed a baseline interview and signed an informed consent form agreeing to be part of the study. Immediately after the baseline interview, each of these 3,383 single parents was randomly assigned with 50-50 odds to either the program group or the control group (1,677 were assigned to the program group, and 1,706 were assigned to the control group). Among the 3,383 sample members who completed a baseline survey and were randomly assigned, it was later discovered (upon verifying the computer programs and data used to select the sample) that 26 program group members and 33 control group members did not meet one of the three criteria for inclusion in the study. In addition, three program group members and five control group members withdrew from the study and requested that none of their data be used in the research. The remaining 3,316 sample members (1,648 program group members and 1,668 control group members) constitute the baseline research sample for the applicant study. These are the sample members for which follow-up interviews are attempted.

Not all of the 3,316 members of the baseline research sample completed a 48-month follow-up survey, but the response rate for the program group is not statistically significantly different from the rate for the control group. Of the 1,648 program group members in the baseline research sample, 1,384 (84.0 per cent) completed a 48-month follow-up survey. Forty-eight month follow-up interviews were completed for 1,390 control group members (83.3 per cent). These 2,774 respondents constitute the sample used in this report. Because the 542 non-respondents may not be representative of the baseline research sample, their omission from the report sample could lead to biases in the estimated impacts. In this appendix, data from the baseline survey and administrative records — which are available for both respondents and non-respondents to the 48-month survey — are used to assess the likely magnitude of such biases.

EFFECTS OF NON-RESPONSE ON MEASURES OF BASELINE CHARACTERISTICS

How Well Do Respondents Represent the Full Sample?

Table A.1 reports on selected characteristics of baseline research sample members at random assignment, showing separate data for program group members and control group members. Table A.2 shows the same measures for the report sample. A comparison of these measures indicates that the respondents represent the full sample fairly well. For example, in the baseline research sample, 97.0 per cent of program group members and 96.3 per cent of control group members had ever worked for pay; in the report sample, the corresponding figures are 97.5 per cent and 96.4 per cent, respectively.

Table A.1: Characteristics of Baseline Research Sample Members in the Applicant Study — Program and Control Groups

Baseline Characteristic	Program Group	Control Group	Difference (Impact)	Standard Error
IA history				
Average number of months of IA in last two years	3.2	3.1	0.1	(0.1)
Average monthly IA payment at random assignment ($)	928	940	-12	(13)
Work history				
Ever worked for pay (%)	97.0	96.3	0.7	(0.6)
Worked in month before random assignment (%)	22.1	21.2	0.9	(1.4)
Personal characteristics				
Female (%)	89.5	91.6	-2.1 **	(1.0)
Under age 25 (%)	15.7	14.6	1.1	(1.2)
Less than high school education (%)	37.0	37.9	-0.9	(1.7)
High school graduate, no post-secondary education (%)	41.7	39.7	2.0	(1.8)
Some post-secondary education (%)	21.2	22.4	-1.2	(1.5)
First Nations ancestry (%)	8.1	9.9	-1.8 *	(1.0)
Immigrant (%)	29.2	30.6	-1.4	(1.6)
Physical limitation (%)	20.0	19.6	0.4	(1.4)
Emotional limitation (%)	6.1	8.4	-2.3 **	(0.9)
Family structure				
Average number of children (up to age 18)	1.5	1.6	0.0	(0.0)
Never married (%)	22.6	24.5	-1.9	(1.5)
Sample size (total = 3,316)	**1,648**	**1,668**		

Sources: Calculations from baseline survey data and IA administrative records.

Notes: Sample sizes vary for individual measures because of missing values.
Two-tailed t-tests were applied to differences in baseline characteristics between the program and control 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 A.2: Characteristics of Report Sample Members — Program and Control Groups

Baseline Characteristic	Program Group	Control Group	Difference (Impact)	Standard Error
IA history				
Average number of months of IA in last two years	3.2	3.0	0.2	(0.1)
Average monthly IA payment at random assignment ($)	918	934	-16	(15)
Work history				
Ever worked for pay (%)	97.5	96.4	1.1 *	(0.7)
Worked in month before random assignment (%)	23.1	22.4	0.7	(1.6)
Personal characteristics				
Female (%)	91.0	92.7	-1.7	(1.0)
Under age 25 (%)	15.5	15.1	0.4	(1.4)
Less than high school education (%)	35.8	37.2	-1.3	(1.9)
High school graduate, no post-secondary education (%)	42.9	40.6	2.3	(1.9)
Some post-secondary education (%)	21.3	22.2	-1.0	(1.6)
First Nations ancestry (%)	7.2	8.6	-1.3	(1.0)
Immigrant (%)	30.2	29.4	0.9	(1.7)
Physical limitation (%)	19.1	19.7	-0.6	(1.5)
Emotional limitation (%)	5.5	8.2	-2.8 ***	(1.0)
Family structure				
Average number of children (up to age 18)	1.5	1.6	0.0	(0.0)
Never married (%)	22.3	25.0	-2.6	(1.6)
Sample size (total = 2,774)	**1,384**	**1,390**		

Sources: Calculations from baseline survey data and IA administrative records.

Notes: Sample sizes vary for individual measures because of missing values.
Two-tailed t-tests were applied to differences in characteristics between the program and control 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.

Does Non-Response Leave the Program and Control Groups Well Matched?

In addition to comparing Table A.1 with Table A.2, it is important to compare the program and control group columns within each table because non-response could reflect differences between the characteristics of program group members in the report sample and those of control group members.

Table A.1 shows the compositions of the program and control groups produced by random assignment.[1] Random assignment is designed to ensure that program and control group members have similar characteristics, and in general they do. There are only a few modest statistically significant differences: program group members are less likely to be female and less likely to be of First Nations ancestry, and they were less likely to report an activity-limiting emotional condition at the baseline interview.[2]

[1]Strictly speaking, the program and control groups produced by random assignment contained 67 people who are not included in the sample for Table A.1. The omission of the 59 people who did not meet the criteria for inclusion in the study should not lead to program-control differences in characteristics, because this omission was based on characteristics before random assignment. The omission of the three program group members and five control group members who withdrew from the study could have only a very small effect on the numbers in Table A.1.

[2]In interpreting the significance levels of these comparisons, one should remember that when a large number of comparisons is performed it becomes more likely that some statistically significant differences will appear.

Table A.2 shows the same measures for the report sample. The difference in the percentage who were never married at random assignment is now statistically significant at the 10 per cent level. In general, however, non-response does not appear to have weakened the similarity between the program and control groups.

EFFECTS OF NON-RESPONSE ON IMPACT ESTIMATES FROM ADMINISTRATIVE RECORDS

Administrative records supply data on IA and SSP supplement receipt for both respondents and non-respondents to the 48-month survey.[3] For these outcomes, it is possible to examine how estimated impacts are affected when the non-respondents are omitted; impact estimates from the report sample can be compared with those from the full baseline research sample. This comparison may provide some indication of whether non-response is likely to introduce much bias into estimated impacts on outcomes measured from the survey (such as employment), although it should be kept in mind that the effects of non-response may vary from one outcome to another.

Table A.3 shows estimated impacts on IA and supplement receipt for the baseline research sample. Table A.4 shows estimated impacts on IA and supplement receipt for the report sample. It appears that program group members who responded to the SSP offer were somewhat more likely to respond to the 48-month follow-up survey. The report sample tends to give slightly larger estimates of program impacts on IA receipt both during the 12-month eligibility determination period (quarters 1 through 4 of the follow-up period) and in subsequent quarters. The magnitude of impacts on IA payments, receipt of income assistance or the supplement, and IA and supplement payments estimated from the report sample are also slightly larger than those estimated for the baseline research sample. The differences are small, however, and do not change the nature of the findings. For example, using the report sample (Table A.4), it is estimated that SSP increased the percentage receiving income assistance in Quarter 4 by 4.1 percentage points and reduced the percentage receiving income assistance in Quarter 9 by 11.0 percentage points. Using the baseline research sample (Table A.3), the estimated impacts are 3.1 percentage points and 10.8 percentage points, respectively.

CONCLUSION

One can never rule out the possibility that survey non-response leads to biased impact estimates, since the information that would confirm or disprove the hypothesis is, by definition, missing. Certain outcomes, such as the percentage of people who moved, may have an especially strong relationship with non-response. Nevertheless, it is reassuring that, in the measures of baseline characteristics and the estimated impacts from administrative records, there is no evidence that the non-response to the 48-month survey introduced important biases into the impact estimates in this report.

[3]However, IA records are not available for sample members who moved to another province. In the analysis, it is assumed that those who moved to another province were not receiving income assistance.

Table A.3: SSP Impacts on IA and Supplement Receipt and Payments in the Applicant Study — Baseline Research Sample

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Receiving IA (%)				
Quarter 1	87.6	87.0	0.6	(0.9)
Quarter 2	74.7	71.5	3.2 **	(1.4)
Quarter 3	68.0	64.9	3.1 **	(1.5)
Quarter 4	64.9	61.8	3.1 *	(1.6)
Quarter 5	60.8	59.5	1.3	(1.6)
Quarter 6	52.2	55.8	-3.6 **	(1.6)
Quarter 7	46.0	52.7	-6.7 ***	(1.7)
Quarter 8	40.8	49.0	-8.2 ***	(1.6)
Quarter 9	35.5	46.2	-10.8 ***	(1.6)
Quarter 10	33.1	43.0	-9.8 ***	(1.6)
Quarter 11	30.9	39.0	-8.1 ***	(1.6)
Quarter 12	29.8	36.9	-7.1 ***	(1.6)
Quarter 13	28.6	34.4	-5.9 ***	(1.6)
Quarter 14	26.2	32.2	-6.0 ***	(1.5)
Quarter 15	23.2	27.7	-4.5 ***	(1.4)
Receiving either IA or SSP (%)				
Quarter 1	87.6	87.0	0.6	(0.9)
Quarter 2	74.7	71.5	3.2 **	(1.4)
Quarter 3	68.0	64.9	3.1 **	(1.5)
Quarter 4	64.9	61.8	3.1 *	(1.6)
Quarter 5	62.3	59.5	2.8 *	(1.6)
Quarter 6	59.4	55.8	3.6 **	(1.6)
Quarter 7	56.9	52.7	4.2 **	(1.7)
Quarter 8	54.1	49.0	5.1 ***	(1.7)
Quarter 9	52.0	46.2	5.8 ***	(1.7)
Quarter 10	49.5	43.0	6.6 ***	(1.7)
Quarter 11	47.2	39.0	8.2 ***	(1.6)
Quarter 12	45.5	36.9	8.6 ***	(1.6)
Quarter 13	43.4	34.4	9.0 ***	(1.6)
Quarter 14	40.9	32.2	8.7 ***	(1.6)
Quarter 15	37.4	27.7	9.7 ***	(1.5)
Average IA payments ($/month)				
Quarter 1	851	862	-11	(13)
Quarter 2	722	718	4	(17)
Quarter 3	660	643	17	(18)
Quarter 4	632	612	19	(18)
Quarter 5	596	589	6	(18)
Quarter 6	514	552	-38 **	(18)
Quarter 7	450	514	-64 ***	(18)
Quarter 8	382	460	-77 ***	(17)
Quarter 9	321	414	-94 ***	(16)
Quarter 10	280	367	-87 ***	(15)
Quarter 11	256	325	-69 ***	(14)
Quarter 12	243	308	-65 ***	(14)
Quarter 13	236	286	-50 ***	(14)
Quarter 14	213	269	-56 ***	(13)
Quarter 15	187	230	-44 ***	(12)

(continued)

Table A.3: SSP Impacts on IA and Supplement Receipt and Payments in the Applicant Study — Baseline Research Sample (Cont'd)

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Average IA and SSP payments ($/month)				
Quarter 1	851	862	-11	(13)
Quarter 2	722	718	4	(17)
Quarter 3	660	643	17	(18)
Quarter 4	632	612	19	(18)
Quarter 5	622	589	33 *	(18)
Quarter 6	590	552	38 **	(18)
Quarter 7	556	514	41 **	(18)
Quarter 8	507	460	48 ***	(17)
Quarter 9	468	414	54 ***	(16)
Quarter 10	416	367	49 ***	(15)
Quarter 11	395	325	70 ***	(15)
Quarter 12	371	308	63 ***	(15)
Quarter 13	353	286	67 ***	(14)
Quarter 14	328	269	59 ***	(14)
Quarter 15	300	230	70 ***	(13)
Sample size (total = 3,316)	**1,648**	**1,668**		

Sources: Calculations from IA administrative records and payment records from SSP's Program Management Information System.

Notes: The estimates for each quarter are calculated by averaging the monthly estimates for the three months within the quarter.
Two-tailed t-tests were applied to differences in outcomes between the program and control 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 A.4: SSP Impacts on IA and Supplement Receipt and Payments in the Applicant Study — Report Sample

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Receiving IA (%)				
Quarter 1	87.2	86.8	0.5	(1.0)
Quarter 2	75.9	71.2	4.7 ***	(1.5)
Quarter 3	69.4	65.1	4.4 ***	(1.7)
Quarter 4	66.5	62.4	4.1 **	(1.7)
Quarter 5	62.3	60.4	2.0	(1.8)
Quarter 6	53.0	56.9	-3.9 **	(1.8)
Quarter 7	46.7	53.7	-6.9 ***	(1.8)
Quarter 8	41.8	50.4	-8.5 ***	(1.8)
Quarter 9	36.5	47.5	-11.0 ***	(1.8)
Quarter 10	33.7	44.3	-10.5 ***	(1.8)
Quarter 11	31.6	40.3	-8.7 ***	(1.7)
Quarter 12	31.1	38.5	-7.4 ***	(1.7)
Quarter 13	29.9	36.2	-6.3 ***	(1.7)
Quarter 14	27.5	34.4	-6.9 ***	(1.7)
Quarter 15	24.7	29.8	-5.1 ***	(1.6)

(continued)

Table A.4: SSP Impacts on IA and Supplement Receipt and Payments in the Applicant Study — Report Sample (Cont'd)

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Receiving either IA or SSP (%)				
Quarter 1	87.2	86.8	0.5	(1.0)
Quarter 2	75.9	71.2	4.7 ***	(1.5)
Quarter 3	69.4	65.1	4.4 ***	(1.7)
Quarter 4	66.5	62.4	4.1 **	(1.7)
Quarter 5	64.1	60.4	3.7 **	(1.8)
Quarter 6	61.0	56.9	4.1 **	(1.8)
Quarter 7	58.6	53.7	5.0 ***	(1.8)
Quarter 8	56.4	50.4	6.0 ***	(1.8)
Quarter 9	55.0	47.5	7.5 ***	(1.8)
Quarter 10	52.2	44.3	7.9 ***	(1.8)
Quarter 11	49.9	40.3	9.6 ***	(1.8)
Quarter 12	48.9	38.5	10.4 ***	(1.8)
Quarter 13	46.9	36.2	10.7 ***	(1.8)
Quarter 14	44.4	34.4	10.1 ***	(1.8)
Quarter 15	40.8	29.8	11.1 ***	(1.7)
Average IA payments ($/month)				
Quarter 1	842	855	-14	(15)
Quarter 2	728	712	16	(18)
Quarter 3	671	642	29	(19)
Quarter 4	644	617	27	(19)
Quarter 5	608	596	12	(20)
Quarter 6	520	566	-46 **	(20)
Quarter 7	459	525	-66 ***	(20)
Quarter 8	390	473	-83 ***	(19)
Quarter 9	330	427	-97 ***	(18)
Quarter 10	287	378	-91 ***	(16)
Quarter 11	262	334	-72 ***	(16)
Quarter 12	254	321	-67 ***	(15)
Quarter 13	247	299	-52 ***	(15)
Quarter 14	225	286	-61 ***	(15)
Quarter 15	200	247	-47 ***	(14)

(continued)

Table A.4: SSP Impacts on IA and Supplement Receipt and Payments in the Applicant Study — Report Sample (Cont'd)

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Average IA and SSP payments ($/month)				
Quarter 1	842	855	-14	(15)
Quarter 2	728	712	16	(18)
Quarter 3	671	642	29	(19)
Quarter 4	644	617	27	(19)
Quarter 5	638	596	42 **	(20)
Quarter 6	604	566	38 *	(20)
Quarter 7	574	525	49 **	(20)
Quarter 8	528	473	55 ***	(19)
Quarter 9	494	427	67 ***	(18)
Quarter 10	439	378	61 ***	(17)
Quarter 11	417	334	84 ***	(16)
Quarter 12	400	321	79 ***	(16)
Quarter 13	381	299	82 ***	(16)
Quarter 14	356	286	71 ***	(16)
Quarter 15	329	247	82 ***	(15)
Sample size (total = 2,774)	**1,384**	**1,390**		

Sources: Calculations from IA administrative records and payment records from SSP's Program Management Information System.

Notes: The estimates for each quarter are calculated by averaging the monthly estimates for the three months within the quarter.
Two-tailed t-tests were applied to differences in outcomes between the program and control 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.

Appendix B:
SSP Impacts in the Applicant Study, by Quarter

Table B.1: SSP Impacts on Labour Market Outcomes in the Applicant Study, by Quarter

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Overall employment rate (%)				
Quarter 1	29.7	29.4	0.3	(1.6)
Quarter 2	34.5	33.0	1.5	(1.7)
Quarter 3	36.3	35.7	0.6	(1.7)
Quarter 4	40.5	39.7	0.8	(1.8)
Quarter 5	43.2	39.7	3.6 *	(1.8)
Quarter 6	46.8	40.2	6.6 ***	(1.8)
Quarter 7	49.5	40.8	8.6 ***	(1.8)
Quarter 8	52.4	41.6	10.8 ***	(1.8)
Quarter 9	54.6	43.7	10.9 ***	(1.8)
Quarter 10	55.6	47.0	8.6 ***	(1.8)
Quarter 11	54.9	47.4	7.5 ***	(1.9)
Quarter 12	55.4	47.8	7.6 ***	(1.8)
Quarter 13	55.3	48.4	6.9 ***	(1.8)
Quarter 14	55.5	49.6	5.9 ***	(1.8)
Quarter 15	56.3	52.6	3.7 **	(1.9)
Full-time employment rate (%)[a]				
Quarter 1	16.9	17.5	-0.6	(1.3)
Quarter 2	21.2	20.7	0.5	(1.5)
Quarter 3	23.2	22.1	1.2	(1.5)
Quarter 4	28.6	26.0	2.6 *	(1.6)
Quarter 5	31.1	26.7	4.4 ***	(1.7)
Quarter 6	34.1	26.9	7.2 ***	(1.7)
Quarter 7	36.5	27.1	9.3 ***	(1.7)
Quarter 8	39.0	27.8	11.1 ***	(1.7)
Quarter 9	40.3	29.1	11.3 ***	(1.7)
Quarter 10	42.6	32.1	10.5 ***	(1.7)
Quarter 11	44.4	34.8	9.6 ***	(1.8)
Quarter 12	44.9	35.0	10.0 ***	(1.8)
Quarter 13	44.6	35.1	9.5 ***	(1.8)
Quarter 14	44.7	35.8	8.8 ***	(1.8)
Quarter 15	45.0	37.3	7.7 ***	(1.8)
Part-time employment rate (%)				
Quarter 1	12.9	11.9	0.9	(1.1)
Quarter 2	13.3	12.3	1.1	(1.2)
Quarter 3	13.1	13.6	-0.6	(1.2)
Quarter 4	12.0	13.7	-1.7	(1.1)
Quarter 5	12.2	13.0	-0.8	(1.2)
Quarter 6	12.7	13.3	-0.6	(1.2)
Quarter 7	13.0	13.7	-0.7	(1.3)
Quarter 8	13.4	13.8	-0.4	(1.3)
Quarter 9	14.2	14.6	-0.4	(1.3)
Quarter 10	13.0	14.8	-1.9	(1.2)
Quarter 11	10.5	12.6	-2.1 *	(1.2)
Quarter 12	10.5	12.9	-2.4 **	(1.2)
Quarter 13	10.6	13.3	-2.7 **	(1.2)
Quarter 14	10.9	13.8	-2.9 **	(1.2)
Quarter 15	11.4	15.4	-4.0 ***	(1.3)

(continued)

Table B.1: SSP Impacts on Labour Market Outcomes in the Applicant Study, by Quarter (Cont'd)

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Average hours worked (hours/month)				
Quarter 1	32	34	-2	(2)
Quarter 2	42	43	0	(3)
Quarter 3	45	46	-1	(3)
Quarter 4	51	50	1	(3)
Quarter 5	60	54	7 **	(3)
Quarter 6	65	54	11 ***	(3)
Quarter 7	69	55	14 ***	(3)
Quarter 8	73	55	17 ***	(3)
Quarter 9	75	57	18 ***	(3)
Quarter 10	79	63	15 ***	(3)
Quarter 11	82	68	14 ***	(3)
Quarter 12	83	67	16 ***	(3)
Quarter 13	82	69	14 ***	(3)
Quarter 14	82	70	12 ***	(3)
Quarter 15	81	73	8 **	(3)
Average earnings ($/month)				
Quarter 1	302	323	-21	(27)
Quarter 2	430	448	-17	(35)
Quarter 3	471	486	-15	(37)
Quarter 4	514	523	-10	(37)
Quarter 5	661	585	76 *	(41)
Quarter 6	711	588	123 ***	(40)
Quarter 7	758	591	166 ***	(41)
Quarter 8	787	601	186 ***	(41)
Quarter 9	830	615	215 ***	(40)
Quarter 10	888	699	189 ***	(42)
Quarter 11	974	819	155 ***	(46)
Quarter 12	983	813	170 ***	(46)
Quarter 13	989	825	164 ***	(46)
Quarter 14	1,000	859	141 ***	(47)
Quarter 15	1,001	880	121 **	(47)
Sample size (total = 2,774)	**1,384**	**1,390**		

Sources: Calculations from baseline, 12-month, 30-month, and 48-month follow-up survey data.

Notes: The estimates for each quarter are calculated by averaging the monthly estimates for the three months within the quarter.

Sample sizes vary for individual measures because of missing values.

Two-tailed t-tests were applied to differences in outcomes between the program and control 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]"Full-time employment" is defined as working 30 or more hours in at least one week during the month.

Table B.2: SSP Impacts on IA and Supplement Receipt and Payments in the Applicant Study, by Quarter

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Receiving IA (%)				
Quarter 1	87.2	86.8	0.5	(1.0)
Quarter 2	75.9	71.2	4.7 ***	(1.5)
Quarter 3	69.4	65.1	4.4 ***	(1.7)
Quarter 4	66.5	62.4	4.1 **	(1.7)
Quarter 5	62.3	60.4	2.0	(1.8)
Quarter 6	53.0	56.9	-3.9 **	(1.8)
Quarter 7	46.7	53.7	-6.9 ***	(1.8)
Quarter 8	41.8	50.4	-8.5 ***	(1.8)
Quarter 9	36.5	47.5	-11.0 ***	(1.8)
Quarter 10	33.7	44.3	-10.5 ***	(1.8)
Quarter 11	31.6	40.3	-8.7 ***	(1.7)
Quarter 12	31.1	38.5	-7.4 ***	(1.7)
Quarter 13	29.9	36.2	-6.3 ***	(1.7)
Quarter 14	27.5	34.4	-6.9 ***	(1.7)
Quarter 15	24.7	29.8	-5.1 ***	(1.6)
Average IA payments ($/month)				
Quarter 1	842	855	-14	(15)
Quarter 2	728	712	16	(18)
Quarter 3	671	642	29	(19)
Quarter 4	644	617	27	(19)
Quarter 5	608	596	12	(20)
Quarter 6	520	566	-46 **	(20)
Quarter 7	459	525	-66 ***	(20)
Quarter 8	390	473	-83 ***	(19)
Quarter 9	330	427	-97 ***	(18)
Quarter 10	287	378	-91 ***	(16)
Quarter 11	262	334	-72 ***	(16)
Quarter 12	254	321	-67 ***	(15)
Quarter 13	247	299	-52 ***	(15)
Quarter 14	225	286	-61 ***	(15)
Quarter 15	200	247	-47 ***	(14)
Receiving either IA or SSP (%)				
Quarter 1	87.2	86.8	0.5	(1.0)
Quarter 2	75.9	71.2	4.7 ***	(1.5)
Quarter 3	69.4	65.1	4.4 ***	(1.7)
Quarter 4	66.5	62.4	4.1 **	(1.7)
Quarter 5	64.1	60.4	3.7 **	(1.8)
Quarter 6	61.0	56.9	4.1 **	(1.8)
Quarter 7	58.6	53.7	5.0 ***	(1.8)
Quarter 8	56.4	50.4	6.0 ***	(1.8)
Quarter 9	55.0	47.5	7.5 ***	(1.8)
Quarter 10	52.2	44.3	7.9 ***	(1.8)
Quarter 11	49.9	40.3	9.6 ***	(1.8)
Quarter 12	48.9	38.5	10.4 ***	(1.8)
Quarter 13	46.9	36.2	10.7 ***	(1.8)
Quarter 14	44.4	34.4	10.1 ***	(1.8)
Quarter 15	40.8	29.8	11.1 ***	(1.7)

(continued)

Table B.2: SSP Impacts on IA and Supplement Receipt and Payments in the Applicant Study, by Quarter (Cont'd)

Outcome (Monthly Average)	Program Group	Control Group	Difference (Impact)	Standard Error
Average payments from IA and SSP supplements ($/month)				
Quarter 1	842	855	-14	(15)
Quarter 2	728	712	16	(18)
Quarter 3	671	642	29	(19)
Quarter 4	644	617	27	(19)
Quarter 5	638	596	42 **	(20)
Quarter 6	604	566	38 *	(20)
Quarter 7	574	525	49 **	(20)
Quarter 8	528	473	55 ***	(19)
Quarter 9	494	427	67 ***	(18)
Quarter 10	439	378	61 ***	(17)
Quarter 11	417	334	84 ***	(16)
Quarter 12	400	321	79 ***	(16)
Quarter 13	381	299	82 ***	(16)
Quarter 14	356	286	71 ***	(16)
Quarter 15	329	247	82 ***	(15)
Sample size (total = 2,774)	**1,384**	**1,390**		

Sources: Calculations from IA administrative records and payment records from SSP's Program Management Information System.

Notes: The estimates for each quarter are calculated by averaging the monthly estimates for the three months within the quarter.
Two-tailed t-tests were applied to differences in outcomes between the program and control 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.

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