

# **When Financial Incentives Pay for Themselves: Early Findings from the Self-Sufficiency Project's Applicant Study**

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The Authors

## Introduction

Policy-makers have struggled for decades with the problem of designing an income support program that will provide 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.<sup>1</sup> The stakes in finding alternatives that can achieve both objectives have risen substantially over the past decade as government budgets have been cut and public attitudes toward welfare have hardened.

In this context, the Self-Sufficiency Project (SSP) was conceived as a rigorous test of financial incentives for encouraging work and discouraging welfare participation. SSP is funded by Human Resources Development Canada (HRDC) and is being conducted in British Columbia and New Brunswick by the Social Research and Demonstration Corporation (SRDC). SSP provides a generous, time-limited earnings supplement to long-term recipients of Income Assistance who leave welfare and find full-time employment. By targeting supplements in this way, SSP holds out the promise of being able to raise the incomes of relatively disadvantaged participants with little or no increase in government costs.

This report summarizes the mid-term findings from one of three SSP experiments.<sup>2</sup> In this “applicant study,” single parents from Vancouver and lower mainland British Columbia who had recently started a new spell of Income Assistance were randomly assigned to either a program group, which was offered the opportunity to receive SSP supplement payments, or a control group, which was not. 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. After a year, some 60 percent of the program group were still on Income Assistance and had established eligibility for SSP. Over the following year, about 27 percent of the program group (or nearly half of the 60 percent that established eligibility) found full time work, left Income Assistance, and began receiving supplement payments. Compared with the control group, the program group had higher employment, lower IA participation, and higher earnings. Because program group members paid taxes on both their earnings and their supplement payments, tax payments increased more than cash assistance. In other words, SSP achieved a result rare among social experiments testing financial incentives to encourage welfare recipients to work: it increased employment, earnings, and income for welfare recipients, while holding constant after-tax government transfer payments.

The SSP evaluation includes another random assignment study, called the “recipient study” in this report. The recipient study randomly included about 6,000 single-parent IA recipients in British Columbia and New Brunswick who had already been on welfare for at

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<sup>1</sup>Income Assistance, also referred to as “social assistance” or “welfare,” is operated by individual provinces and partly funded through the federal government’s Canada Health and Social Transfer.

<sup>2</sup>This report is one in a series. Earlier reports by Mijanovich and Long, 1995; Bancroft and Vernon, 1995; and Lui-Gurr, Vernon, and Mijanovich, 1994, examined the institutional structure of the program, operational issues confronted by program staff, and the way SSP was experienced and used by eligible single parents. Lin et al., 1998, and Card and Robins, 1996, examined the interim effects of SSP on employment, earnings, and welfare receipt of long-term recipients. Berlin et al., 1998, and Card, Robins, and Lin, 1997, investigated whether SSP’s generous financial incentive induced new welfare recipients to extend their stays on welfare. Quets et al., 1999, studied the effect of the SSP Plus program, which combined the offer of SSP’s earnings supplement with an offer of job-search and other services.

least a year at the time of random assignment. If a program like SSP were implemented nationally, it 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. At the same time, 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. A comparison of the results for the two studies has found that the overall impacts of a newly instituted SSP and an established SSP would be similar in most regards.

Although impacts for the applicant and recipient studies were similar in most regards, there were several large differences. Earnings increased by substantially more in the applicant study than in the recipient study, in part because applicants were able to obtain relatively high-paying jobs. In addition, after-tax transfer payments were slightly reduced in the applicant study but increased somewhat in the recipient study. In these respects, the SSP program, when offered to new welfare applicants, has produced extremely encouraging results. Can this success be duplicated with a different group of welfare recipients, or is there something special about the sample in the applicant study? This question was investigated by comparing the findings from the applicant study with findings for a group of short-term recipients from the SSP recipient study who were similar in many respects to members of the applicant study. The comparison revealed that much of the relative success of the program group members in the applicant study is attributable to their characteristics, particularly their ability to find jobs. Impacts for the group of short-term recipients were nearly as large as impacts from the applicant study, lending credibility to the results of the applicant study.

## **Description of SSP and the Applicant Study**

### ***The supplement offer***

SSP's earnings supplement is broadly similar to the negative income tax (NIT) programs that were evaluated in the United States and Canada in the 1970s (Hum and Simpson, 1991; Robins, 1985). It differs in several key ways from a conventional NIT, however; see the text box on the following page for more details about the earnings supplement. Most importantly, SSP eligibility is limited to single parents who have been on Income Assistance (IA) for at least a year. This restriction targets SSP benefits to a disadvantaged population that normally experiences difficulty in the labour market. At the same time, the requirement of a full year on Income Assistance substantially reduces the incentive for people to enter Income Assistance in order to receive the supplement; that is, it reduces the "entry effect" created by the SSP offer.<sup>3</sup> A second feature of SSP is that benefits are available only to full-time workers who leave Income Assistance.<sup>4</sup> In addition, the SSP supplement varies with individual earnings rather than family income, and is therefore unaffected by family composition, other family members' earnings, or unearned income.<sup>5</sup>

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<sup>3</sup>For a discussion of entry effects in welfare programs, see Moffitt, 1992, and Moffitt, 1996.

<sup>4</sup>For the purposes of SSP, full-time work is defined as 30 or more hours per week.

<sup>5</sup>Thus, the SSP supplement formula does not penalize single parents who receive child support, marry, or find a partner. Because benefits from SSP do not increase with family size, however, SSP is relatively less generous than Income Assistance for larger families. For persons working full time, the supplement is half of the difference between earnings and

Finally, supplement payments are available for a maximum of three years, and only to sample members who initiate SSP payments within 12 months of their initial eligibility.

The SSP demonstration consists of three studies. In the SSP recipient study, a group of about 6,000 single parents in British Columbia and New Brunswick who had been on Income Assistance for at least a year were selected at random from the IA rolls. One-half of these people were randomly assigned to the program group and offered the SSP supplement, while the remainder formed a control group. Comparisons of the two groups in the first 18 months after random assignment (Lin et al., 1998) show that SSP doubled the rate of full-time employment while lowering the proportion on Income Assistance by 13 percentage points. Relative to the control group, those who were offered SSP had higher average monthly earnings, lower IA payments, higher total government transfers (including Income Assistance and their earnings supplement payments), and higher family incomes. A smaller second study, known as SSP Plus, combined the supplement offer of SSP with a package of job-finding services. This dual program had somewhat larger impacts on employment and earnings outcomes.

Entry into both the recipient and SSP Plus studies was limited to those who had already spent a year or more on Income Assistance, so that these studies provided no way to discern whether people would prolong their stay on Income Assistance to become eligible for SSP. The third SSP study — the applicant study — was designed to test the effect of SSP on the behaviour of new welfare recipients and to measure the potential “entry effect” caused by the future availability of the supplement.<sup>6</sup> In this study, a group of single parents who had recently started a new IA claim in the lower mainland of British Columbia were randomly assigned to either a program group or a control group.<sup>7</sup> The program group received a letter informing them that if they remained on Income Assistance for one year they would become eligible for SSP.<sup>8</sup> A second letter reviewing the supplement offer and the eligibility criteria was sent to program group members six to seven months after random assignment.

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a targeted level of earnings. This target earnings level was initially set at \$37,000 per year in British Columbia and \$30,000 per year in New Brunswick and has been adjusted periodically for changes in the cost of living.

<sup>6</sup>The applicant study tested whether offering the supplement would induce new welfare recipients to extend their stays on welfare. 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. If people who are already receiving welfare are unlikely to extend their welfare spells because of the supplement, however, it is even less likely that people not receiving welfare would apply for benefits because of the supplement.

<sup>7</sup>The formal requirement was that an applicant had not received Income Assistance for six months prior to random assignment.

### Key Features of the Earnings Supplement for Applicants

- **Full-time work requirement.** Supplement payments are made only to eligible single parents who work 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 are not receiving Income Assistance.
- **Substantial financial incentive.** The supplement is 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, which was \$37,625 in 1996, has been adjusted over time to reflect changes in the cost of living and generosity of Income Assistance. The supplement is 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 is 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 is 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 may collect the supplement for up to three calendar years from the time she began receiving it, as long as she is working full time and not receiving Income Assistance.
- **Voluntary alternative to welfare.** People cannot receive IA payments while receiving the supplement. No one is required to participate in the supplement program, however; after beginning supplement receipt, people may decide at any time to return to Income Assistance, as long as they give up supplement receipt and meet the eligibility requirements for Income Assistance. They can also renew their supplement receipt by going back to work full time at any point during the three-year period in which they are eligible to receive the supplement.

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<sup>8</sup>The program assignment letters were mailed from the SRDC office. If the letter was returned as undeliverable to SRDC, it was forwarded to the relevant IA caseworker and re-sent to the last known address on the Ministry of Social Service's (MSS) IA information system. Only four letters were subsequently returned to the MSS as undeliverable by the post office.

Earlier reports (Berlin et al., 1998, Card, Robins, and Lin, 1997) compared the IA participation rates of the program group and the control group 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.<sup>9</sup> 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. Members of the applicant program group who satisfied the SSP eligibility requirement were informed of their status by mail in the 12<sup>th</sup> or 13<sup>th</sup> month after applying for Income Assistance. Over 90 percent subsequently attended an information session describing the program’s benefits and requirements. As in the recipient study, these “eligible applicants” were given one year in which to find a full-time job, leave Income Assistance, and initiate SSP payments. Those who initiated the supplement during this window could then receive supplement payments during the next three years, provided that they continued to meet the full-time employment requirement of the program (30 or more hours per week). 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.

In addition to providing a direct measure of the entry effect associated with the potential availability of SSP to new welfare recipients, the applicant study provides estimates of the effect of SSP itself on new welfare recipients. Participants in the applicant study are being followed for a period of six years, with surveys at approximately 12, 30, 48, and 72 months after random assignment. This report uses administrative data and information from the baseline survey and the 12- and 30-month surveys to study the effects of SSP during the first two-and-a-half years of the study, or 18 months after most members of the program group could have begun receiving the supplement.

### *The Policy and Economic Context for the Applicant Study*

Members of the applicant study became part of the evaluation of SSP between February 1994 and February 1995. Because members of the applicant study had to establish eligibility for the supplement during the first year after random assignment, the take-up window extended roughly from February 1995 until February 1997. During this time, British Columbia made a variety of changes to its IA program.<sup>10</sup>

**The earnings disregard**—One of the major changes to the British Columbia IA system involved the “earnings disregard” — the amount that recipients are able to earn without reducing their IA benefit. Until April 1996, single parents who had received Income

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<sup>9</sup> Applicants in the program group became eligible for SSP if they received Income Assistance in 12 of the 13 months following their initial entry into Income Assistance.

<sup>10</sup> Changes in British Columbia’s social policy occurred following a larger federal reform described more fully in Lin et al., 1998. Briefly, the two major federal funding programs for cost-sharing of social expenditures (the Canada Assistance Plan and the Established Programs Financing Plan) were abolished and replaced by the Canada Health and Social Transfer (CHST) program, which provided a substantially lower level of funding. Battle, 1997, estimates that in 1997–98, federal expenditures for CHST were 15.2 percent lower than they would have been for the same year under the previous CAP and Established Programs Financing programs.

Assistance for more than three months were eligible for a “flat rate” disregard of \$200 per month and, for up to 12 out of every 36 months, an “enhanced” disregard of 25 percent of earnings in excess of the \$200 disregard. Effective April 1996, the flat rate disregard was eliminated, and the 25 percent disregard could be used for only 12 months in a lifetime. This change increased the attractiveness of SSP over Income Assistance for family heads who chose to work while receiving welfare.

**Family bonus**—In August 1996, British Columbia introduced a monthly “Family Bonus” of up to \$103 per child per month for all low-income families and simultaneously reduced IA benefits by the same amount. This change increased income for working poor families while leaving income for IA recipients unchanged. As a result, Family Bonus payments reduced the relative generosity of Income Assistance, lowering the incentive for both program and control group members to remain on Income Assistance.

**Sanctions and changed application process**—Two other changes in the British Columbia IA system are potentially important.<sup>11</sup> In January 1996, sanctions were introduced that prohibited anyone who quit a job without just cause from receiving Income Assistance for six months. Thus, program group members who found full-time jobs and initiated supplement payments might not be allowed to return to Income Assistance if they voluntarily left those jobs (contrary to the original design of SSP). Later in 1996, the process of applying for Income Assistance was made considerably harder. For example, applicants were required to make advance appointments and to bring various documents to their appointments, and the issuance of on-the-spot checks was eliminated. These changes would be expected to reinforce the effects of sanctions, potentially decreasing receipt of Income Assistance by supplement takers who quit (or lost) full-time jobs.

**Economic growth and changes in the minimum wage**—The policy environment is not the only potential factor that might affect the impact of SSP. Economic conditions may also have been important. Although the Vancouver area labour market did not undergo huge changes in the mid-1990s, the economy gradually improved, with unemployment falling from 9.3 percent in 1993 to 8.1 percent in 1996. During this same period the minimum wage in British Columbia increased from \$5.50 per hour in January 1993 to \$6.00 in April 1993, \$6.50 in March 1995, and \$7.00 in October 1995. The net effect of these changes is unclear. On the one hand, the rise in the minimum wage would probably raise wages for lower-skilled workers, increasing the attractiveness of work. On the other hand, conventional economic models suggest that raises in the minimum wage will lower demand for lower-skilled workers.<sup>12</sup>

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<sup>11</sup> British Columbia made a number of other changes to its IA system in 1995 and 1996, but many of these changes had little effect on most single-parent recipients. A requirement of three months’ residency was imposed but later dropped. IA rates for recipients without children were reduced. Starting in January 1996, people aged 19 to 24 (excluding single parents with children aged seven or younger) have been required to participate in expanded job-search and work preparation programs.

<sup>12</sup> Recent research on the minimum wage in the U.S. and U.K. has found that the employment effects of relatively modest minimum wage increases are quite small (see, for example, Card and Krueger, 1995).

## The Applicant Study Sample

### *Initial characteristics*

The applicant study is being conducted with a group of 3,316 single parents from Vancouver and lower mainland British Columbia who began a new spell of IA receipt between February 1994 and February 1995.<sup>13</sup> After agreeing to participate in the study and completing a baseline interview, the intake sample was randomly divided into a program group (1,648 members) and a control group (1,668 members). Not all of the original sample members completed the subsequent 12-month and 30-month surveys. In this report, the analysis is limited to the 2,852 participants who responded to the 30-month survey, 1,430 control group members, and 1,422 program group members.<sup>14</sup> 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 of the applicant study (first column). Information is drawn both from IA records and from the baseline interview.<sup>15</sup> Nearly all members of the applicant sample were female, and nearly two-thirds had a high school diploma. A typical member of the sample had one or two children and had some work experience but 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 results for the applicant study will later be compared with results for the recipient study, Table 1 also shows baseline information for members of the recipient study from British Columbia who responded to the 18-month survey (second column).<sup>16</sup> The third column of the table reports the differences in mean characteristics between the samples, while the fourth column reports the standard error of this difference.

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<sup>13</sup>As is discussed in Appendix A, about 1,000 additional parents selected into the initial applicant project sample are not part of the study sample because they did not complete a baseline interview or they did not sign an informed consent form agreeing to be part of 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.

<sup>14</sup>Response rates for the 30-month survey were 85.73 percent for the control group and 86.28 percent for the program group. The difference in response rates is not statistically significant ( $t = 0.47$ ).

<sup>15</sup>In Table 1, the program and control groups are pooled. Earlier reports (Card, Robins, and Lin, 1997, Lin et al., 1998) present data for the program and control groups and verify that random assignment procedures worked, providing statistically comparable program and control groups.

<sup>16</sup>The applicant study is being conducted only in British Columbia, whereas the recipient study is being conducted in British Columbia and New Brunswick. Comparisons in Table 1 are limited to British Columbia participants in the recipient study.

**Table 1: Characteristics of Applicant and Recipient Samples**

Baseline Characteristic	Applicants	Recipients	Difference	Standard Error
<b>IA history</b>				
Average number of months of Income Assistance in last two years	3.2	21.6	-18.4 ***	(0.1)
Average monthly IA payment at random assignment (\$)	924	1,017	-93 ***	(9)
<b>Work history</b>				
Ever worked for pay (%)	97.1	95.6	1.5 ***	(0.5)
Worked in month before random assignment (%)	24.1	18.3	5.8 ***	(1.1)
<b>Personal characteristics</b>				
Female (%)	91.4	95.1	-3.7 ***	(0.7)
Under age 25 (%)	14.9	18.6	-3.6 ***	(1.0)
Less than high school education (%)	36.0	54.3	-18.3 ***	(1.3)
High school graduate, no post-secondary education (%)	41.5	33.1	8.4 ***	(1.3)
Some post-secondary education (%)	22.5	12.6	9.9 ***	(1.0)
First Nation ancestry (%)	8.1	12.1	-4.0 ***	(0.8)
Immigrant (%)	30.2	23.2	7.0 ***	(1.2)
Physical limitation (%)	19.8	26.2	-6.4 ***	(1.1)
Emotional limitation (%)	6.9	8.7	-1.8 **	(0.7)
<b>Family structure</b>				
Average number of children (up to age 18)	1.5	1.7	-0.2 ***	(0.0)
Never married (%)	23.2	43.5	-20.3 ***	(1.2)
<b>Sample size (total = 5,618)</b>	<b>2,852</b>	<b>2,766</b>		

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

**Notes:** "Recipients" are British Columbia sample members from the recipient study who responded to the 18-month follow-up survey.

Sample sizes vary for individual measures because of missing values.

Two-tailed t-tests were applied to differences in baseline characteristics between the applicants and recipients.

Statistical significance levels are indicated as: \* = 10 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

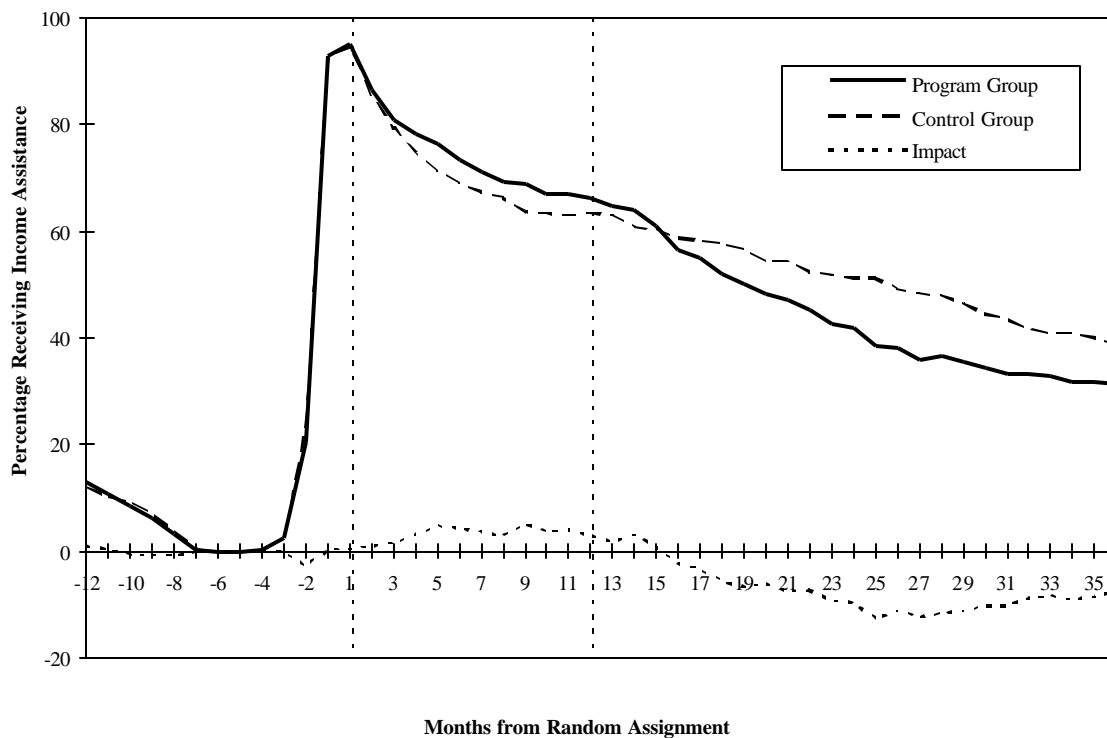
In a number of important ways, new welfare recipients and longer-term recipients were quite similar. Nearly all were female and had worked at some time in the past, while a typical member of either sample had one or two children. In other ways, however, applicants and recipients were quite different. The average applicant had spent considerably less time on Income Assistance and had lower average IA benefits in the month of random assignment.<sup>17</sup> Members of the applicant sample were more likely to have a high school diploma than longer-term recipients, were more likely to have worked in the month prior to random assignment, and were less likely to report physical or emotional problems that limited their work readiness. The applicant sample's higher level of educational attainment, its greater recent work experience, and its lower levels of physical and emotional problems all suggest that they would have an easier time finding work than the recipient sample and an easier time finding high-wage jobs.

<sup>17</sup>This gap reflects a small fraction of "partial month" IA cheques among new applicants; in later months, average IA payments (conditional on remaining on welfare) are similar among recent applicants and longer-term recipients.

## Establishing eligibility

Program group members in the applicant study became eligible for SSP if they received IA payments in 12 of the first 13 months after entering Income Assistance.<sup>18</sup> Figure 1 shows the proportions of program and control group members on Income Assistance by month, starting one year before random assignment and continuing to 36 months after, or about six months past the 30-month interview.<sup>19</sup> Also shown in the graph is the *program impact*, defined as the difference between the program and control groups in the proportion on Income Assistance.

**Figure 1: Monthly Rates of Receiving Income Assistance, British Columbia Applicant Sample**



Source: Calculations from IA administrative records.

In interpreting the results in this chart, as well as other results presented in this report, keep in mind that they apply only to the 2,852 people who responded to the 30-month questionnaire — about 86 percent of the applicant sample. In contrast, earlier results reported in Berlin et al., 1998, and Card, Robins, and Lin, 1997, used the entire applicant sample.<sup>20</sup> Results presented in this report will consequently differ somewhat from results presented in the earlier reports. Because the earlier reports used the complete sample, however, the estimated entry effect reported there is a more accurate estimate of the true entry effect of a

<sup>18</sup>The eligibility criterion of receiving at least 12 months of Income Assistance in the first 13 months was adopted to allow some flexibility for people who experience an irregular event — such as receipt of child support payments — that reduces their IA cheque to \$0 in one month.

<sup>19</sup>There is no month 0 in the figure. Month 1 corresponds to the month in which random assignment occurred.

<sup>20</sup>The earlier reports (Berlin et al., 1998, and Card, Robins, and Lin, 1997) present results on 3,315 sample members, all but one of the full sample of applicants (for whom administrative records were not available when those reports were written).

program like SSP. Nevertheless, the size of the entry effect among 30-month respondents is important for understanding the program's later impacts on employment, earnings, and income.

Prior to random assignment, the two groups received Income Assistance at nearly identical rates, as is to be expected because the groups were randomly assigned. In the year after random assignment, a small gap emerged between the two groups, reaching a peak in month 9 when about 69 percent of the program group and 64 percent of the control group received Income Assistance. This five-percentage-point gap is an estimate of the entry effect (or, more precisely, the delayed exit effect) caused by the response of the program group to the future availability of SSP benefits for those who remained on Income Assistance. A slightly different measure of the entry effect is shown in Figure 2, which graphs the proportions of the program group and control group who have been off welfare for no more than one month since first entering Income Assistance. Since SSP eligibility was restricted to those who received IA payments in 12 of the first 13 months after beginning a new welfare spell, the proportions in Figure 2 represent the percentages of the program and control group who continued to meet the criteria for potential eligibility for SSP. (Note that none of the control group were ever actually eligible for SSP.) In the 13<sup>th</sup> month of the follow-up period (the month of final eligibility determination for most of the sample), this estimate of the entry effect is equal to nearly four percentage points, slightly larger than the estimate in Berlin et al., 1998.

Starting as early as the ninth month after random assignment, people in the program group could begin receiving SSP.<sup>21</sup> Because program group members had to leave Income Assistance to receive the supplement, any impact of the program should be reflected in a decline in the proportion of the program group on Income Assistance. As shown in Figure 1, such a downturn begins in about month 14 and continues for the next 12 months. By month 25, which corresponds to the end of the 12-month window for taking up the supplement, the IA participation rate of the program group is about 12.5 percentage points *below* the IA participation rate of the control group.

### ***Eligible and ineligible applicants***

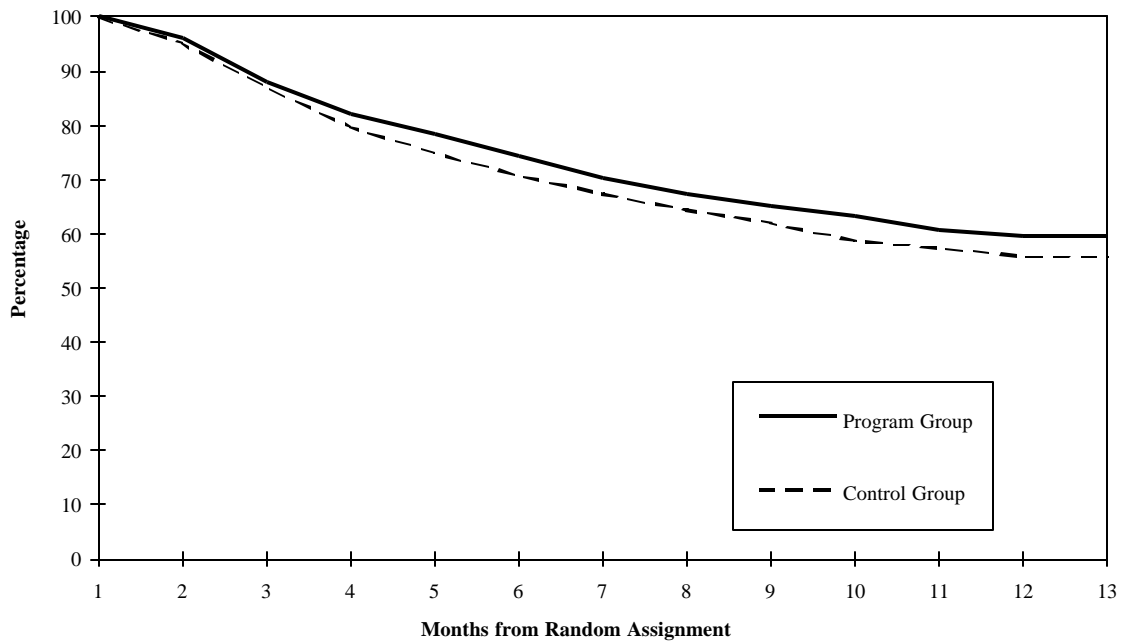
According to Figure 2, about 60 percent of the program group and 56 percent of the control group remained on Income Assistance long enough to satisfy the eligibility rule for SSP. These participants will be referred to as “eligible applicants,” and those who left Income Assistance prior to satisfying the SSP eligibility requirement as “ineligible applicants.” Because only eligible program group members could receive SSP supplement payments, their characteristics will provide a clue to the impacts of the supplement offer. And because the eligible program group contains some people who responded to the

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<sup>21</sup>Most program group members (72.4 percent 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 the 11<sup>th</sup> month after random assignment and could potentially begin receiving SSP immediately. Some 18 percent of program group members were 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 percent 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 were on Income Assistance for more than three months prior to random assignment.

supplement offer by staying on welfare longer, it will also be instructive to compare the characteristics of eligible program and eligible control group members. Table 2 presents these comparisons.

**Figure 2: Monthly Rates of Continuous IA Receipt, British Columbia Applicant Sample**



**Source:** Calculations from IA administrative records.

**Note:** The rates shown represent those members of the program and control groups who had not been off Income Assistance for more than one month since random assignment. For the program group, the rate thus shows the proportion still potentially eligible for SSP.

**Table 2: Characteristics of “Eligible” and “Ineligible” Applicants**

Baseline Characteristic	Control Group Members			Program Group Members			Difference: Eligible Program vs. Eligible Control Group Member
	Eligible	Ineligible	Difference	Eligible	Ineligible	Difference	
<b>IA history</b>							
Average number of months of Income Assistance in last two years <sup>a</sup>	3.1	3.1	0.0	3.2	3.3	0.0	0.1
Average monthly IA payment at random assignment (\$)	1,026	810	216 ***	1,004	794	211 ***	-22
<b>Work history</b>							
Ever worked for pay (%)	95.9	98.3	-2.4 ***	95.9	99.1	-3.3 ***	0.0
Worked in month before random assignment (%)	15.5	33.7	-18.2 ***	18.8	33.1	-14.3 ***	3.3 *
<b>Personal characteristics</b>							
Female (%)	94.1	90.7	3.4 **	90.8	89.3	1.5	-3.3 **
Under age 25 (%)	17.2	11.3	5.9 ***	16.8	12.8	4.0 **	-0.4
Less than high school education (%)	42.6	29.7	12.9 ***	38.7	30.2	8.6 ***	-3.9
High school graduate, no post-secondary education (%)	38.1	43.0	-4.9 *	42.7	43.0	-0.3	4.6 *
Some post-secondary education (%)	19.3	27.4	-8.1 ***	18.6	26.9	-8.3 ***	-0.7
First Nation ancestry (%)	9.1	9.6	-0.6	6.6	7.1	-0.5	-2.4 *
Immigrant (%)	36.9	21.3	15.6 ***	34.4	24.5	9.9 ***	-2.5
Physical limitation (%)	19.3	20.2	-0.9	20.1	19.6	0.5	0.8
Emotional limitation (%)	8.4	7.8	0.6	5.5	6.1	-0.6	-2.9 **
<b>Family structure</b>							
Average number of children	1.6	1.5	0.1 *	1.6	1.4	0.1 ***	0.0
Never married (%)	26.7	22.0	4.6 **	22.5	21.0	1.5	-4.2 **
<b>Sample size (total = 2,852)</b>	<b>795</b>	<b>635</b>		<b>845</b>	<b>577</b>		

**Source:** Calculations from applicant and recipient 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. Statistical significance levels are indicated as: \* = 10 percent; \*\* = 5 percent;

\*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup>The "last two years" refers to the 24-month period before random assignment.

Consider first the characteristics of eligible and ineligible control group members and differences between the two groups, presented in the first three columns of the table. Eligible control group members are more likely to have dropped out of high school (42.6 percent compared with 29.7 percent); to be never married (26.7 percent compared with 22.0 percent); and to be immigrants to Canada (36.9 percent compared with 21.3 percent). Finally, and perhaps most striking, eligible applicant control group members were much less likely to have been working at random assignment than those who left welfare quickly (15.5 percent compared with 33.7 percent). These differences reflect the natural diversity of new IA applicants; those who remain on Income Assistance for many years are likely to have low levels of education and job experience and serious personal or family limitations that prevent them from working, and those who leave welfare quickly have characteristics that make them more likely to work without the supplement offer.<sup>22</sup>

The next three columns of Table 2 show the same information for the eligible and ineligible program group members, while the last column shows the differences in mean characteristics between eligible program group members and eligible control group members. In general, differences between eligible and ineligible program group members are typically smaller than differences for control group members. In addition, eligible program group members are somewhat better educated and are less likely to have never married than are eligible control group members. They are also more likely to be male. All of these features are consistent with the presence of an “entry effect” group among eligible program group members. This entry effect group stayed on welfare a year because of SSP, so they should be less job-ready than ineligible control group members. At the same time, they would have left welfare in the first year without SSP’s supplement offer, so they should be more job-ready than eligible control group members.

### *Supplement take-up by eligible applicants*

Program group members who became eligible for SSP were informed by mail of their status and invited to attend an orientation session describing the SSP program in more detail. Ninety-four percent of eligible participants in the program group attended such a session. Once informed of their SSP eligibility, participants had 12 months to take up the supplement by finding full-time work, leaving Income Assistance, and beginning to receive SSP payments. Those who took up the supplement in this interval could receive up to 36 months of supplement payments, while non-takers lost all further opportunity to receive the SSP supplement. Operational details of the supplement program are described in more detail in Mijanovich and Long, 1995, and Card and Robins, 1996.<sup>23</sup>

Figure 3 shows the proportion of program group members who ever initiated supplement payments and the proportion who were receiving supplement payments in a given month, starting in the 12<sup>th</sup> month of the follow-up period. These supplement take-up rates are shown both as a proportion of the eligible program group and as a proportion of the

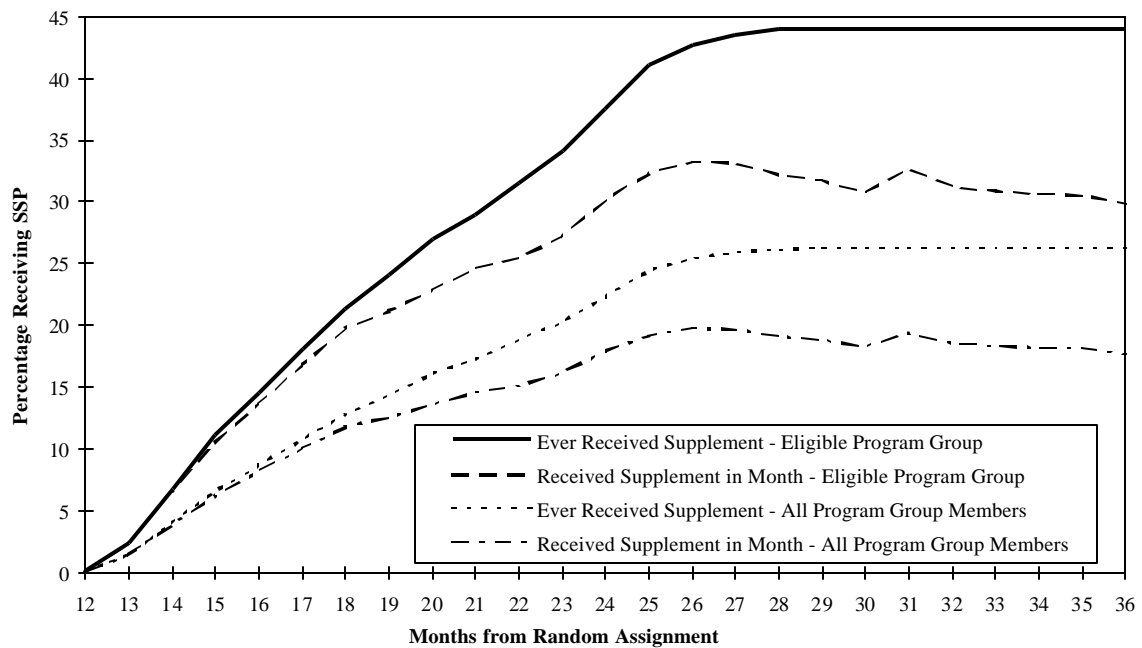
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<sup>22</sup>In the U.S. system, as described by Blank, 1989, recipients may end a spell of welfare receipt because they find a job that pays enough to make them ineligible for payments, because they enter a relationship with a partner whose income exceeds the welfare threshold, or for a variety of other reasons.

<sup>23</sup>Briefly, takers were required to mail in pay stubs (or similar information) verifying their employment status, earnings, and hours. They were then mailed a cheque for their supplement payment amount.

overall program group. Over the year following notification of supplement eligibility, the proportion of applicants who ever received the supplement gradually increases, reaching a plateau of about 26 percent of the overall program group (or 44 percent of the eligible program group) in month 27.<sup>24</sup> The proportion of the program group receiving SSP each month also rises through the second year, reaching a peak in month 26. At the peak, substantially fewer eligible program group members are receiving SSP than have *ever* received SSP. The gap between the proportion who ever received SSP and those currently receiving a payment represents the proportion of people who started and then left full-time jobs. These participants can still receive SSP supplement payments in later months, if and when they return to full-time employment.

**Figure 3: Percentage of Program Group Members Receiving SSP Supplement Payments, British Columbia Applicant Sample**



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

### Impacts of SSP on Employment, Income, and Net Public Expenditures

Given that a sizeable proportion of the program group in the SSP applicant study received SSP payments, the next question concerns how SSP affected the incomes and labour market outcomes of this group. A key issue is whether SSP supplement takers would have worked full time even in the absence of the program. If so, the supplement was essentially a

<sup>24</sup> Although program group members had only 12 months to initiate an SSP payment after being informed of their eligibility status, and most members of the program group were informed of their eligibility status in month 12 or 13, the fraction who ever received SSP continues to rise until month 27. This discrepancy reflects delays in verifying jobs and processing SSP cheques, as well as the fact that few individuals accepted full-time jobs in the last few weeks of their SSP eligibility window.

“windfall” income gain that rewarded people who did not change their behaviour.<sup>25</sup> The alternative is that some, or even most, SSP supplement takers would not have left Income Assistance and worked full time without the encouragement of the supplement.

***Estimated impacts of SSP on income assistance and SSP payments***

As shown earlier in Figure 1, SSP’s entry effect initially increased IA receipt among the program group members relative to the control group members, but by month 16 this pattern was reversed, and by month 25 about 12 percent fewer members of the program group were still on Income Assistance. The fact that SSP reduced IA use means that some supplement takers left Income Assistance because of the supplement.

Other supplement takers presumably would have left Income Assistance and begun working full time even without the supplement offer. Because this group would not have been receiving Income Assistance anyway but is receiving supplement payments, it increases the proportion receiving either IA or supplement payments. As a result, the proportion of the program group receiving *either* Income Assistance *or* SSP will likely be larger than in the control group. This prediction is confirmed by Figure 4, which plots the proportion of the two research groups receiving either Income Assistance or SSP, along with the study’s impact.<sup>26</sup> The impact rises to about five percentage points in the first year (reflecting the SSP entry effect) and subsequently rises another three or four percentage points, reflecting the receipt of SSP payments by people who would have left Income Assistance anyway.

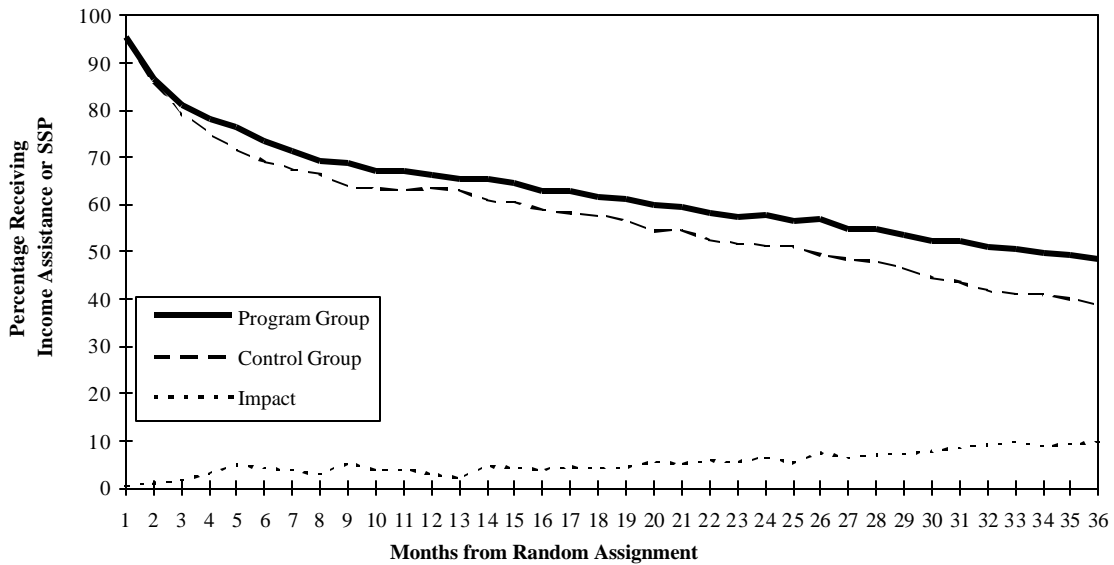
SSP not only increased the proportion of people receiving IA or SSP payments; it also increased the average payments from Income Assistance and SSP supplements. Figure 5 graphs average monthly amounts of IA and SSP payments received by members of the program and control groups, along with the impact. The figure is strikingly similar to Figure 4. In the first year after random assignment, average payments are higher for the program group, reflecting the entry effect. After month 13, the gap widens further as program group members begin claiming the supplement. By the end of the follow-up period, program group members were receiving \$60–\$80 more per month than control group members.

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<sup>25</sup>This is not to say that SSP payments received by those who would have worked full time anyway have no social value. Many welfare and tax programs in Canada and the U.S., such as the Earned Income Tax Credit, have been designed to raise the incomes of those who leave welfare and support themselves through employment.

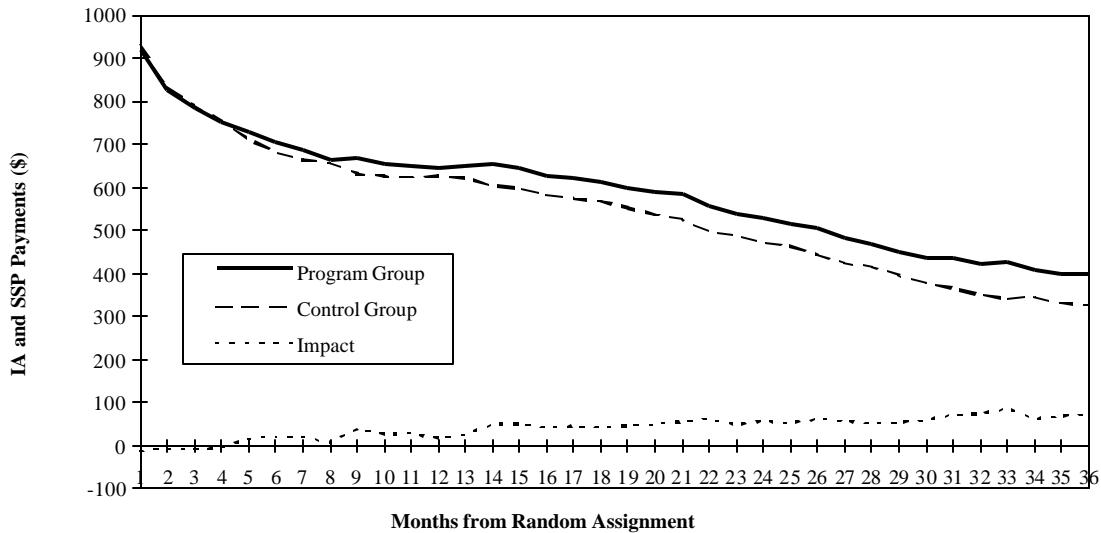
<sup>26</sup>For the control group, this is simply the proportion receiving Income Assistance.

**Figure 4: Monthly Rates of Receipt of Income Assistance or SSP, British Columbia Applicant Sample**



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

**Figure 5: Average Monthly IA and SSP Payments, British Columbia Applicant Sample**



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

Table 3 summarizes the information in these figures in a different format. This table reports average monthly data by quarter on IA receipt rates, IA or SSP receipt rates, IA payment amounts, and IA or SSP payment amounts. As the earlier figures indicate, the results in Table 3 show that SSP initially increased the proportion of participants receiving Income Assistance. In quarter 4, for example, just before program group members would have established eligibility for the supplement, 66.9 percent of the program group received

**Table 3: SSP Impacts on Income Assistance and IA/SSP Participation in the Applicant Study**

<b>Outcome (monthly average)</b>	<b>Program Group</b>	<b>Control Group</b>	<b>Difference (Impact)</b>	<b>Standard Error</b>
<b>Receiving Income Assistance (%)</b>				
Quarter 1	87.6	86.6	1.0	(1.0)
Quarter 2	76.0	71.9	4.1 ***	(1.5)
Quarter 3	69.8	65.8	4.0 **	(1.7)
Quarter 4	66.9	63.3	3.6 **	(1.7)
Quarter 5	63.4	61.5	1.9	(1.7)
Quarter 6	54.5	58.3	-3.7 **	(1.8)
Quarter 7	48.5	55.2	-6.7 ***	(1.8)
Quarter 8	43.2	51.9	-8.7 ***	(1.8)
Quarter 9	37.7	49.6	-12.0 ***	(1.8)
<b>Receiving either Income Assistance or SSP (%)</b>				
Quarter 1	87.6	86.6	1.0	(1.0)
Quarter 2	76.0	71.9	4.1 ***	(1.5)
Quarter 3	69.8	65.8	4.0 **	(1.7)
Quarter 4	66.9	63.3	3.6 **	(1.7)
Quarter 5	65.1	61.5	3.7 **	(1.7)
Quarter 6	62.4	58.3	4.2 **	(1.8)
Quarter 7	60.3	55.2	5.0 ***	(1.8)
Quarter 8	57.8	51.9	5.9 ***	(1.8)
Quarter 9	56.0	49.6	6.4 ***	(1.8)
<b>Average IA payments (\$/month)</b>				
Quarter 1	843	851	-8	(14)
Quarter 2	728	716	11	(18)
Quarter 3	673	651	22	(19)
Quarter 4	650	625	24	(19)
Quarter 5	621	608	13	(19)
Quarter 6	537	575	-38 *	(20)
Quarter 7	476	539	-63 ***	(19)
Quarter 8	404	487	-82 ***	(18)
Quarter 9	341	444	-103 ***	(17)
<b>Average IA and SSP Payments (\$/month)</b>				
Quarter 1	843	851	-8	(14)
Quarter 2	728	716	11	(18)
Quarter 3	673	651	22	(19)
Quarter 4	650	625	24	(19)
Quarter 5	650	608	43 **	(19)
Quarter 6	619	575	44 **	(20)
Quarter 7	590	539	51 ***	(19)
Quarter 8	542	487	56 ***	(19)
Quarter 9	502	444	58 ***	(18)
<b>Sample size (total = 2,852)</b>	<b>1,422</b>	<b>1,430</b>		

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

**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 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

Income Assistance in an average month, compared with 63.3 percent of the control group. In other words, SSP resulted in an increase in IA receipt of 3.6 percentage points in that quarter. Starting in the second year after random assignment, SSP resulted in a decrease in IA receipt. By quarter 9, only 37.7 percent of the program group received Income Assistance in an average month, compared with 49.6 percent of the control group, a reduction of about 12 percentage points.

Briefly, other results shown in the table indicate that SSP increased the proportion receiving Income Assistance or SSP by more than six percentage points in quarter 9, reduced average monthly IA payments by \$103 in quarter 9, and increased total cash transfers by about \$58 per month in quarter 9. Comparisons of the proportion of the program group receiving Income Assistance in quarter 9 (37.7 percent) versus Income Assistance or SSP (56.0 percent) indicate that 18.3 percent of the program group received supplement payments by the end of the follow-up period.<sup>27</sup> Similar calculations reveal that the program group received \$58 more per month in transfer payments in quarter 9 because the \$103 reduction in monthly IA payments was accompanied by a \$161 increase in monthly SSP supplement payments.

### *Impacts on employment, earnings, hours, and wages*

One of the primary goals of SSP is to increase the self-sufficiency of former IA recipients by raising their earnings. Table 4 shows the impacts of SSP on employment, hours, and earnings using data collected in the 30-month follow-up survey. As can be seen in the table, SSP increased full-time employment by about as much as it lowered IA participation: roughly 12 percentage points in quarter 9. Moreover, the impact on full-time employment is about equal to the impact on total employment, indicating that SSP neither increased nor decreased part-time employment.<sup>28</sup> In other words, virtually all of SSP's effect on employment results from the fact that people who would not otherwise have worked were persuaded to work full time.

SSP provides a “windfall” to people who would have worked full time without the supplement offer but who are nevertheless receiving supplement payments. An estimate of this windfall is the difference between the percentage receiving supplement payments and the impact on full-time employment. In quarter 9, as Table 3 shows, 18.3 percent of the applicant sample received supplement payments, while SSP increased full-time employment by 12.5 percentage points. These figures suggest that 5.8 percent of the applicant sample, or about 30 percent of all supplement takers, were windfall cases who would have worked full time without the supplement offer.

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<sup>27</sup>The actual percentage receiving supplement payments is probably more than 18.3 percent, since some people could have received both an IA cheque and a supplement payment in the same month. This is not an indication of fraud; supplement payments were typically made in the month after a person worked full time.

<sup>28</sup>While not reported in the table, an analysis of part-time employment rates shows that SSP had little impact on the likelihood of working part time.

**Table 4: SSP Impacts on Labour Market Outcomes in the Applicant Study**

<b>Outcome (monthly average)</b>	<b>Program Group</b>	<b>Control Group</b>	<b>Difference (Impact)</b>	<b>Standard Error</b>
<b>Overall employment rate (%)</b>				
Quarter 1	29.0	28.3	0.7	(1.6)
Quarter 2	33.2	31.4	1.8	(1.7)
Quarter 3	35.3	33.8	1.5	(1.7)
Quarter 4	38.5	36.9	1.6	(1.7)
Quarter 5	42.2	38.1	4.1 **	(1.8)
Quarter 6	45.8	38.5	7.3 ***	(1.8)
Quarter 7	49.0	39.5	9.6 ***	(1.8)
Quarter 8	52.4	40.7	11.6 ***	(1.8)
Quarter 9	54.9	42.8	12.1 ***	(1.8)
<b>Full-time employment rate (%)<sup>a</sup></b>				
Quarter 1	15.3	16.3	-1.0	(1.2)
Quarter 2	19.1	18.8	0.2	(1.4)
Quarter 3	21.3	20.5	0.7	(1.5)
Quarter 4	24.6	23.1	1.4	(1.5)
Quarter 5	29.5	25.4	4.1 **	(1.6)
Quarter 6	32.6	25.6	7.0 ***	(1.7)
Quarter 7	35.5	26.3	9.2 ***	(1.7)
Quarter 8	38.7	27.7	10.9 ***	(1.7)
Quarter 9	41.2	28.7	12.5 ***	(1.7)
<b>Average hours worked (hrs/month)</b>				
Quarter 1	29	31	-2	(2)
Quarter 2	38	38	1	(2)
Quarter 3	41	42	0	(2)
Quarter 4	47	45	2	(3)
Quarter 5	57	50	7 **	(3)
Quarter 6	62	51	11 ***	(3)
Quarter 7	67	52	14 ***	(3)
Quarter 8	71	54	17 ***	(3)
Quarter 9	76	56	20 ***	(3)
<b>Average earnings (\$/month)</b>				
Quarter 1	291	306	-15	(25)
Quarter 2	404	412	-7	(33)
Quarter 3	443	451	-8	(34)
Quarter 4	485	476	9	(34)
Quarter 5	630	552	78 **	(38)
Quarter 6	684	557	126 ***	(38)
Quarter 7	741	572	168 ***	(39)
Quarter 8	788	596	192 ***	(40)
Quarter 9	853	610	242 ***	(40)
<b>Sample size (total = 2,852)</b>	1,422	1,430		

**Source:** Calculations from 12-month and 30-month applicant follow-up survey data.

**Notes:** The estimates for each quarter were 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 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

"Full-time employment" is defined as working 30 or more hours in at least one week during the month.

Perhaps the most striking result shown in Table 4 is the relatively large estimated program effect on earnings. The impact on earnings rose throughout the follow-up period, reaching a peak of \$242 per month in quarter 9.

A more detailed comparison of the program's impacts on employment, earnings, and hours in Table 4 is informative. In quarter 9, SSP increased employment by 12.1 percentage points and increased hours worked by 20.0 per month. If the increase in hours of work were due only to new workers, then new workers averaged about 165 hours of work per month (20 hours per month divided by the 12.1 percent of the sample that began working because of the supplement, that is,  $20/.121$ ). This calculation is consistent with the expectation that program group members who began to work because of SSP worked full time on average. Likewise, if SSP's \$242 increase in monthly earnings in quarter 9 were due only to new workers, then each new worker earned \$2,000 dollars per month ( $\$242/.121$ ). Using the same logic, the results in quarter 9 imply that new workers earned an average hourly wage of about \$12 ( $\$242$  increase in earnings allocated across the 20-hour increase in work effort, that is,  $\$242/20$ ), considerably above the British Columbia statutory minimum wage of \$7.

Table 5 presents more detail on the distributions of wages and hours in the 25<sup>th</sup> month of the follow-up period, the latest month for which information is available for all 30-month respondents. In that month, 12.5 percent more program group members than control group members were working. SSP's impact on jobs that paid wages between \$7 and \$8 per hour was nearly 40 percent of the impact on employment ( $4.8/12.5 = 38$  percent).<sup>29</sup> An equally large proportion of the impact on wages occurred at wages of \$10 or more per hour ( $4.7/12.5 = 37$  percent), or \$3 or more above the minimum wage. Thus, SSP resulted in both increases in low-wage jobs and increases in relatively high-wage jobs.

The second panel of Table 5 presents the distribution of weekly hours worked and the program's impacts on weekly hours worked. Not only did SSP increase employment, but it increased employment at all levels of work effort that would qualify a program group member for supplement payments. The impact on the number of people working the minimum level of 30 hours per week was about 20 percent of the total employment impact ( $2.5/12.5$ ). Similar calculations reveal that the impact on working 31–39 hours is between 35 and 40 percent of the total employment impact ( $4.8/12.5$ ), as is the impact on working 40 or more hours per week ( $4.4/12.5$ ). The last finding is worth noting. In particular, even though SSP provided little incentive to work more than 30 hours per week, the supplement offer increased the number of people working overtime.

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<sup>29</sup>Note that some people receiving SSP may actually have held two or more jobs.

**Table 5: SSP Impacts on the Distribution of Hourly Wages and Weekly Hours Worked, Month 25 in the Applicant Study**

<b>Outcome</b>	<b>Program Group</b>	<b>Control Group</b>	<b>Difference (Impact)</b>	<b>Standard Error</b>
<b>Hourly wage rate (% in each category)</b>				
Not working	45.7	58.3	-12.5 ***	(1.9)
Wage unreported <sup>a</sup>	5.0	5.9	-0.9	(0.8)
Less than \$6.00	2.9	2.5	0.4	(0.6)
\$6.00-6.99	1.3	0.8	0.4	(0.4)
\$7.00-7.99	10.1	5.2	4.8 ***	(1.0)
\$8.00-8.99	5.3	3.5	1.8 **	(0.8)
\$9.00-9.99	4.3	3.0	1.3 *	(0.7)
\$10.00-14.99	14.1	12.3	1.8	(1.3)
\$15.00 or higher	11.5	8.5	2.9 ***	(1.1)
<b>Hours worked per week (% in each category)</b>				
Not working	45.7	58.3	-12.5 ***	(1.9)
Hours per week unreported <sup>a</sup>	1.7	1.9	-0.2	(0.5)
Fewer than 30	12.5	11.5	1.0	(1.2)
30	6.0	3.5	2.5 ***	(0.8)
31-34	2.5	0.8	1.6 ***	(0.5)
35	6.1	3.9	2.2 ***	(0.8)
36-39	5.4	4.4	1.0	(0.8)
40	13.5	10.6	2.9 **	(1.2)
More than 40	6.8	5.2	1.5 *	(0.9)
<b>Sample size (total = 2,582)</b>	<b>1,422</b>	<b>1,430</b>		

**Source:** Calculations from 30-month applicant 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 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup>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.

### ***Impacts on income, poverty, and net public expenditures***

The results so far indicate that SSP increased average monthly earnings by substantially more than it increased average cash assistance payments (\$242 versus \$58). Because SSP supplement takers must pay payroll taxes on their earnings and income taxes on both their earnings *and* their supplement payments, the net effect of SSP on after-tax transfer payments (cash payments minus tax receipts) is smaller than the effect on cash payments alone. Table 6 summarizes the effect of the program on cash payments, income, and projected taxes. Earnings, IA amounts, and SSP payments are averaged over the six-month period prior to the 30-month survey. Taxes and tax credits are imputed for each participant, on the basis of income data for this six-month period; they are thus different from previous outcomes presented in this report, which are based on either administrative records or survey responses.

On average over this period, SSP increased earnings by \$223 per month and increased cash payments by \$57 per month (\$154 more in supplement payments, offset by \$97 less in IA payments). It also increased projected income taxes by \$78 per month and reduced other

transfer payments by \$5 per month. On balance, then, SSP generated a small savings in net transfer payments.

**Table 6: SSP Impacts on Monthly Income and Net Transfer Payments in the Applicant Study**

<b>Outcome</b>	<b>Program Group</b>	<b>Control Group</b>	<b>Difference (Impact)</b>	<b>Standard Error</b>
<b>Sources of individual income (\$)</b>				
Earnings	836	613	223 ***	(39)
SSP supplement payments	154	0	154 ***	(8)
IA payments	352	449	-97 ***	(17)
Other transfer payments <sup>a</sup>	240	245	-5	(8)
Other unearned income <sup>b</sup>	129	146	-17	(11)
<b>Projected taxes and net transfer payments</b>				
Projected income taxes <sup>c</sup>	193	115	78 ***	(11)
Net transfer payments (i.e., public expenditures on SSP, IA payments, and other transfers, net of income tax revenue)	571	600	-29	(26)
<b>Total individual and family income</b>				
Total individual income (\$)	1,722	1,470	252 ***	(36)
Total individual income net of taxes (\$)	1,529	1,355	174 ***	(28)
Total family income (\$) <sup>d</sup>	1,972	1,686	286 ***	(47)
Percentage with income below the low income cut-off <sup>e</sup>	57.2	68.5	-11.3 ***	(2.0)
<b>Sample size (total = 2,852)</b>	<b>1,422</b>	<b>1,430</b>		

**Sources:** Calculations from 30-month applicant follow-up survey data, IA administrative records, and payments from SSP's Program Management Information System (PMIS).

**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 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup>Includes the Child Tax Benefit, the Goods and Services Tax Credit, unemployment insurance, and provincial tax credits.

<sup>b</sup>Includes alimony, child support, income from roomers and boarders, and other reported income.

<sup>c</sup>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.

<sup>d</sup>Family income is measured by the sum of the sample member's income plus the labour earnings of any other members in that person's family.

<sup>e</sup>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.

Even though increases in taxes and reductions in Income Assistance more than offset SSP supplement payments, participants gained \$174 per month in after-tax income. The SSP program likewise reduced the proportion of families in poverty (income below Statistics Canada's low income cut-off) by more than 11 percentage points. Thus, SSP increased earnings and income and reduced poverty, all while reducing net government transfer payments. Of course, these simple calculations apply only to the six-month period preceding the interview; they also ignore other elements of government cost, such as administrative costs and the costs of child-care subsidies.

## Comparisons with the SSP Recipient Study

As was indicated in the Introduction, several interesting questions can be addressed by comparing results from the applicant study with results from the recipient study. This section presents three comparisons: (1) impacts per applicant compared with impacts per recipient; (2) impacts per eligible applicant program group member compared with impacts per recipient; and (3) impacts per eligible applicant program group member compared with impacts for a group of short-term recipients in the recipient study. The comparisons answer different questions.

### ***Comparison 1: Effects of an ongoing program compared with effects of a new program***

As discussed in the Introduction, if a program like SSP were implemented nationally, all new welfare recipients would be informed of their potential eligibility when they applied for welfare but would not become eligible until they had been on welfare for a year. In contrast, long-term recipients would be eligible immediately. Thus, a newly implemented program like SSP would initially enrol participants who were similar to the sample members in the recipient study. Results from the recipient study are therefore our best estimates of the effects of a program like SSP at its inception, while results from the applicant study provide our best estimate of the ongoing impacts in an established earnings supplement program. It is therefore informative to compare impacts among all applicants with impacts among all recipients.

There is no reason to expect impacts for the applicant and recipient studies to be the same. For one thing, the samples were chosen differently. Because of their shorter welfare histories, members of the applicant study were probably more “job-ready” than members of the recipient study and hence may have been better able to respond to SSP’s incentives. On the other hand, only 60 percent of the program group members in the applicant study sample became eligible for the supplement, whereas all program group members in the recipient study were eligible when they entered the study. On balance, it is not possible to predict whether SSP’s impacts would be larger in the recipient study or in the applicant study. The two other comparisons in this section adjust for these differences in sample composition.

### ***Comparison 2: Impacts per eligible program group member***

Because only 60 percent of applicant program group members were eligible for the SSP supplement, impacts in the applicant study would be only 60 percent as large as impacts in the recipient study if sample members of the applicant and recipient studies were otherwise comparable. In the second comparison, *impacts per eligible program group member* in the two studies are compared. Because program group members in the recipient study were eligible for the supplement at random assignment, the impacts from the recipient study are the same as impacts per eligible program member. In the applicant study, impacts per eligible program group member are obtained by dividing impacts by the proportion of the applicant program group that was eligible for the supplement: 0.594.

### ***Comparison 3: Validating results for the applicant study***

Even after the impacts per eligible program group member are compared, the samples of the two studies are quite different. Eligible applicants had been on welfare for a year when

they established eligibility for the supplement, but most members of the recipient study had been on welfare much longer than a year at random assignment. To make the samples comparable, the third comparison focuses on members of the recipient sample who had been on welfare about a year at the time of random assignment. By showing, for each study, impacts per eligible program group member who had been on welfare about a year when becoming eligible for the supplement, this comparison presents one means of judging whether the impacts in the applicant study could be replicated using a different group of applicants.

### *Comparisons of impacts using the full applicant and recipient samples*

The analysis begins with a comparison of impacts using the entire applicant sample with impacts using the entire recipient sample from British Columbia. As is discussed above, this comparison should provide policy-makers with valuable information about immediate and longer-term costs and benefits of an earnings supplement program designed to encourage self-sufficiency among welfare recipients.

Comparisons between the applicant results and recipient results are summarized in Table 7. Columns 1 and 2 of the table summarize the overall impacts of the applicant and recipient studies on a variety of outcomes, and column 3 shows the differences in impacts between the two studies. The impacts pertain to the six-month period before the 30-month interview for applicants and the 18-month interview for recipients.<sup>30</sup>

The results in the first three columns of Table 7 imply that the effects of both an ongoing SSP program and an SSP program at its inception are not only large and positive but also similar in many respects. The impact on employment in the applicant study is 12.2 percentage points, for example, while the impact in the recipient study is 11.7 percentage points. The impacts on hours worked, on the probability of IA receipt, and on the likelihood of receiving either Income Assistance or SSP are all similar, as is the reduction in the number of families with income below Statistics Canada's low income cut-off.

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<sup>30</sup>Because applicants had to remain on Income Assistance a year before becoming eligible to receive SSP supplement payments, these six-month periods represent similar lengths of time after participants could have first received supplement payments.

**Table 7: Comparisons of Unadjusted Program Impacts on Employment, Transfer Payments, and Income Between Applicant and Recipient Studies**

Outcome	Applicants vs. All Recipients			Applicants vs. All Recipients Using Applicant Impacts per Eligible Program Group Member			Applicants vs. Short-Term Recipients Using Applicant Impacts per Eligible Program Group Member		
	Impact per Applicant	Impact per Recipient	Difference	Impact per Eligible Applicant <sup>a</sup>	Impact per Recipient	Difference	Impact per Eligible Applicant <sup>a</sup>	Impact per Short-Term Recipient	Difference
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Employed (%)	12.2 ***	11.7 ***	0.5	20.5 ***	11.7 ***	8.9 ***	20.5 ***	15.7 ***	4.8
Employed full time (%) <sup>d</sup>	12.2 ***	13.8 ***	-1.6	20.4 ***	13.8 ***	6.7 **	20.4 ***	13.3 ***	7.1
Average monthly hours	19 ***	19 ***	0	32 ***	19 ***	12 **	32 ***	19 ***	12
Average monthly earnings (\$)	223 ***	140 ***	84 *	376 ***	140 ***	236 ***	376 ***	118	258 **
Receiving Income Assistance or SSP (%)	-10.9 ***	-10.5 ***	-0.4	-18.3 ***	-10.5 ***	-7.8 **	-18.3 ***	-8.1 *	-10.2 *
Average IA payments (\$)	-97 ***	-105 ***	8	-163 ***	-105 ***	-58 *	-163 ***	-60	-104 *
Average IA + SSP payments (\$)	57 ***	91 ***	-34	96 ***	91 ***	5	96 ***	204 ***	-108 **
Average income tax (\$) <sup>c</sup>	78 ***	52 ***	26 **	131 ***	52 ***	79 ***	131 ***	61 ***	70 ***
Average net transfer (IA + SSP + other transfers - taxes) (\$) <sup>d</sup>	-29	31 *	-60 *	-48	31 *	-79 *	-48	126 **	-174 **
Average net individual income (\$) <sup>e</sup>	174 ***	167 ***	8	293 ***	167 ***	127 **	293 ***	250 ***	43
Income below the low income cut-off (%) <sup>f</sup>	-11.3 ***	-11.5 ***	0.2	-19.0 ***	-11.5 ***	-7.5 **	-19.0 ***	-10.7 **	-8.3
<b>Sample size</b>	<b>2,852</b>	<b>2,766</b>		<b>2,852</b>	<b>2,766</b>		<b>2,852</b>	<b>344</b>	

**Sources:** Calculations from 30-month applicant follow-up survey data, 18-month recipient follow-up survey data, IA administrative records, and payment records from SSP's Program Management Information System (PMIS).

**Notes:** For applicants, impacts pertain to the six-month period before the 30-month follow-up interview. For recipients, impacts pertain to the six-month period before the 18-month follow-up interview.

"Recipients" are British Columbia sample members from the recipient study who responded to the 18-month follow-up survey.

"Short-term recipients" are defined as British Columbia sample members from the recipient study who did not receive IA payments in months 14 to 17, 15 to 18, or 16 to 19 before random assignment.

Two-tailed t-tests were applied to impact estimates and to differences in impact estimates. Statistical significance levels are indicated as: \* = 10 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup> "Impact per eligible applicant" is the impact for applicants divided by the SSP eligibility rate among program group members (0.594).

<sup>b</sup> "Full-time employment" is defined as working 30 hours or more in at least one week during the month.

<sup>c</sup> 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.

<sup>d</sup> Average monthly public expenditures on SSP, IA payments, and other transfers (Child Tax Benefit, Goods and Services Tax Credit, UI (EI) benefit, and provincial tax credits), net of projected tax revenue.

<sup>e</sup> Net individual income includes earnings, Income Assistance, and SSP payments, as well as all other sources of individual cash income (tax credits, alimony and child support, etc.), net of projected tax revenue.

<sup>f</sup> Calculated by comparing annualized family income (individual pre-tax income plus earnings of other family members) with the low income cut-off defined by Statistics Canada for the sample member's location and family size.

Although impacts for applicants and recipients are similar, there are some notable differences. First, SSP has a greater effect on the earnings of applicants than on earnings of recipients. This finding may reflect the larger number of high school graduates and people with recent work experience in the applicant sample. Second, as a consequence of the higher impact on earnings in the applicant sample, the program's impact on income taxes is also higher in the applicant sample. Another way of viewing this impact is shown in the comparison of net transfer payments. While SSP increased monthly net transfer payments by \$31 in the recipient sample, it reduced monthly net transfer payments in the applicant sample. Thus, an ongoing program may have larger impacts on earnings and tax payments than a program at its inception and may actually decrease net transfer payments.

### ***Impacts per Eligible Applicant***

One way to account for the fact that only 60 percent of applicant program group members were eligible for SSP is to construct impacts *per eligible program group member* for the applicant study. This is done by dividing the program impact by the proportion of the program group eligible for SSP (59.4 percent).<sup>31</sup> As a result, impacts per eligible program group member are based on experimental comparisons of the entire program group and entire control group, not on direct comparisons of average outcomes for eligible program group members and eligible control group members. Such direct comparisons would not be appropriate since the eligible program and control groups differ in composition because of SSP's modest entry effect.

The use of impacts per eligible program group member is appropriate if ineligible program group members did not change their behaviour (in the six months prior to the interview) in response to the availability of SSP benefits. Although it is plausible that the SSP program had no effect on the behaviour of the 40 percent of ineligible program group members, such an effect cannot be ruled out *a priori*. For example, some members of the program group could have changed their behaviour in earlier months of the study in an effort to become SSP-eligible (say, by turning down a job opportunity), but could still have left Income Assistance before the 12<sup>th</sup> month of the study. This earlier change could then have led to differences in outcomes later in the study among sample members in the ineligible subset of the program group. Because such changes cannot be ruled out, impacts *per* eligible applicant program group member are not necessarily the same as impacts *among* eligible applicant program group members.

With this caveat in mind, columns 4 through 6 of Table 7 compare the impacts per eligible program group member in the applicant study with the impacts in the recipient study. Note that the entries of column 4 are simply the entries of column 1 divided by 0.594, the proportion of program group members who were eligible.

According to Table 7, most impacts per eligible program group member in the applicant sample are substantially larger in magnitude than impacts in the recipient study. For example, full-time employment increased by 13.8 percentage points in the recipient study,

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<sup>31</sup>This idea is borrowed from the evaluation of the *Job Training and Partnership Act* (JTPA), which reported "impacts per enrollee." The idea of impacts per enrollee is discussed in Bloom, April 1984, pp. 225–46. A key assumption is that the reasons why "no-shows" do not show up are unrelated to the experiment or its policies.

but increased by 20.4 percentage points per eligible applicant program group member. The effect of the change to impacts “per eligible program group member” is most remarkable for monthly earnings. The earnings impact per eligible applicant program group member was \$376 per month, versus an impact of only \$140 per month in the recipient study. As a result of the large difference in the earnings impacts, there are also large differences in the impacts on net income and the proportion of families with income below Statistics Canada’s low income cut-off, shown in the last two rows of the table. Net income increased by \$293 per month per eligible applicant program group member, while the impact on net income is only \$167 among recipients. While the proportion of families with low income was reduced by 11.5 percentage points in the recipient study, it was reduced by 19.0 percentage points per eligible applicant program group member.

In an effort to better understand this large gap in earnings impacts, Table 8 reports a comparison of the impacts on the distributions of hourly wages and hours worked per week, using data from the 14<sup>th</sup> month after most people could have initiated supplement payments (month 14 in the recipient study and month 25 in the applicant study). For simplicity, only the impacts per eligible program group member from the applicant study and impacts per recipient from the recipient study (columns 4, 5, and 6 in the table) are discussed. This table makes clear that the much higher earnings impact in the applicant study is due to two factors. First, the applicant study had a larger impact (per eligible program group member) on the probability of employment 14 months after SSP-eligibility determination (21.1 percentage-point impact versus 14.2 percentage-point impact). Second, program group members in the applicant study who responded to SSP’s incentives managed to earn wages much higher than members of the recipient study who responded to the incentives. Per eligible program group member in the applicant study, there was a 7.9 percentage-point increase in the proportion of jobs paying more than \$3 above the minimum wage; the impact in the recipient study was a modest 1.4 percentage points.

The difference in earnings impacts could also have stemmed from differences in the impacts on hours worked per week. The second panel of Table 8 indicates that this difference is relatively unimportant. As was discussed earlier, the employment gains attributable to SSP in the applicant study were distributed among people working the minimum level of 30 hours per week (about 20 percent of the impact on employment), people working 31–39 hours per week (about 38 percent of the impact on employment), and people working 40 or more hours per week (about 35 percent of the increase in employment). The changes in the hours distributions of the jobs due to SSP in the recipient study are comparable: 27 percent at 30 hours per week (3.8/14.2), 45 percent between 31 and 39 hours per week (6.4/14.2), and 38 percent at 40 hours or more per week (5.4/14.2).

**Table 8: Comparisons of Unadjusted Program Impacts on the Distribution of Wages and Hours Between Applicant and Recipient Studies**

Outcome	Applicants vs. All Recipients Using Applicant Impacts per Eligible Program Group Member						Applicants vs. Short-Term Recipients Using Applicant Impacts per Eligible Program Group Member		
	Applicants vs. All Recipients			Impact per Eligible Applicant <sup>a</sup>	Impact per Recipient	Difference	Impact per Eligible Applicant <sup>a</sup>	Impact per Short-Term Recipient	Difference
	Impact per Applicant (1)	Impact per Recipient (2)	Difference (3)	(4)	(5)	(6)	(7)	(8)	(9)
<b>Hourly wage rate (% in each category)</b>									
Not working	-12.5 ***	-14.2 ***	1.6	-21.1 ***	-14.2 ***	-6.9 *	-21.1 ***	-18.6 ***	-2.5
Wage unreported <sup>d</sup>	-0.9	-0.7	-0.2	-1.5	-0.7	-0.8	-1.5	0.9	-2.4
Less than minimum wage <sup>c</sup>	0.9	0.1	0.8	1.5	0.1	1.4	1.5	-1.5	2.9
Minimum to \$.99 above minimum	4.8 ***	6.9 ***	-2.1	8.1 ***	6.9 ***	1.2	8.1 ***	10.4 ***	-2.3
\$1.00-\$1.99 above minimum	1.8 **	4.6 ***	-2.8 **	3.0 **	4.6 ***	-1.6	3.0 **	3.0	0.0
\$2.00-\$2.99 above minimum	1.3 *	1.9 ***	-0.6	2.2 *	1.9 ***	0.3	2.2 *	4.4 **	-2.3
\$3.00 or more above minimum	4.7 ***	1.4	3.3 *	7.9 ***	1.4	6.5 **	7.9 ***	1.3	6.5
<b>Hours worked per week (% in each category)</b>									
Not working	-12.5 ***	-14.2 ***	1.6	-21.1 ***	-14.2 ***	-6.9 *	-21.1 ***	-18.6 ***	-2.5
Hours per week unreported <sup>b</sup>	-0.2	-0.1	-0.1	-0.3	-0.1	-0.3	-0.3	1.3	-1.7
Fewer than 30	1.0	-1.4	2.4	1.6	-1.4	3.1	1.6	0.6	1.0
30	2.5 ***	3.8 ***	-1.3	4.2 ***	3.8 ***	0.4	4.2 ***	3.9 *	0.3
31-34	1.6 ***	2.1 ***	-0.5	2.7 ***	2.1 ***	0.6	2.7 ***	3.9 *	-1.1
35	2.2 ***	3.2 ***	-1.0	3.7 ***	3.2 ***	0.5	3.7 ***	5.8 **	-2.1
36-39	1.0	1.1 **	-0.1	1.7	1.1 **	0.6	1.7	1.3	0.3
40	2.9 **	4.0 ***	-1.1	5.0 **	4.0 ***	0.9	5.0 **	1.4	3.5
More than 40	1.5 *	1.4 **	0.1	2.5 *	1.4 **	1.1	2.5 *	0.3	2.2
<b>Sample size</b>	<b>2,852</b>	<b>2,766</b>		<b>2,852</b>	<b>2,766</b>		<b>2,852</b>	<b>344</b>	

**Sources:** Calculations from 30-month applicant follow-up survey data and 18-month recipient follow-up survey data.

**Notes:** Percentages are for the 14<sup>th</sup> month after SSP eligibility determination. For applicants, this is the 25<sup>th</sup> month of the follow-up period, which ranges from February 1996 to February 1997. For recipients, this is the 14<sup>th</sup> month of the follow-up period, which ranges from February 1994 to March 1996.

"Recipients" are British Columbia sample members from the recipient study who responded to the 18-month follow-up survey. "Short-term recipients" are defined as British Columbia sample members from the recipient study who did not receive IA payments in months 14 to 17, 15 to 18, or 16 to 19 before random assignment.

Two-tailed t-tests were applied to impact estimates and differences in impact estimates. Statistical significance levels are indicated as: \* = 10 percent; \*\* = 5 percent; \*\*\* = 1 percent. Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup>"Impact per eligible applicant" is the impact for applicants divided by the SSP eligibility rate among program group members (0.594).

<sup>b</sup>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.

<sup>c</sup>>From April 1993 until March 1995 the minimum wage was \$6.00 per hour. In March 1995, it was increased to \$6.50, and in October 1995 it was increased again to \$7.00 per hour, where it remained until April 1998.

## *Narrowing the Comparison*

How much of the difference in impacts between the applicant and recipient studies is due to the differences in characteristics of the samples in the two studies? As discussed earlier, the selection criteria of the two studies means that the recipient sample includes many long-term IA recipients, while the applicant sample is made up of people who had just started a new spell of Income Assistance. It is not clear what these characteristics imply about the relative impacts in the two studies. On the one hand, the applicant sample is more job-ready than the recipient sample, suggesting possibly greater impacts. On the other hand, a larger proportion of the applicant sample would be expected to return to work more quickly in the absence of SSP, suggesting smaller impacts in the applicant study.

Fortunately, the recipient sample contains a group of people who had been on Income Assistance for only about a year at the time of random assignment. By identifying and studying the behaviour of these “short-term” recipients, one can compare the effects of the applicant and recipient studies for relatively comparable people. The ideal would be to identify recipients who would satisfy the eligibility criteria of the applicant study.<sup>32</sup> Single parents who had recently applied for Income Assistance were eligible for the applicant study if they had not received welfare in the six months prior to their most recent application. In practice, few members of the applicant study received Income Assistance in the fourth through seventh months prior to random assignment. A comparable selection rule for the recipient sample would require no receipt of Income Assistance in the 15<sup>th</sup> through 18<sup>th</sup> months prior to random assignment. With this criterion, a total of 264 “short-term” recipients were identified — some 10 percent of the B.C. recipient sample.<sup>33</sup> The number of short-term recipients was then expanded to include those who had not received Income Assistance in the 16<sup>th</sup> through 19<sup>th</sup> months prior to random assignment or in the 14<sup>th</sup> through 17<sup>th</sup> months prior to random assignment. This more inclusive definition increased the sample to 352 short-term recipients.

Use of this selection rule generates a sample of short-term recipients whose characteristics and welfare histories are remarkably similar to those of eligible applicant control group members. Figure 6 shows the IA receipt rates for control group members of the full recipient sample, the short-term recipient sample, the full applicant sample, and the eligible applicant sample.<sup>34</sup> For the applicant groups, the time interval covered in the figure begins 12 months prior to random assignment and runs to 36 months after random assignment. A comparable time interval for groups in the recipient sample begins 23 months prior to random assignment and runs to 25 months after.

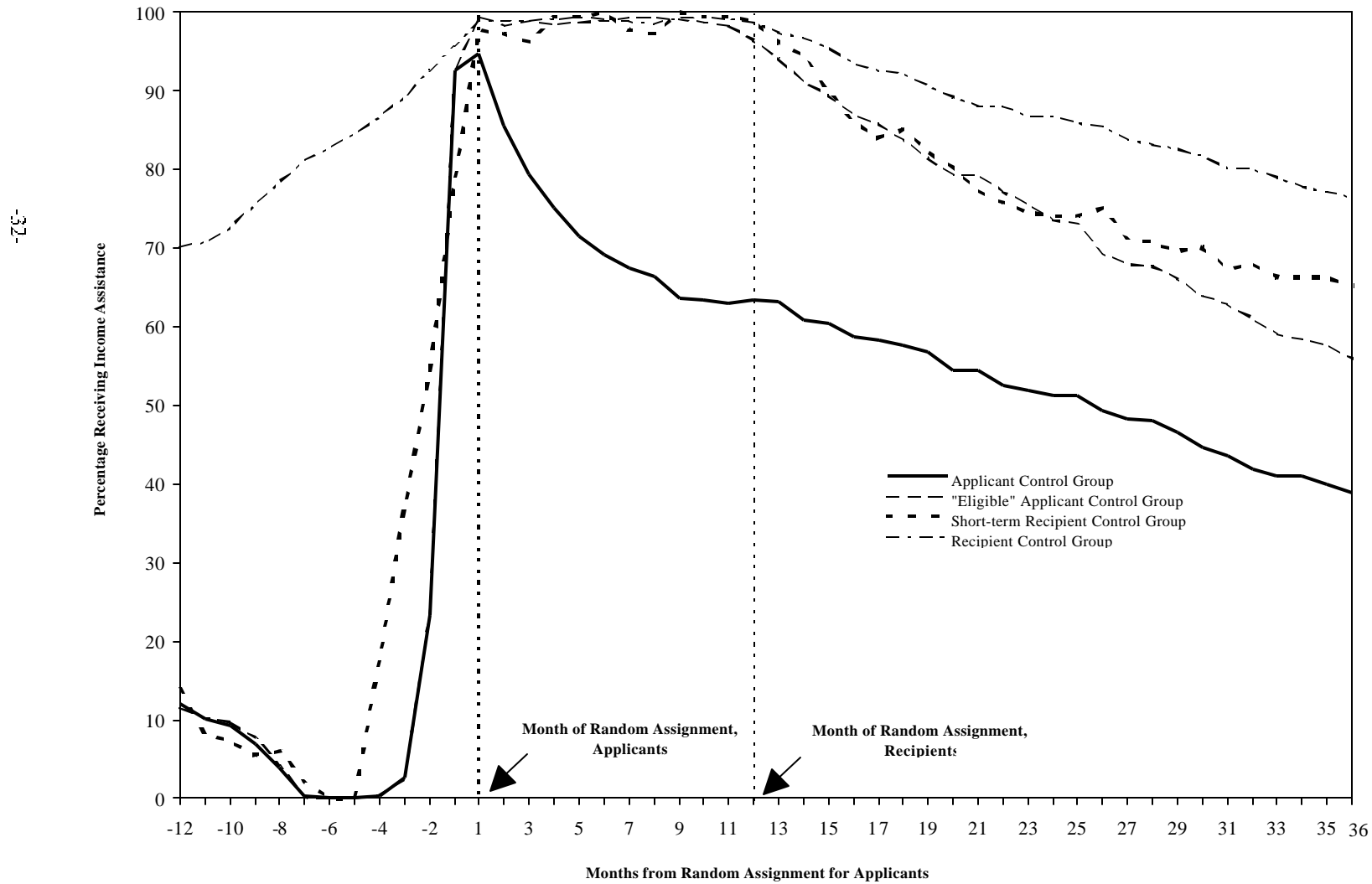
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<sup>32</sup>Recent research on sample selectivity models has underscored the importance of making comparisons based on the probability of satisfying the appropriate selection criteria (see, for example, Heckman et al., 1998, and Rosenbaum and Rubin, 1983). Although the rule used to select the comparison sample of short-term recipients was not exactly the same as the rule used to select the applicant sample, the differences are relatively minor.

<sup>33</sup>An initial, stricter condition of no IA receipt in the 15<sup>th</sup> through 20<sup>th</sup> months prior to random assignment produced a smaller sample of 246 individuals. Use of this smaller sample yielded comparisons similar to those reported here.

<sup>34</sup>Only the control groups are depicted because the composition of the eligible program group might be affected by SSP’s modest entry effect.

**Figure 6: Monthly Rates of Receiving Income Assistance, British Columbia Applicant and Recipient Samples**



Sources: Calculations from 30-month follow-up survey data and 18-month follow-up survey data.

The figure verifies what has already been shown: the time patterns for the overall applicant and recipient control groups are quite different. The overall recipient control group includes many long-term IA recipients who have much higher rates of IA participation before and after the 12-month period of IA receipt that establishes SSP eligibility (the period from months 1–12 for applicants highlighted in the figure). In fact, some 70 percent of the overall recipient control group was receiving Income Assistance 23 months prior to random assignment (month -23 for recipients, which corresponds to month -12 for applicants on the graph). Because the recipient group was chosen from people who had received Income Assistance for 12 of the 13 months leading up to random assignment, nearly 100 percent of the overall recipient group was on Income Assistance during months 1–12 on the graph. The overall applicant control group, on the other hand, includes many people who left Income Assistance after only a couple of months. Only about 60 percent of this group was still on Income Assistance a year after random assignment.

Figure 6 also indicates that the attempt to choose a recipient group comparable with the eligible applicant control group was fairly successful. The proportion receiving Income Assistance is strikingly similar through month -5. Subsequently, there is a steep rise in the proportion receiving Income Assistance, culminating in a period between months 1 and 12 in which virtually 100 percent of both groups were on Income Assistance. After month 12 (the month of random assignment for recipients), the two groups show similar declines in IA receipt.

Figures 7 and 8 graph the employment and earnings outcomes of the four control group samples starting in the month of random assignment for applicants and 11 months prior to random assignment for recipients. Employment and earnings are by far the highest for the overall applicant control group, which includes very short-term IA recipients who have relatively high employment rates and earnings. Compared with the overall applicant control group, employment and earnings for eligible applicant control group members are much closer to employment and earnings for recipients, however, especially for the short-term recipient group. While employment rates for the overall applicant group increased from about 27 percent to nearly 45 percent, employment among eligible applicant control group members and short-term recipients range together between about 15 and 30 percent. Similar comparisons can be made for earnings of the four groups.

On the basis of these comparisons of the outcomes of the *control groups*, the short-term recipient sample appears to be fairly similar to the group of eligible applicants. As a further check, the personal characteristics of the short-term recipient control group and the eligible applicant control group were compared. The results, summarized in Table 9, show some differences between the samples. The eligible applicant control group has fewer high school dropouts and fewer never-married single parents, suggesting that this group may be slightly more advantaged. On balance however, the differences are not large.

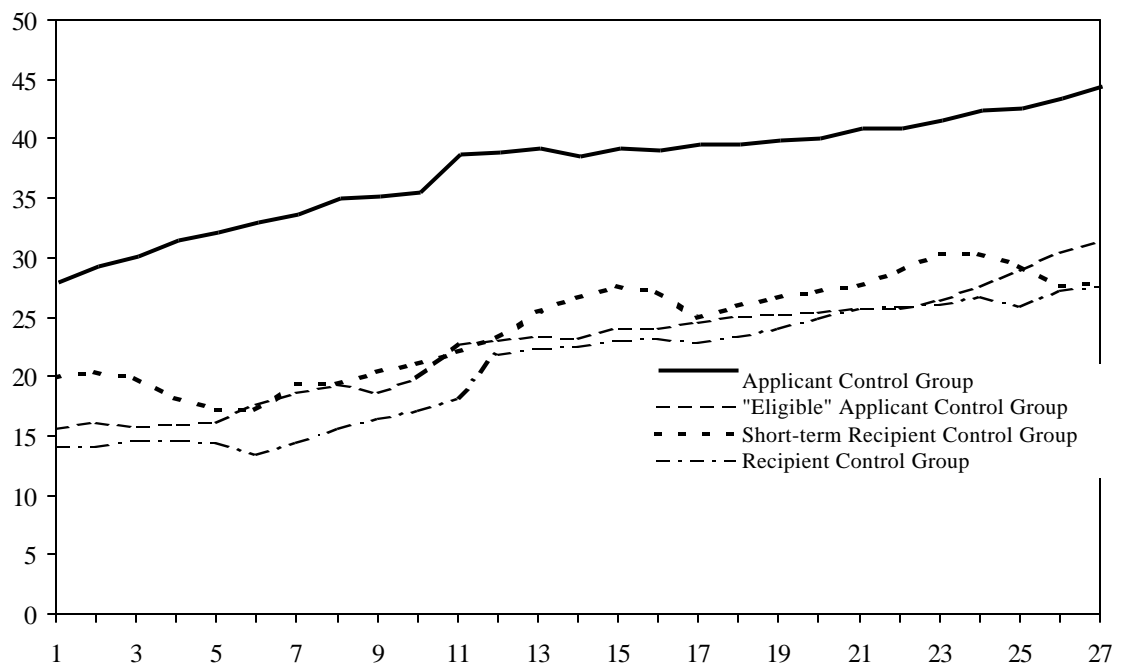
Returning to Table 7, columns 7, 8, and 9 show the SSP impacts per eligible applicant, impacts for short-term recipients, and the differences between the two.<sup>35</sup> Overall,

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<sup>35</sup>In the next two paragraphs, the phrase “impacts *per* eligible applicant” is used to emphasize that these are nonexperimental estimates calculated by dividing impacts among all respondents to the 30-month interview by the proportion of the program group that was eligible for SSP supplement payments. The phrase “impacts *for* (or *among*) short-term recipients”

the impacts per eligible applicant tend to be larger in magnitude than impacts for short-term recipients, and half the differences in impacts are statistically significant. Perhaps the most important differences are in earnings and net transfer payments. SSP's impact on monthly earnings per eligible applicant program group member is more than three times as high as the impact on monthly earnings for short-term recipients (\$376 versus \$118). Moreover, the impact per eligible applicant program group member on monthly payments from either IA or SSP supplements is \$108 less than the comparable impact among short-term recipients. The combination of modest impact on total IA and SSP payments and large impact on earnings in the applicant study resulted in lower net public expenditures per eligible applicant program group member. Among short-term recipients, in contrast, estimated tax collections fall well short of the increased transfer costs, leading to a \$126 per month increase in average net transfers.

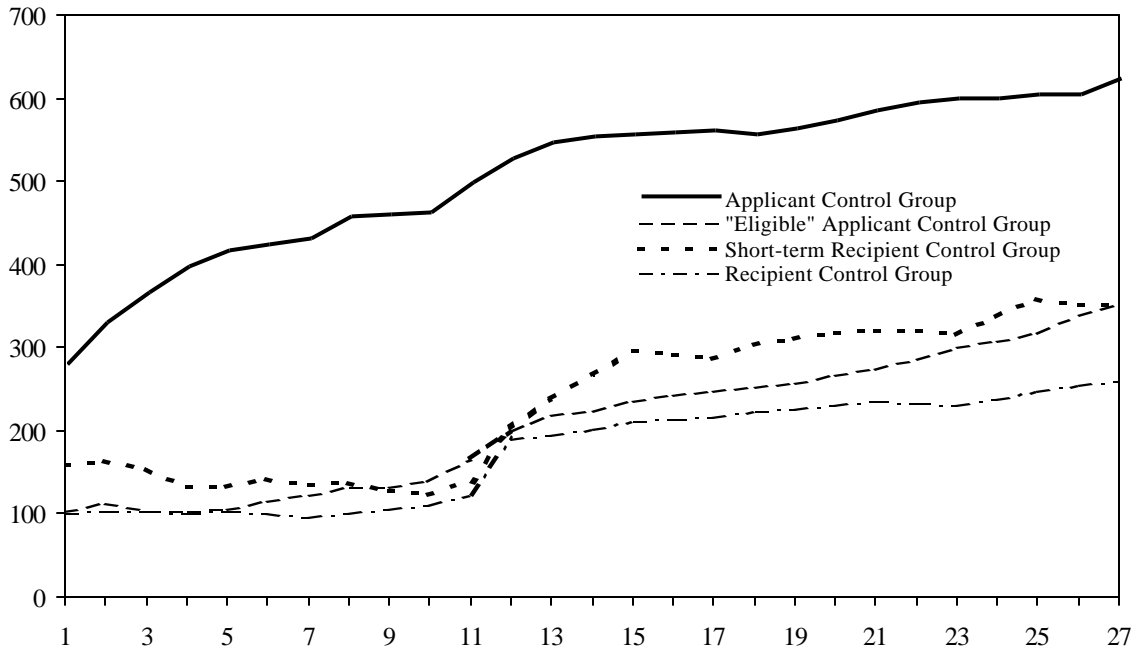
**Figure 7: Average Monthly Employment Rate, British Columbia Applicant and Recipient Samples**



Sources: Calculations from 30-month follow-up survey data and 18-month follow-up survey data.

is used to emphasize that these are experimental estimates calculated as the difference in average outcomes between program and control group members.

**Figure 8: Average Monthly Earnings, British Columbia Applicant and Recipient Samples**



**Sources:** Calculations from 30-month follow-up survey data and 18-month follow-up survey data.

**Table 9: Characteristics of “Eligible” Applicants vs. Short-Term Recipients, Control Group Members Only**

Baseline Characteristic	Eligible Applicant Control Group	Short-Term Recipient Control Group	Difference	Standard Error
<b>IA history</b>				
Average number of months of prior IA receipt <sup>a</sup>	1.9	2.3	-0.4	(0.3)
Average monthly IA payment at random assignment (\$) <sup>b</sup>	1,026	851	176 ***	(28)
<b>Work history</b>				
Ever worked for pay (%)	95.9	95.6	0.3	(1.7)
Worked in month before SSP eligibility determination (%) <sup>c</sup>	22.8	22.1	0.7	(3.5)
<b>Personal characteristics</b>				
Female (%)	94.1	92.8	1.3	(2.0)
Under age 25 (%)	17.2	21.5	-4.3	(3.2)
Less than high school education (%)	42.6	51.9	-9.3 **	(4.1)
High school graduate, no post-secondary education (%)	38.1	27.6	10.5 ***	(4.0)
Some post-secondary education (%)	19.3	20.4	-1.1	(3.3)
First Nation ancestry (%)	9.1	9.4	-0.3	(2.4)
Immigrant (%)	36.9	28.9	8.0 **	(3.9)
Physical limitation (%)	19.3	17.1	2.1	(3.2)
Emotional limitation (%)	8.4	3.3	5.0 **	(2.2)
<b>Family structure</b>				
Average number of children (up to age 18)	1.6	1.6	0.0	(0.1)
Never married (%)	26.7	34.8	-8.1 **	(3.7)
<b>Sample size (total = 976)</b>	<b>795</b>	<b>181</b>		

**Sources:** Calculations from applicant and recipient baseline survey data, 12-month applicant follow-up survey data, 30-month applicant follow-up survey data, and IA administrative records.

**Notes:** "Short-term recipients" are defined as British Columbia sample members from the recipient study who did not receive IA payments in months 14 to 17, 15 to 18, or 16 to 19 before random assignment.

Sample sizes vary for individual measures because of missing values.

Two-tailed t-tests were applied to differences in baseline characteristics between eligible applicant and short-term recipient control groups. Statistical significance levels are indicated as: \* = 10 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup>For applicants, the number in the table is the average number of months of IA receipt in the 18 months before the six-month break preceding the IA spell that began at random assignment the 7<sup>th</sup> through 24<sup>th</sup> months before random assignment. For recipients, the number in the table is the average months of IA receipt in the 18<sup>th</sup> to 35<sup>th</sup> months before random assignment.

<sup>b</sup>For applicants, this is the average IA payment in the month of random assignment. For short-term recipients, this is the IA payment received in the 11<sup>th</sup> month before random assignment.

<sup>c</sup>For applicants, eligibility determination was at the 12<sup>th</sup> month of the follow-up period. For recipients, eligibility determination was at random assignment.

### *Adjusting for other differences in sample characteristics*

The short-term recipient sample was chosen because its welfare history was close to the welfare history among eligible control group members in the applicant sample. Nevertheless, there are some demographic differences between the two groups. Eligible control group applicants are more likely to have graduated from high school, to be immigrants, to have emotional limitations that keep them from working, and to have ever married. Perhaps these differences are responsible for the large impacts among eligible applicants.

To investigate the importance of differences in these other baseline characteristics, impacts were calculated again, and ordinary least squares regressions were used to adjust impacts for baseline characteristics. The resulting comparison is shown in Table 10.

Most differences in impacts remain fairly large. Nevertheless, regression adjustment generally reduced the impact per eligible applicant and increased the impact for short-term recipients. For example, regression adjustment lowered the estimated impact on monthly earnings from \$376 to \$345 per eligible applicant. Likewise, adjusting for demographic differences increased the estimated impact on monthly earnings among short-term recipients from \$118 to \$171. The resulting difference in impacts — \$174 per month — is not significantly different from zero at the 10 percent level. In fact, after regression adjustment, only the difference in impacts on after-tax transfer payments remains statistically significant. These results support the belief that the impacts in the applicant sample could be replicated among a different group of applicants.

### **Conclusion**

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 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 extend their length of stay on Income Assistance to become eligible for SSP, the financial incentive provided by the SSP supplement reduces IA benefits and increases tax payments by enough to keep total public expenditures at about the same level. Furthermore, the increased earnings resulting from increased full-time employment generates a large increase in total family income.

**Table 10: Comparison of Regression Adjusted SSP Impacts per Eligible Applicant and Short-Term Recipient**

	Impact per Eligible Applicant <sup>a</sup>	Impact per Short-Term Recipient	Difference
Employed (%)	19.3 ***	17.7 ***	1.6
Employed full time (%) <sup>b</sup>	19.2 ***	14.8 ***	4.3
Average monthly hours	29 ***	23 ***	6
Average monthly earnings (\$)	345 ***	171 *	174
Receiving Income Assistance (%)	-17.4 ***	-9.4 **	-8.0
Receiving Income Assistance or SSP (%)	11.5 ***	15.2 ***	-3.8
Average IA payments (\$)	-152 ***	-75	-77
Average IA + SSP payments (\$)	103 ***	188 ***	-85
Average income tax (\$) <sup>c</sup>	122 ***	73 **	49
Average net transfer (\$) (IA + SSP + other transfers - taxes) <sup>d</sup>	-30	98	-128 *
Average net individual income (\$) <sup>e</sup>	281 ***	267 ***	14
Income below the low income cut-off (%) <sup>f</sup>	-17.3 ***	-10.9 **	-6.4

**Sources:** Calculations from 30-month applicant follow-up survey data, 18-month recipient follow-up survey data, IA administrative records, and payment records from SSP's Program Management Information System (PMIS).

**Notes:** For applicants, impacts pertain to the six-month period before the 30-month follow-up interview. For recipients, impacts pertain to the six-month period before the 18-month follow-up interview.

The estimated impacts are derived from a regression model that includes 25 covariates, indicators for missing covariate values, an indicator for people in the program group, an indicator for people in the applicant sample, and an interaction of the program group indicator and the applicant sample indicator.

"Short-term recipients" are defined as British Columbia sample members from the recipient study who did not receive IA payments in months 14 to 17, 15 to 18, or 16 to 19 before random assignment.

Two-tailed t-tests were applied to impact estimates and to differences in impact estimates. Statistical significance levels are indicated as: \* = 10 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup>"Impact per eligible applicant" is the impact for applicants divided by the SSP eligibility rate among program group members (0.594).

<sup>b</sup>"Full-time employment" is defined as working 30 hours or more in at least one week during the month.

<sup>c</sup>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.

<sup>d</sup>Average monthly public expenditures on SSP, IA payments, and other transfers (Child Tax Benefit, Goods and Services Tax Credit, UI (EI) benefit, and provincial tax credits), net of projected tax revenue.

<sup>e</sup>Net individual income includes earnings, Income Assistance, and SSP payments, as well as all other sources of individual cash income (tax credits, alimony and child support, etc.), net of projected tax revenue.

<sup>f</sup>Calculated by comparing annualized family income (individual pre-tax income plus earnings of other family members) with the low income cut-off defined by Statistics Canada for the sample member's location and family size.

All the results presented in this report apply to the first two-and-a-half 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 the 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 SSP's 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 percent of people selected into the initial applicant project sample completed a baseline interview and signed an informed consent form agreeing to be part of the study.<sup>36</sup> 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 30-month follow-up survey, but the response rate for the program group was not statistically significantly different from the rate for the control group. Of the 1,648 program group members in the baseline research sample, 1,422 (86.3 percent) completed a 30-month follow-up survey. Thirty-month follow-up interviews were completed for 1,430 control group members (85.7 percent). These 2,852 respondents constitute the sample used in this report. Because the 464 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 30-month survey — are used to assess the likely magnitude of such biases.

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<sup>36</sup> According to the Statistics Canada interviewers, a main reason for nonresponse was that people had already left Income Assistance by the time they were contacted for their baseline interview. 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. By excluding these short-termers from the sample, estimates of impacts are likely to be overstated because none of these short-termers would have been likely to respond to the SSP offer.

## 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 percent of program group members and 96.3 percent of control group members had ever worked for pay; in the report sample, the corresponding figures are 97.2 percent and 96.9 percent, respectively.

### 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.<sup>37</sup> 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, less likely to be of First Nation ancestry, and less likely to report an activity-limiting emotional condition at the baseline interview.<sup>38</sup>

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 percent level. In general, however, non-response does not appear to have weakened the similarity between the program and control groups.

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<sup>37</sup>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.

<sup>38</sup>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.1: Characteristics of Baseline Research Sample Members in the Applicant Study — Program and Control Groups**

<b>Baseline Characteristic</b>	<b>Program Group</b>	<b>Control Group</b>	<b>Difference</b>	<b>Standard Error</b>
<b>IA history</b>				
Average number of months of Income Assistance in last two years	3.2	3.1	0.1	(0.1)
Average monthly IA payment at random assignment (\$)	928	939	-11	(13)
<b>Work history</b>				
Ever worked for pay (%)	97.0	96.3	0.7	(0.6)
Worked in month before random assignment (%)	23.2	22.2	1.1	(1.5)
<b>Personal characteristics</b>				
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 Nation 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)
<b>Family structure</b>				
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)
<b>Sample size (total = 3,316)</b>	<b>1,648</b>	<b>1,668</b>		

**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 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

**Table A.2: Characteristics of Report Sample Members — Program and Control Groups**

<b>Baseline Characteristic</b>	<b>Program Group</b>	<b>Control Group</b>	<b>Difference</b>	<b>Standard Error</b>
<b>IA history</b>				
Average number of months of Income Assistance in last two years	3.3	3.1	0.1	(0.1)
Average monthly IA payment at random assignment (\$)	919	930	-11	(14)
<b>Work history</b>				
Ever worked for pay (%)	97.2	96.9	0.3	(0.6)
Worked in month before random assignment (%)	24.6	23.6	1.0	(1.6)
<b>Personal characteristics</b>				
Female (%)	90.2	92.6	-2.4 **	(1.1)
Under age 25 (%)	15.2	14.6	0.6	(1.3)
Less than high school education (%)	35.2	36.8	-1.6	(1.9)
High school graduate, no post-secondary education (%)	42.8	40.3	2.5	(1.9)
Some post-secondary education (%)	22.0	22.9	-0.9	(1.6)
First Nation ancestry (%)	6.8	9.3	-2.5 **	(1.0)
Immigrant (%)	30.4	30.0	0.4	(1.7)
Physical limitation (%)	19.9	19.7	0.2	(1.5)
Emotional limitation (%)	5.7	8.1	-2.4 **	(1.0)
<b>Family structure</b>				
Average number of children (up to age 18)	1.5	1.6	0.0	(0.0)
Never married (%)	21.9	24.6	-2.7 *	(1.6)
<b>Sample size (total = 2,852)</b>	<b>1,422</b>	<b>1,430</b>		

**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 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

## 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 30-month survey.<sup>39</sup> 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, which is identical to Table 3 in the body of this report, shows estimated impacts on IA and supplement receipt for the report sample. It appears that

<sup>39</sup>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.

program group members who responded to the SSP offer were somewhat more likely to respond to the 30-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 it is estimated that SSP increased the percentage receiving Income Assistance in quarter 4 by 3.6 percentage points and reduced the percentage receiving Income Assistance in quarter 9 by 12.0 percentage points. Using the baseline research sample, 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 who move, 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 30-month survey introduced important biases into the impact estimates in this report.

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

<b>Outcome (monthly average)</b>	<b>Program Group</b>	<b>Control Group</b>	<b>Difference (Impact)</b>	<b>Standard Error</b>
<b>Receiving Income Assistance (%)</b>				
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	46.3	-10.8 ***	(1.6)
<b>Receiving either Income Assistance or SSP (%)</b>				
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	46.3	5.8 ***	(1.7)
<b>Average IA payments (\$/month)</b>				
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	515	-65 ***	(18)
Quarter 8	382	460	-78 ***	(17)
Quarter 9	321	414	-94 ***	(16)
<b>Average IA and SSP payments (\$/month)</b>				
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	515	41 **	(18)
Quarter 8	507	460	48 ***	(17)
Quarter 9	468	414	53 ***	(16)
<b>Sample size (total = 3,316)</b>	<b>1,648</b>	<b>1,668</b>		

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

**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 percent; \*\* = 5 percent; \*\*\* = 1 percent. 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**

<b>Outcome (monthly average)</b>	<b>Program Group</b>	<b>Control Group</b>	<b>Difference (Impact)</b>	<b>Standard Error</b>
<b>Receiving Income Assistance (%)</b>				
Quarter 1	87.6	86.6	1.0	(1.0)
Quarter 2	76.0	71.9	4.1 ***	(1.5)
Quarter 3	69.8	65.8	4.0 **	(1.7)
Quarter 4	66.9	63.3	3.6 **	(1.7)
Quarter 5	63.4	61.5	1.9	(1.7)
Quarter 6	54.5	58.3	-3.7 **	(1.8)
Quarter 7	48.5	55.2	-6.7 ***	(1.8)
Quarter 8	43.2	51.9	-8.7 ***	(1.8)
Quarter 9	37.7	49.6	-12.0 ***	(1.8)
<b>Receiving either Income Assistance or SSP (%)</b>				
Quarter 1	87.6	86.6	1.0	(1.0)
Quarter 2	76.0	71.9	4.1 ***	(1.5)
Quarter 3	69.8	65.8	4.0 **	(1.7)
Quarter 4	66.9	63.3	3.6 **	(1.7)
Quarter 5	65.1	61.5	3.7 **	(1.7)
Quarter 6	62.4	58.3	4.2 **	(1.8)
Quarter 7	60.3	55.2	5.0 ***	(1.8)
Quarter 8	57.8	51.9	5.9 ***	(1.8)
Quarter 9	56.0	49.6	6.4 ***	(1.8)
<b>Average IA payments (\$/month)</b>				
Quarter 1	843	851	-8.3	(14.4)
Quarter 2	728	716	11.4	(17.9)
Quarter 3	673	651	22.3	(18.8)
Quarter 4	650	625	24.3	(19.0)
Quarter 5	621	608	13.0	(19.3)
Quarter 6	537	575	-38.1 *	(19.6)
Quarter 7	476	539	-62.6 ***	(19.4)
Quarter 8	404	487	-82.4 ***	(18.5)
Quarter 9	341	444	-103.2 ***	(17.4)
<b>Average IA and SSP payments (\$/month)</b>				
Quarter 1	843	851	-8.3	(14.4)
Quarter 2	728	716	11.4	(17.9)
Quarter 3	673	651	22.3	(18.8)
Quarter 4	650	625	24.4	(19.0)
Quarter 5	650	608	42.5 **	(19.4)
Quarter 6	619	575	44.0 **	(19.6)
Quarter 7	590	539	51.2 ***	(19.4)
Quarter 8	542	487	55.7 ***	(18.7)
Quarter 9	502	444	57.8 ***	(17.8)
<b>Sample size (total = 2,852)</b>	<b>1,422</b>	<b>1,430</b>		

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

**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 percent; \*\* = 5 percent; \*\*\* = 1 percent.

Rounding may cause slight discrepancies in sums and differences.

**Appendix B:**  
**Details of Comparisons of Impacts in the SSP Applicant and Recipient Studies**

**Table B.1: Details of the Comparisons of Unadjusted Program Impacts on Employment, Transfer Payments, and Income Between Applicant and Recipient Studies Shown in Table 7**

Sample and Outcome	Means in the Six-Month Period Before the Follow-Up Interview				
	Program Group	Control Group	Difference (Impact)	Standard Error	Difference per Eligible <sup>a</sup>
<b>Applicants</b>					
Employed (%)	54.6	42.4	12.2 ***	(1.7)	20.5 ***
Employed full time (%) <sup>b</sup>	40.7	28.5	12.2 ***	(1.7)	20.4 ***
Average monthly hours	75	56	19 ***	(3)	32 ***
Average monthly earnings (\$)	836	613	223 ***	(39)	376 ***
Receiving Income Assistance (%)	38.9	49.7	-10.9 ***	(1.7)	-18.3 ***
Receiving Income Assistance or SSP (%)	56.3	49.7	6.5 ***	(1.7)	11.0 ***
Average IA payments (\$)	352	449	-97 ***	(17)	-163 ***
Average IA + SSP payments (\$)	506	449	57 ***	(17)	96 ***
Average income tax (\$) <sup>c</sup>	193	115	78 ***	(11)	131 ***
Average net transfer (IA + SSP + other transfers - taxes) (\$) <sup>d</sup>	571	600	-29	(26)	-48
Average net individual income (\$) <sup>e</sup>	1,529	1,355	174 ***	(28)	293 ***
Income below the low income cut-off (%) <sup>f</sup>	57.2	68.5	-11.3 ***	(2.0)	-19.0 ***
<b>Sample size (total = 2,852)</b>	<b>1,422</b>	<b>1,430</b>			
<b>BC recipients</b>					
Employed (%)	38.9	27.2	11.7 ***	(1.6)	11.7 ***
Employed full time (%) <sup>b</sup>	26.4	12.6	13.8 ***	(1.4)	13.8 ***
Average monthly hours	47	27	19 ***	(2)	19 ***
Average monthly earnings (\$)	389	249	140 ***	(23)	140 ***
Receiving Income Assistance (%)	74.3	84.8	-10.5 ***	(1.4)	-10.5 ***
Receiving Income Assistance or SSP (%)	91.6	84.8	6.8 ***	(1.1)	6.8 ***
Average IA payments (\$)	770	875	-105 ***	(17)	-105 ***
Average IA + SSP payments (\$)	966	875	91 ***	(15)	91 ***
Average income tax (\$) <sup>c</sup>	84	32	52 ***	(6)	52 ***
Average net transfer (IA + SSP + other transfers - taxes) (\$) <sup>d</sup>	1077	1047	31 *	(18)	31 *
Average net individual income (\$) <sup>e</sup>	1543	1376	167 ***	(20)	167 ***
Income below the low income cut-off (%) <sup>f</sup>	75.4	86.9	-11.5 ***	(1.6)	-11.5 ***
<b>Sample size (total = 2,766)</b>	<b>1,386</b>	<b>1,380</b>			

*(continued)*

**Table B.1: Details of the Comparisons of Unadjusted Program Impacts on Employment, Transfer Payments, and Income Between Applicant and Recipient Studies Shown in Table 7 (Cont'd)**

Sample and Outcome	Means in the Six-Month Period Before the Follow-Up Interview				
	Program Group	Control Group	Difference (Impact)	Standard Error	Difference per Eligible <sup>a</sup>
<b>BC short-term recipients</b>					
Employed (%)	45.0	29.3	15.7 ***	(4.7)	15.7 ***
Employed full time (%) <sup>b</sup>	31.2	17.9	13.3 ***	(4.3)	13.3 ***
Average monthly hours	55	35	19 ***	(7)	19 ***
Average monthly earnings (\$)	465	346	118	(77)	118
Receiving Income Assistance (%)	64.5	72.7	-8.1 *	(4.6)	-8.1 *
Receiving Income Assistance or SSP (%)	89.2	72.7	16.5 ***	(3.8)	16.5 ***
Average IA payments (\$)	662	721	-60	(53)	-60
Average IA + SSP payments (\$)	925	721	204 ***	(46)	204 ***
Average income tax (\$) <sup>c</sup>	113	52	61 ***	(19)	61 ***
Average net transfer (IA + SSP + other transfers - taxes) (\$) <sup>d</sup>	1001	876	126 **	(59)	126 **
Average net individual income (\$) <sup>e</sup>	1560	1310	250 ***	(62)	250 ***
Income below the low income cut-off (%) <sup>f</sup>	72.6	83.3	-10.7 **	(4.9)	-10.7 **
<b>Sample size (total = 344)</b>	<b>163</b>	<b>181</b>			

**Sources:** Calculations from 30-month applicant follow-up survey data, 18-month recipient follow-up survey data, IA administrative records, and payment records from SSP's Program Management Information System (PMIS).

**Notes:** For applicants, means are monthly averages in the six-month period before the 30-month follow-up interview. For recipients, means are monthly averages in the six-month period before the 18-month follow-up interview.

Sample sizes vary for individual measures because of missing values.

"Short-term recipients" are defined as British Columbia sample members from the recipient study who did not receive IA payments in months 14 to 17, 15 to 18, or 16 to 19 before random assignment.

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

Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup>For applicants, "difference per eligible" is the difference divided by the SSP eligibility rate among program group members (0.594). For recipients, the "difference per eligible" is the difference, since all program group members in the recipient sample were eligible to receive SSP payments at the start of the study. Please refer to the text for a more detailed explanation of SSP eligibility.

<sup>b</sup>"Full-time employment" is defined as working 30 hours or more in at least one week during the month.

<sup>c</sup>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.

<sup>d</sup>Average monthly public expenditures on SSP, IA payments, and other transfers (Child Tax Benefit, Goods and Services Tax Credit, UI (EI) benefit, and provincial tax credits), net of projected tax revenue.

<sup>e</sup>Net individual income includes earnings, Income Assistance, and SSP payments, as well as all other sources of individual cash income (tax credits, alimony and child support, etc.), net of projected tax revenue.

<sup>f</sup>Calculated by comparing annualized family income (individual pre-tax income plus earnings of other family members) with the low income cut-off defined by Statistics Canada for the sample member's location and family size.

**Table B.2: Details of the Comparisons of Unadjusted Impacts on the Distribution of Wages and Hours in the Applicant and Recipient Studies Shown in Table 8**

Sample and Outcome	Distributions in the 14th Month After SSP Eligibility Determination				
	Program Group	Control Group	Difference (Impact)	Standard Error	Difference per Eligible <sup>a</sup>
<b>Applicants</b>					
Hourly wage rate (% in each category)					
Not working	45.7	58.3	-12.5 ***	(1.9)	-21.1 ***
Wage unreported <sup>b</sup>	5.0	5.9	-0.9	(0.8)	-1.5
Less than minimum wage <sup>c</sup>	4.2	3.3	0.9	(0.7)	1.5
Minimum to \$.99 above minimum	10.1	5.2	4.8 ***	(1.0)	8.1 ***
\$1.00-\$1.99 above minimum	5.3	3.5	1.8 **	(0.8)	3.0 **
\$2.00-\$2.99 above minimum	4.3	3.0	1.3 *	(0.7)	2.2 *
\$3.00 or more above minimum	25.5	20.8	4.7 ***	(1.6)	7.9 ***
Hours worked per week (% in each category)					
Not working	45.7	58.3	-12.5 ***	(1.9)	-21.1 ***
Hours per week unreported <sup>b</sup>	1.7	1.9	-0.2	(0.5)	-0.3
Fewer than 30	12.5	11.5	1.0	(1.2)	1.6
30	6.0	3.5	2.5 ***	(0.8)	4.2 ***
31-34	2.5	0.8	1.6 ***	(0.5)	2.7 ***
35	6.1	3.9	2.2 ***	(0.8)	3.7 ***
36-39	5.4	4.4	1.0	(0.8)	1.7
40	13.5	10.6	2.9 **	(1.2)	5.0 **
More than 40	6.8	5.2	1.5 *	(0.9)	2.5 *
<b>Sample size (total = 2,852)</b>	<b>1,422</b>	<b>1,430</b>			
<b>BC recipients</b>					
Hourly wage rate (% in each category)					
Not working	59.8	74.0	-14.2 ***	(1.8)	-14.2 ***
Wage unreported <sup>b</sup>	2.2	2.9	-0.7	(0.6)	-0.7
Less than minimum wage <sup>c</sup>	3.1	3.0	0.1	(0.7)	0.1
Minimum to \$.99 above minimum	10.8	3.9	6.9 ***	(1.0)	6.9 ***
\$1.00-\$1.99 above minimum	8.1	3.5	4.6 ***	(0.9)	4.6 ***
\$2.00-\$2.99 above minimum	4.3	2.5	1.9 ***	(0.7)	1.9 ***
\$3.00 or more above minimum	11.6	10.2	1.4	(1.2)	1.4
Hours worked per week (% in each category)					
Not working	59.8	74.0	-14.2 ***	(1.8)	-14.2 ***
Hours per week unreported <sup>b</sup>	1.2	1.2	-0.1	(0.4)	-0.1
Fewer than 30	11.2	12.6	-1.4	(1.2)	-1.4
30	5.9	2.1	3.8 ***	(0.7)	3.8 ***
31-34	2.7	0.7	2.1 ***	(0.5)	2.1 ***
35	4.4	1.2	3.2 ***	(0.6)	3.2 ***
36-39	2.4	1.3	1.1 **	(0.5)	1.1 **
40	8.5	4.5	4.0 ***	(0.9)	4.0 ***
More than 40	3.9	2.5	1.4 **	(0.7)	1.4 **
<b>Sample size (total = 2,766)</b>	<b>1,386</b>	<b>1,380</b>			

(continued)

**Table B.2: Details of the Comparisons of Unadjusted Impacts on the Distribution of Wages and Hours in the Applicant and Recipient Studies Shown in Table 8 (Cont'd)**

Sample and Outcome	Distributions in the 14th Month After SSP Eligibility Determination				
	Program Group	Control Group	Difference (Impact)	Standard Error	Difference per Eligible <sup>a</sup>
<b>BC short-term recipients</b>					
Hourly wage rate (% in each category)					
Not working	52.2	70.7	-18.6 ***	(5.2)	-18.6 ***
Wage unreported <sup>b</sup>	3.7	2.8	0.9	(1.9)	0.9
Less than minimum wage <sup>c</sup>	1.8	3.3	-1.5	(1.7)	-1.5
Minimum to \$.99 above minimum	15.3	5.0	10.4 ***	(3.2)	10.4 ***
\$1.00-\$1.99 above minimum	8.0	5.0	3.0	(2.6)	3.0
\$2.00-\$2.99 above minimum	5.5	1.1	4.4 **	(1.9)	4.4 **
\$3.00 or more above minimum	13.5	12.2	1.3	(3.6)	1.3
Hours worked per week (% in each category)					
Not working	52.2	70.7	-18.6 ***	(5.2)	-18.6 ***
Hours per week unreported <sup>b</sup>	2.5	1.1	1.3	(1.4)	1.3
Fewer than 30	11.7	11.1	0.6	(3.4)	0.6
30	6.1	2.2	3.9 *	(2.1)	3.9 *
31-34	5.5	1.7	3.9 *	(2.0)	3.9 *
35	8.0	2.2	5.8 **	(2.3)	5.8 **
36-39	2.5	1.1	1.3	(1.4)	1.3
40	8.6	7.2	1.4	(2.9)	1.4
More than 40	3.1	2.8	0.3	(1.8)	0.3
<b>Sample size (total = 344)</b>	<b>163</b>	<b>181</b>			

**Sources:** Calculations from 30-month applicant follow-up survey data and 18-month recipient follow-up survey data.

**Notes:** Percentages are for the 14<sup>th</sup> month after SSP eligibility determination. For applicants, this is the 25<sup>th</sup> month of the follow-up period, which ranges from February 1996 to February 1997. For recipients, this is the 14<sup>th</sup> month of the follow-up period, which ranges from February 1994 to March 1996.

"Short-term recipients" are defined as British Columbia sample members from the recipient study who did not receive IA payments in months 14 to 17, 15 to 18, or 16 to 19 before random assignment.

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

Rounding may cause slight discrepancies in sums and differences.

<sup>a</sup>For applicants, "difference per eligible" is the difference divided by the SSP eligibility rate among program group members (0.594). For recipients, the "difference per eligible" is the difference, since all program group members in the recipient sample were eligible to receive SSP payments at the start of the study. Please refer to the text for a more detailed explanation of SSP eligibility.

<sup>b</sup>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.

<sup>c</sup>From April 1993 until March 1995, the minimum wage was \$6.00 per hour. In March 1995, it was increased to \$6.50, and in October 1995 it was increased again to \$7.00 per hour, where it remained until April 1998.

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