

# **When Financial Work Incentives Pay for Themselves**

**Early Findings from the  
Self-Sufficiency Project's  
Applicant Study**

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

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

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

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

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

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

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

*When Financial Incentives Encourage Work: Complete 18-Month Findings from the Self-Sufficiency Project.* Winston Lin, Philip K. Robins, David Card, Kristen Harknett, and Susanna Lui-Gurr. September 1998.

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

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## Preface

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

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

The second purpose of the applicant study was to determine whether SSP would have any effect on the subsequent employment, earnings, income, and welfare receipt of this group of people who were told, at the time they applied for Income Assistance, that they would be eligible to receive an earnings supplement if they were still on welfare a year later. This report provides an early answer to this question and the results so far are very encouraging. The increases in full-time employment and earnings and the reductions in poverty that resulted from SSP’s supplement offer are among the largest ever seen in a social experiment designed to encourage welfare recipients to work. Furthermore, SSP led to no net increase in government costs. Because of SSP’s large positive impacts on employment and earnings, the combination of reduced IA payments and increased tax revenues offset the cost of the SSP supplement payments.

When Human Resources Development Canada (then called Employment and Immigration Canada) announced the launch of SSP in 1992, it was an ambitious undertaking in many respects. SSP would last almost 10 years and involve more than 9,000 participants in two provinces. It would use a complex design to enrol participants in three separate research samples and employ a random assignment evaluation design — widely viewed as the most reliable way to measure program impacts, but a method that has been rarely used in social policy research in Canada.

More important, the project set itself the challenging task of trying to deal simultaneously with the problems of poverty and dependence. Programs that transfer income to poor people in order to reduce poverty typically reduce the incentive for recipients to seek and accept employment, particularly if their potential earnings are low. This problem is reflected in the real-life experiences of welfare-reliant families. Because many of those receiving Income Assistance have low levels of education or limited work experience, they often encounter starting wages that will pay them less than the amount they receive in welfare benefits. Therefore, they face a stark choice: they can continue their reliance on welfare or they can accept a lower income in the work world, at least until their earnings rise with increasing experience and skills.

SSP was designed to test an innovative financial incentive for single parents who were long-term IA recipients. The incentive, in the form of a generous, but temporary, monthly earnings supplement, would put more money in the hands of poor families and, at the same time, encourage work as a way of achieving economic self-sufficiency. To receive the supplement, a person had to leave Income Assistance for full-time employment; payments could then be received for up to three years.

SSP was designed and is managed by the non-profit Social Research and Demonstration Corporation, and it is now well along in its operational phase. The project has reached the point where Human Resources Development Canada's (HRDC's) substantial investment to finance SSP has begun paying dividends in the form of a rich body of research evidence.

Last October, a report titled *When Financial Incentives Encourage Work: Complete 18-Month Findings from the Self-Sufficiency Project* presented initial in-program impact results with SSP's main sample of long-term IA recipients. In this new report, we present findings on the effects of SSP's financial incentive with a somewhat less disadvantaged group of IA recipients, who had a relatively shorter history of welfare receipt. A companion report, *Does SSP Plus Increase Employment? The Effect of Adding Services to the Self-Sufficiency Project's Financial Incentives*, also being published this month, provides the first results of offering SSP's financial incentive in combination with employment services.

Together, these findings are beginning to tell an exciting story. SSP's approach of linking income transfer payments to work effort can both encourage work and fight poverty. SSP doubled the percentage of eligible participants who were off welfare and working full time 18 months after entering the program. Employment impacts were achieved with long-term IA recipients who had a broad range of characteristics, although the effects were somewhat larger for those who were more job-ready or faced fewer barriers to working. Adding job-finding help substantially increased the proportion of participants who are able to take advantage of SSP's financial offer.

SSP appears to be an efficient income transfer mechanism. While the program results in a modest increase in government cost, each extra dollar of government spending leads to an additional three dollars of income for these poor families. The cost-effectiveness of SSP remains to be determined. Much depends on what happens to participants after the three-year period of supplementation ends. SSP's results with the "applicant" sample, however, suggest that a program of this type in a fully mature state might not entail any net cost to governments.

The results available so far are for a relatively short follow-up period. The final chapters of the SSP story are yet to be written. Next year we will report on how people fared 36 months after entering the study, including the program's effects on the children in participating families. SSP's long-term impacts will be based on data from a follow-up survey conducted 54 months after entry into the study, and after the supplement period has ended. We believe, however, that the findings already emerging from SSP can provide useful pointers to policy-makers and practitioners as they seek to identify promising directions for future social policies and programs.

John Greenwood  
Executive Director



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At the Social Research and Demonstration Corporation (SRDC), John Greenwood directed the project and provided invaluable guidance at all stages of the analysis and writing for this report. Saul Schwartz closely reviewed drafts of the report and had a strong influence on its focus, particularly the presentation of the more technical results. Susanna Lui-Gurr, Patrick Villeneuve, and Reuben Ford also reviewed drafts of the report and provided information on the policy environment and economic conditions in British Columbia.

At Manpower Demonstration Research Corporation (MDRC), many people helped prepare the report. As director of MDRC's work on the project, Gordon Berlin contributed valuable insights, particularly concerning the policy implications of our findings. Judith Gueron, Howard Bloom, Barbara Goldman, and Robert Ivry reviewed several drafts and helped us sharpen the analysis and presentation. Martey Dodoo was responsible for the creation and management of the data files, with the help of Frank Tsai. Michelle Pierre coordinated document production, and created tables and figures. Colleen Parker checked the accuracy of the exhibits and text, with the assistance of Jevon Nicholson and Kara Balemian. Nina Gunzenhauser edited the report, with the assistance of Robert Weber, and Patt Pontevolpe and Stephanie Cowell did the word processing. Rosa De Los Santos and Rose Harris took care of scheduling and many other administrative matters. Greg Hoerz also gave valuable advice.

The Authors



## Executive Summary

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 long-term welfare recipients to leave Income Assistance and enter full-time work. 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). This report summarizes the mid-term findings from one of three SSP experiments, the “applicant study.”<sup>2</sup> Results of the applicant study so far are extremely encouraging: SSP’s supplement offer has resulted in some of the largest changes in full-time employment, earnings, income, and poverty ever seen in a social experiment designed to encourage welfare recipients to work. Furthermore, at the end of the follow-up period in this report, the program was paying for itself through increased tax revenues.

How does SSP work? Under SSP, single parents who have received Income Assistance (or welfare) for a year or longer are eligible to receive an earnings supplement if they are no longer receiving Income Assistance and work at least 30 hours per week. A single parent can receive the supplement for up to three years, as long as she remains off Income Assistance and works full time.<sup>3</sup> The SSP supplement is roughly equal to the pre-tax earnings of many low-wage workers who work full time. The primary objectives of SSP are to increase economic self-sufficiency through work and to reduce poverty. By targeting supplements to long-term recipients who work full time, SSP also holds out the promise of promoting these goals without increasing the amount paid in cash assistance.

In the applicant study, 3,316 single parents who were beginning a new spell of Income Assistance in the lower mainland of British Columbia became part of the evaluation of SSP between February 1994 and February 1995 and were randomly assigned to either a *program group* or a *control group*.<sup>4</sup> Members of the program group were offered the opportunity to receive SSP’s supplement; members of the control group were not. More specifically, members of the program group were informed that they would become eligible for the

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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>Earlier reports about SSP referred to the applicant study as the “entry-effects” study, reflecting the original purpose of the study mentioned in this report.

<sup>3</sup>The feminine pronoun is used throughout this report because the vast majority of single parents receiving Income Assistance are women.

<sup>4</sup>The applicant study should not be confused with the main study of SSP in which the SSP supplement was offered to people who had already been on welfare at least a year. Interim results from that study are reported in Lin et al., 1998.

supplement if they remained on Income Assistance for a year. They were also informed of the terms of the supplement payment: that they could begin receiving supplement payments by leaving Income Assistance and working full time in the year after establishing eligibility for the supplement, and that the supplement would be available for up to three years once they started receiving supplement payments. Key features of the earnings supplement are described in the accompanying text box.

### **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.

The primary purpose of the applicant study was to learn whether new welfare recipients would stay on welfare longer to become eligible for the SSP earnings supplement. The answer was that few did; most people who would have left Income Assistance anyway did so before becoming eligible for the supplement.<sup>5</sup> A second purpose of the applicant study was to learn whether SSP's earnings supplement would increase the employment, earnings, and income of people who were offered the opportunity to receive the supplement when they applied for welfare. This report provides an early answer to this question. It examines SSP's impacts on applicants' employment, income, and use of Income Assistance during the first 30 months after random assignment (that is, 18 months after sample members could first receive supplement payments).

The report uses data from a number of sources. Administrative data came from two sources: provincial records, for information on Income Assistance, and SSP's Program Management Information System (PMIS), for information on supplement payments. The report also uses information from three surveys of the applicant sample: a "baseline survey" conducted at the time of random assignment, a "12-month survey" conducted soon after program group members could have established eligibility for the supplement, and a "30-month survey" conducted approximately 18 months later. Of the 3,316 people originally enrolled in the applicant study, 2,852 participants responded to the 30-month survey, and the results in this report are limited to them.<sup>6</sup>

## THE FINDINGS IN BRIEF

When the applicant study began, expectations were that impacts would be small; many members of the study were expected to find work and leave welfare before becoming eligible for the supplement. There was also concern that impacts would come at a high cost; supplement payments would be made primarily to program group members who would have worked full time anyway. These expectations were not borne out. In the applicant study, SSP's supplement offer resulted in significant changes in full-time employment, earnings, income, and poverty. Furthermore, at the end of the follow-up period covered in this report, the cost of supplement payments was more than offset by reduced IA payments and increased tax revenues.

The major findings of this report are as follows:

- **By supplementing earnings to make work pay, SSP substantially increased employment.** During the last six months of the 30-month follow-up period, SSP's supplement offer increased both full-time employment and employment overall by about 12 percentage points. There was little change in part-time employment. Thus, SSP appears to have encouraged people who would not otherwise have worked to work full time but had little discernible effect on the work effort of people who would have worked part time.

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<sup>5</sup>See Lin et al., 1998, and Card, Robins, and Lin, 1997.

<sup>6</sup>Because some people did not respond to the 30-month interview, there will be small differences between the results presented in this report and the results presented in prior reports on the applicant study.

- **Because many new welfare recipients are relatively skilled, SSP resulted in numerous high-wage jobs.** About one-third of the additional employment generated by SSP paid \$10 or more per hour, considerably above the statutory minimum wage of \$7 per hour; about half the additional employment paid close to the minimum wage.
- **By requiring full-time work, SSP increased earnings by more than a third.** Because SSP requires people to work full time to receive the supplement (and because SSP had such a large effect on employment at high-wage jobs), SSP generated large increases in earnings. During the last six months of the follow-up period, program group members earned on average \$836 per month, compared with \$613 per month for control group members, an increase of \$223 per month, or \$1,338 over the six-month period.
- **Most supplement payments are going to people who would have remained on Income Assistance without the supplement offer.** In the last six months of the follow-up period, SSP reduced the proportion of program group members receiving Income Assistance by 11 percentage points. During this same period, however, 19 percent of the program group received a supplement payment. The fact that the proportion of program group members receiving SSP payments is greater than SSP's impact on the proportion receiving Income Assistance suggests that some people receiving supplement payments would have left Income Assistance even without SSP's incentives. The fact that substantially fewer program group members than control group members received Income Assistance implies that SSP payments are also going to many people who would have continued receiving Income Assistance without the SSP offer.
- **SSP led to no increase in net public transfer payments.** To qualify for supplement payments, program group members had to leave Income Assistance and work full time. Furthermore, they had to pay income and payroll taxes on their earnings and income taxes on their supplement payments. Because of SSP's large impact on earnings, the combination of increased tax revenues and reduced IA payments more than offset the cost of SSP supplement payments.
- **SSP reduced poverty by a substantial amount.** SSP encouraged people to work by using the "carrot" of financial incentives, not the "stick" of reduced welfare benefits. As a result, SSP's large effect on earnings reduced by 11 percentage points the proportion of families below Statistics Canada's low income cut-off. This is a substantial reduction in poverty, perhaps the largest reduction in poverty ever resulting from a program that does not increase government transfer payments.

## **ELIGIBILITY FOR THE SUPPLEMENT AND SUPPLEMENT RECEIPT**

Program group members in the applicant study became eligible for SSP if they received IA payments in at least 12 of the first 13 months after entering Income Assistance. Since all program group members had received at least one IA payment by the month of random assignment, eligibility would have been established by the end of the first year *after* random assignment. By the end of this first year, about 60 percent of the program group had satisfied the eligibility criteria for SSP. The remaining 40 percent had left Income Assistance for at least one month and were thus ineligible for supplement payments.

Program group members who satisfied the eligibility criteria had a second year to find full-time work, leave Income Assistance, and begin receiving SSP supplement payments. If they did not begin receiving SSP supplement payments in that second year, they forever lost the opportunity to receive the supplement. Of the 60 percent of the program group who were eligible for the supplement, 44 percent received at least one supplement payment. Put in other terms, 26 percent of the full program group eventually qualified for and received a supplement payment. The proportion receiving a supplement payment in any given month was substantially less, never rising above 20 percent of the program group, because many people started and left full-time jobs.

## **IMPACTS ON EMPLOYMENT, INCOME, AND PUBLIC TRANSFER PAYMENTS**

Table ES-1 summarizes the impacts of SSP in the applicant study on a variety of outcomes related to employment, income, and public transfer payments. The table reports results from the six-month period prior to the 30-month interview, a period roughly 12 to 18 months after a program group member might have initiated supplement payments. The first column of the table presents average outcomes for the program group, while the second column presents averages for the control group.<sup>7</sup> The third column of the table shows the *program impact*, defined as the difference in average outcomes between the program and control groups, along with an indication of the statistical significance of the difference. Outcomes and impacts are calculated for the full program and control group samples, including those who never became eligible for the supplement (40 percent of the program group) and those who never received the supplement (73 percent of the program group).<sup>8</sup>

During the six-month period shown in Table ES-1, SSP resulted in a 10.9 percentage point reduction in the proportion of people receiving Income Assistance (38.9 percent of the program group received Income Assistance, compared with 49.7 percent of the program group). The fact that fewer program group members than control group members received Income Assistance implies that SSP encouraged people to leave Income Assistance.

During the same period, about 19 percent of the program group received SSP supplement payments in an average month, and the proportion of the program group receiving *either* SSP or Income Assistance was 6.5 percentage points higher than the proportion of the control group receiving Income Assistance. If SSP payments were going only to people who would have stayed on Income Assistance without the supplement offer, SSP's impact on IA receipt would equal its impact on receipt of supplement payments. The increase in the proportion receiving either Income Assistance or SSP, therefore, suggests that the pool of supplement takers includes some people who would have left Income Assistance without the supplement offer.

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<sup>7</sup>Recall that members of the program group had the first year to establish eligibility for the supplement, and a second year to initiate supplement payments by beginning to work full time. A member of the program group could therefore initiate supplement payments as early as the 13<sup>th</sup> month after beginning her welfare spell, or 17 months before the 30<sup>th</sup> month of follow-up. Alternatively, she could initiate supplement payments as late as the 25<sup>th</sup> month after beginning her welfare spell, or five months before the most likely date of the 30-month interview.

<sup>8</sup>All outcomes are monthly averages over the six-month period prior to the 30-month interview. For example, the percentage working is the fraction working in an average month; it is not the fraction who ever worked during the six-month period.

**Table ES-1: Summary of Impacts in the SSP Applicant Study**

Outcome	Mean Monthly Outcomes in the Six Months Before the 30-Month Interview		
	Program Group	Control Group	Difference
<b>Cash transfers</b>			
Receiving Income Assistance (%)	38.9	49.7	-10.9 ***
Receiving SSP (%)	18.7	0.0	18.7 ***
Ever received SSP (%)	26.2	0.0	26.2 ***
Receiving Income Assistance or SSP (%)	56.3	49.7	6.5 ***
Average IA payments (\$)	352	449	-97 ***
Average IA + SSP payments (\$)	506	449	57 ***
Average net transfer payments (\$) <sup>a</sup>	571	600	-29
<b>Employment and earnings</b>			
Employed (%)	54.6	42.4	12.2 ***
Employed full time (%) <sup>b</sup>	40.7	28.5	12.2 ***
Average hours of work	75	56	19 ***
Average earnings (\$)	836	613	223 ***
<b>Total income</b>			
Average income tax (\$) <sup>c</sup>	193	115	78 ***
Average individual income net of taxes (\$) <sup>d</sup>	1,529	1,355	174 ***
Average family income (\$) <sup>e</sup>	1,972	1,686	286 ***
Income below the low income cut-off (%) <sup>f</sup>	57.2	68.5	-11.3 ***
<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 payment records from SSP's Program Management Information System (PMIS).

**Notes:** 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.

<sup>a</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>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>Individual income includes earnings, Income Assistance, and SSP payments, as well as all other sources of individual cash income (taxcredits, alimony and child support, etc.).

<sup>e</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. The amount shown in the table is pre-tax income.

<sup>f</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.

SSP's rules require people to work full time in order to receive the supplement. It is not surprising, then, that SSP increased full-time employment by about as much as it lowered receipt of Income Assistance (about 12 percentage points). The impact on full-time employment is also about the same as the impact on employment overall, so that SSP neither increased nor decreased part-time employment. Since SSP does not provide an incentive for people to work part time, this finding suggests that SSP worked primarily by convincing people who would not have worked to work full time.



Perhaps most striking is SSP's impact on earnings and hourly wages. During the six-month period, SSP increased earnings by \$223 per month, on average, or more than one-third, while increasing hours of work by 19 per month. If the increased earnings were spread equally across the increased hours of work, the average hourly wage would be close to \$12 (\$223 divided over 19 hours). This wage is considerably above British Columbia's statutory minimum wage of \$7 in effect during most of this period. In fact, about one-third of the impact on employment resulted in jobs that paid more than \$10 per hour (not shown in Table ES-1).

Because of its substantial impact on earnings, SSP did not increase direct after-tax payments to program group members by the government. The logic behind this is as follows. First, supplement payments are reduced 50 cents for each dollar earned. The large increase in earnings generated by SSP, therefore, resulted in an average supplement payment of only \$154 per month. Second, a program group member could not simultaneously be eligible for Income Assistance and receive supplement payments. As a result, SSP reduced IA payments by \$97 per month. Finally, program group members had to pay payroll taxes on their earnings and income taxes on both their earnings and supplement payments, so SSP resulted in a \$78 increase in monthly income tax and payroll taxes. (These are estimated amounts based on tax laws and may differ from the amounts actually paid by sample members.) All together, including some small differences in other transfer payments, SSP resulted in a (statistically insignificant) reduction of nearly \$30 per month in transfer payments less tax receipts. Overall, then, SSP considerably increased the average income of program group members, *with no increase in transfer program costs.*<sup>9</sup>

The impacts of SSP in the applicant study are even more impressive when one considers that only 60 percent of the program group were eligible for the supplement. If the behaviour of ineligible program group members was not altered by the supplement offer (which seems likely), the impact of SSP would be concentrated on eligible program group members. The impact per eligible program group member would then be calculated as the impact for the entire applicant sample divided by the proportion of the program group that was eligible for the supplement (59.4 percent). Doing this calculation reveals that, *per eligible program group member*, SSP increased full-time employment by about 20 percentage points, increased earnings by about \$375 per month, increased family income by about \$481 per month, and increased the proportion of families with income above Statistics Canada's low income cut-off by 19 percentage points. All of this occurred, still, with no increase in net transfer payments.

## COMPARISONS WITH THE SSP RECIPIENT STUDY

The SSP evaluation includes two random assignment studies in addition to the applicant study. The original experiment, which will be called the "recipient study," was the first SSP experiment to rigorously test the effects of the earnings supplement on welfare recipients. This study included about 6,000 single-parent IA recipients in British Columbia and New

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<sup>9</sup>Estimated costs in this study apply to the six-month period preceding the interview and ignore other elements of government cost, such as administrative costs and the costs of child-care subsidies. The evaluation of SSP includes a fuller cost-benefit analysis, but the results of that analysis were not available when this report was published.

Brunswick who had already been on welfare for at least a year and, therefore, met the SSP eligibility requirement. Between November 1992 and March 1995, these long-term recipients were randomly assigned to a program group and a control group. Members of the program group were given the opportunity to receive SSP's supplement; members of the control group were not.

In the recipient study, many members of the program group never obtained the full-time job required to receive a supplement payment, and some who received supplement payments eventually lost their full-time jobs.<sup>10</sup> To learn whether job-search assistance and job counselling services could help long-term recipients find and keep full-time employment, a second experiment, called the "SSP Plus study," was launched. In the SSP Plus study, about 900 long-term recipients in New Brunswick were randomly assigned to three research groups — the program and control groups of the recipient study plus a third group that received both SSP's supplement offer and the offer of job-search services. The SSP Plus study indicated that adding services led to somewhat larger impacts on employment and earnings outcomes.<sup>11</sup>

In the recipient study (and in the SSP Plus study), sample members were drawn from the population of current IA recipients who had been on welfare for at least one year. A newly implemented program like SSP would also initially enrol primarily long-term recipients. Thus, results from the recipient study provide our best estimate of the effects of a newly implemented program like SSP.<sup>12</sup>

In the applicant study, only people beginning a new spell of welfare were enrolled. If a program like SSP had already been implemented for several years, all new welfare recipients would be informed of their potential eligibility when they applied for welfare. In other words, they would come from the same population used for the SSP applicant study. Results from the applicant study will therefore provide estimates of the effects of an established earnings supplement program. Together, the results from both studies should provide valuable information about the immediate and longer-term costs and benefits of an earnings supplement program designed to encourage self-sufficiency among welfare recipients.

There is no reason to expect impacts in 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 are probably more "job-ready" than members of the recipient study and hence may be 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 members of 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 or applicant study.

Table ES-2 compares impacts from the applicant and recipient studies. The first column presents the impacts from the applicant study (the figures in the third column of Table ES-1). The second column presents the impacts from the recipient study (similar to results presented in Lin et al., 1998), but only among sample members from British Columbia. The third

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<sup>10</sup>See Lin et al., 1998, for detailed results on the recipient study.

<sup>11</sup>See Quets et al., 1999.

<sup>12</sup>A newly implemented program would also include new applicants, a group not included in the recipient and SSP Plus studies.

column presents the difference in the impacts from the two studies, along with an indication of the statistical significance of the difference. Results are presented for the six-month period prior to the 18-month interview for recipients and for the six-month period prior to the 30-month interview for applicants. Because program members in the recipient study were eligible for the SSP supplement at random assignment, while eligibility for the supplement in the applicant study could not be established until one year after random assignment, results for both groups represent a period about 12 to 18 months after program group members could have initiated supplement payments.

**Table ES-2: Comparison of Impacts in the SSP Applicant and Recipient Studies**

Outcome	Mean Monthly Outcomes in the Six Months Before the 30-Month Interview		
	Impact per Applicant	Impact per Recipient	Difference
<b>Cash transfers</b>			
Receiving Income Assistance (%)	-10.9 ***	-10.5 ***	-0.4
Receiving SSP (%)	18.7 ***	21.0 ***	-2.3 *
Ever received SSP (%)	26.2 ***	34.2 ***	-8.0 ***
Receiving Income Assistance or SSP (%)	6.5 ***	6.8 ***	-0.2
Average IA payments (\$)	-97 ***	-105 ***	8
Average IA + SSP payments (\$)	57 ***	91 ***	-34
Average net transfer payments (\$) <sup>a</sup>	-29	31 *	-60 *
<b>Employment and earnings</b>			
Employed (%)	12.2 ***	11.7 ***	0.5
Employed full time (%) <sup>b</sup>	12.2 ***	13.8 ***	-1.6
Average hours of work	19 ***	19 ***	0
Average earnings (\$)	223 ***	140 ***	84 *
<b>Total income</b>			
Average income tax (\$) <sup>c</sup>	78 ***	52 ***	26 **
Average individual income net of taxes (\$) <sup>d</sup>	174 ***	167 ***	8
Average family income (\$) <sup>e</sup>	286 ***	181 ***	106 *
Income below the low income cut-off (%) <sup>f</sup>	-11.3 ***	-11.5 ***	0.2
<b>Sample size</b>	<b>2,852</b>	<b>2,766</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.

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.

<sup>a</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>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>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.).

<sup>e</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. The amount shown in the table is pre-tax income.

<sup>f</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.

Despite the differences in sample composition, the impacts in the recipient and applicant studies are remarkably similar in many ways. In both studies, employment increased by about 12 percentage points, the proportion receiving Income Assistance decreased by about 11 percentage points, after-tax income increased by about \$170, and the poverty rate was reduced by about 11 percentage points.

Despite these similarities, the interim results of the applicant and recipient studies differ in two important ways. First, earnings increased by about \$84 more per month in the applicant study, and net public transfer payments increased in the recipient study but actually dropped in the applicant study. These results imply that the effects of both a newly implemented and an ongoing program like SSP would be large and positive, though there are some key differences.

Although these comparisons are interesting for understanding the impacts of an ongoing program and a newly implemented program, they should not be used to judge the validity of the results of the applicant study. Indeed, as has been indicated, there are important differences in sample composition between the two studies. To judge the validity of the findings in the applicant study, impacts per eligible applicant were compared with impacts for a group from the recipient study who resembled eligible applicant control group members. Although impacts were somewhat larger per eligible applicant program group member, most differences were small enough that they could have been due to chance. This finding supports the hypothesis that the findings of the applicant study would be similar if the experiment were done using a different group of applicants.

## **POLICY IMPLICATIONS**

The effectiveness of SSP for applicants adds to growing evidence that financial incentives with a work requirement can encourage welfare recipients to work, increase their income, *and* reduce their dependence on welfare. In a previous SSP report studying long-term recipients (Lin et al., 1998), it was found that SSP's offer of a supplement doubled full-time employment and increased average income by about \$170 per month, while increasing transfer payments somewhat. For the applicants studied in this report, SSP also caused after-tax income to increase by a similar amount but did not increase after-tax transfer payments.

Both results should lessen concerns about possible adverse effects of financial-incentive programs for welfare recipients. Some critics of financial incentives have worried that such incentives would be expensive because they would primarily reward people who would have worked without the incentives. SSP's design attempted to keep costs low by targeting incentives, both by offering them only to people least likely to work and by requiring people to work full time. Targeting raises a second concern, however: targeted financial incentives might be inexpensive simply because nobody uses them.

The interim results from SSP should allay such concerns. Although SSP's incentives are quite generous, the requirements that people receive welfare for a year and that people work full time reduce the number of people who would add to the costs of the program without changing their behaviour. Because SSP *is* so generous, however, a substantial number of long-term welfare recipients were convinced by the incentive to start working. In addition, their incomes rose substantially, leading to large overall reductions in poverty.

The applicant group studied in this report may be the ideal group to be offered a supplement with SSP's restrictions. Those most likely to work left welfare quickly and therefore never became eligible for the supplement. Those who remained were more likely to have graduated from high school and to have worked recently than longer-term recipients, and they were less likely to have emotional or physical problems that kept them from working. In short, SSP appears to have motivated a group of very employable people who, but for the SSP supplement, would still be receiving welfare.

Still, some caution is in order. The findings in this report apply to only the first two-and-a-half years of the applicant study, a period before any sample members had exhausted their three years of supplement payments. In addition, estimated costs in this study apply primarily to the six-month period preceding the interview, and they ignore other elements of government cost, such as administrative costs and the costs of child-care subsidies. The impacts on long-run individual behaviour and the long-run cost-effectiveness of SSP are presently unknown and will be studied in two future reports — four years after random assignment, when recipients of the supplement are nearing the end of their eligibility, and six years after random assignment, after the last supplement payment has been received.



## 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.

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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.

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 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> 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.

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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 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.

### 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.

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.

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.

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<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.

<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.

<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.

## 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 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

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<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.

<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.

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>

## 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.

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<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).

<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.

**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.

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.

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

<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.

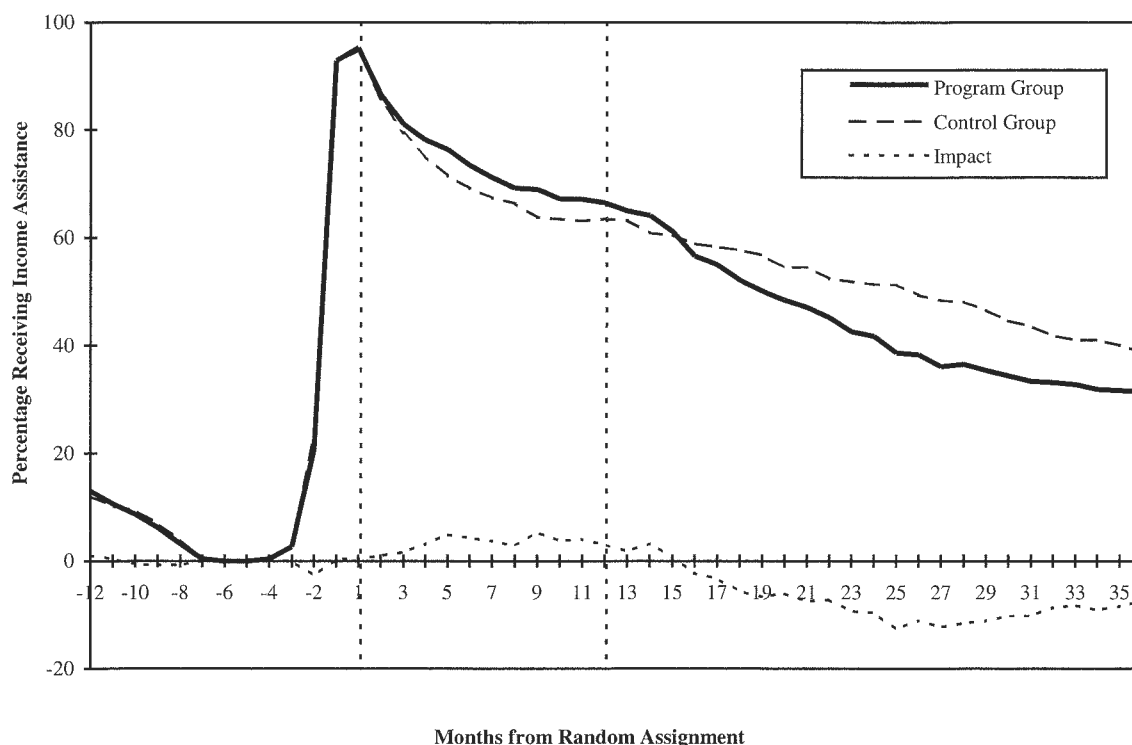
<sup>17</sup>This gap reflects a small fraction of "partial month" IA cheques among new applicants; in later months, average IA payments (conditional on remaining on welfare) are similar among recent applicants and longer-term recipients.

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.

### 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.

<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.

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 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.

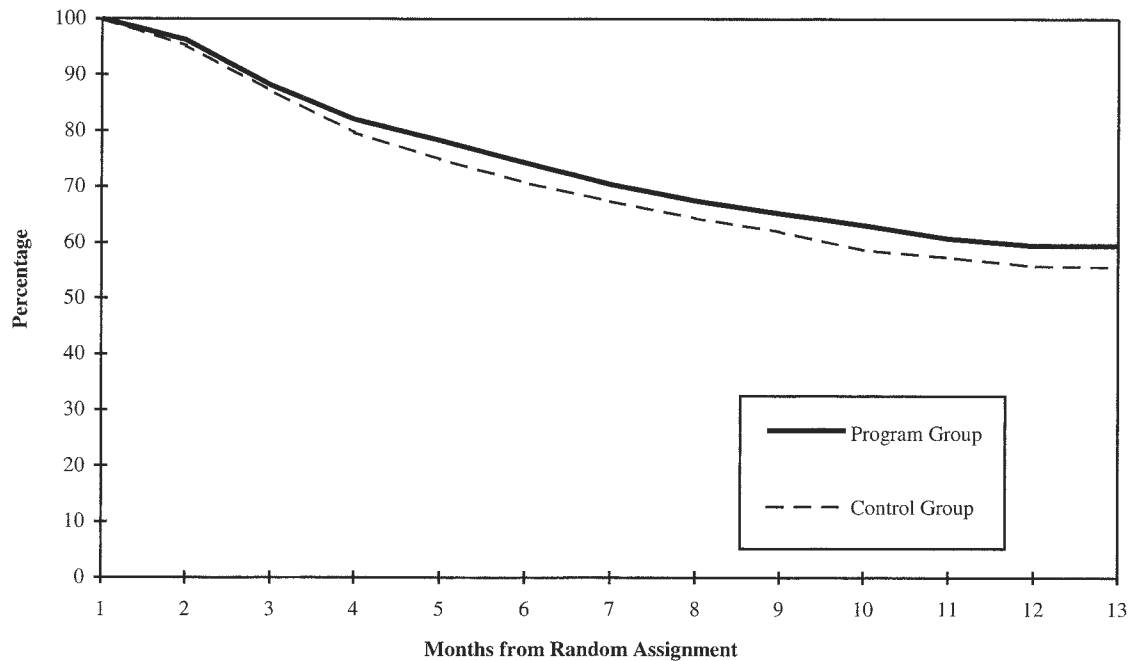
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<sup>20</sup>The earlier reports (Berlin et al., 1998, and Card, Robins, and Lin, 1997) present results on 3,315 sample members, all but one of the full sample of applicants (for whom administrative records were not available when those reports were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

<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.



**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.

### **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 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.

**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	Eligible	Ineligible	
<b>IA history</b>					
Average number of months of Income Assistance in last two years <sup>a</sup>	3.1	3.1	3.2	3.3	0.0
Average monthly IA payment at random assignment (\$)	1,026	810	1,004	794	211 ***
<b>Work history</b>					
Ever worked for pay (%)	95.9	98.3	95.9	99.1	-3.3 ***
Worked in month before random assignment (%)	15.5	33.7	18.8	33.1	-14.3 ***
<b>Personal characteristics</b>					
Female (%)	94.1	90.7	90.8	89.3	1.5
Under age 25 (%)	17.2	11.3	16.8	12.8	4.0 **
Less than high school education (%)	42.6	29.7	38.7	30.2	8.6 ***
High school graduate, no post-secondary education (%)	38.1	43.0	42.7	43.0	-0.3
Some post-secondary education (%)	19.3	27.4	18.6	26.9	-8.3 ***
First Nation ancestry (%)	9.1	9.6	6.6	7.1	-0.5
Immigrant (%)	36.9	21.3	34.4	24.5	9.9 ***
Physical limitation (%)	19.3	20.2	20.1	19.6	0.5
Emotional limitation (%)	8.4	7.8	5.5	6.1	-0.6
<b>Family structure</b>					
Average number of children	1.6	1.5	1.6	1.4	0.1 ***
Never married (%)	26.7	22.0	22.5	21.0	1.5
<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 overall program group. Over the year following notification of supplement eligibility, the proportion of

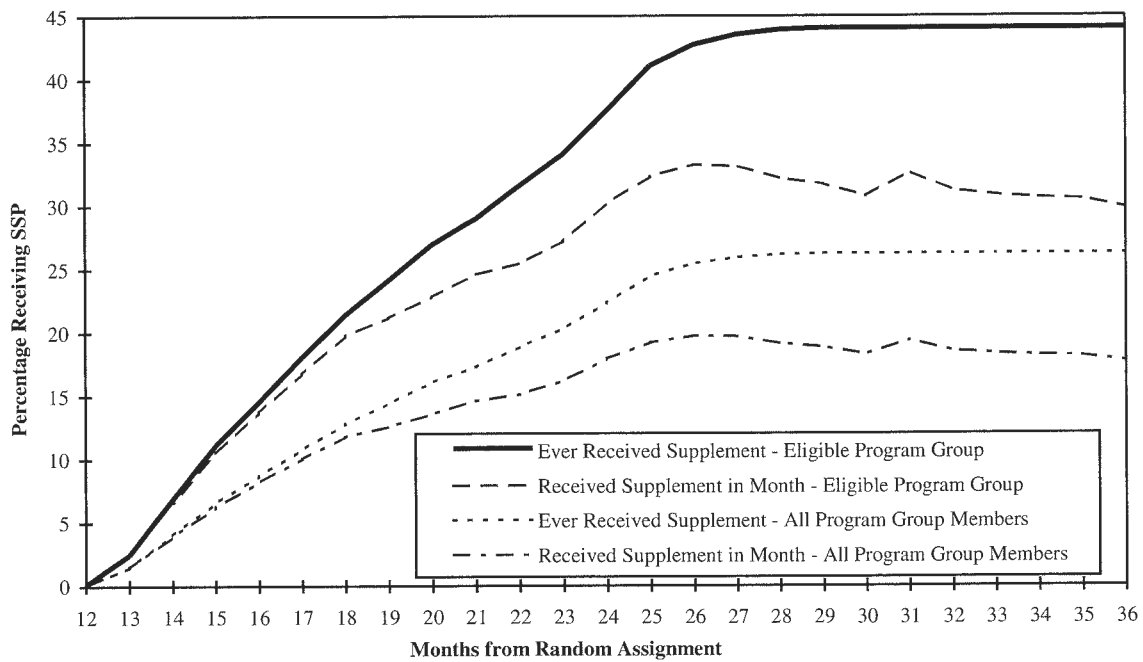
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<sup>22</sup>In the U.S. system, as described by Blank, 1989, recipients may end a spell of welfare receipt because they find a job that pays enough to make them ineligible for payments, because they enter a relationship with a partner whose income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

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.

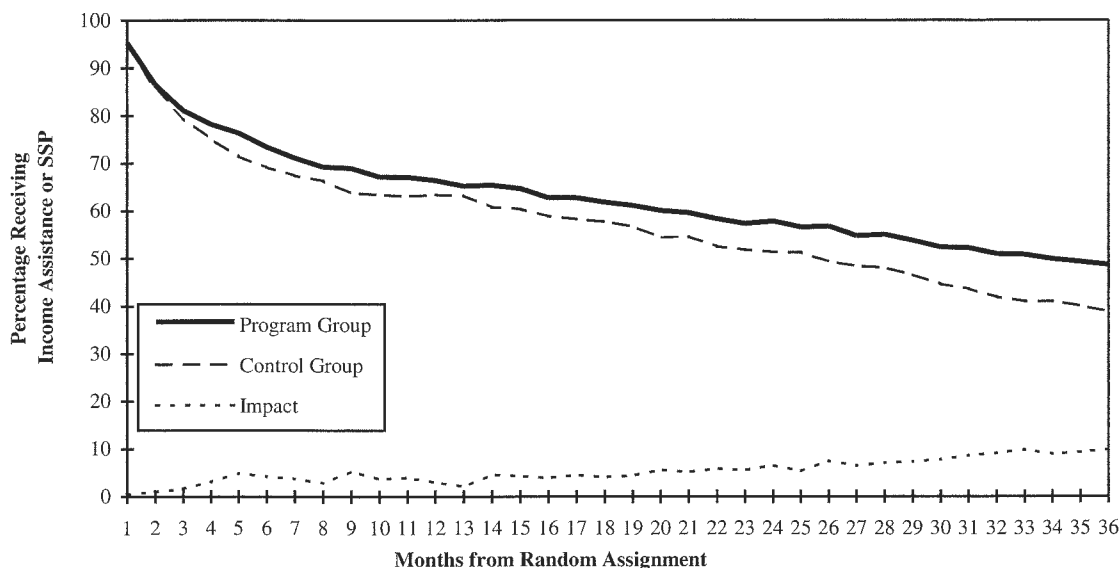
“windfall” income gain that rewarded people who did not change their behaviour.<sup>25</sup> The alternative is that some, or even most, SSP supplement takers would not have left Income Assistance and worked full time without the encouragement of the supplement.

### 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.

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



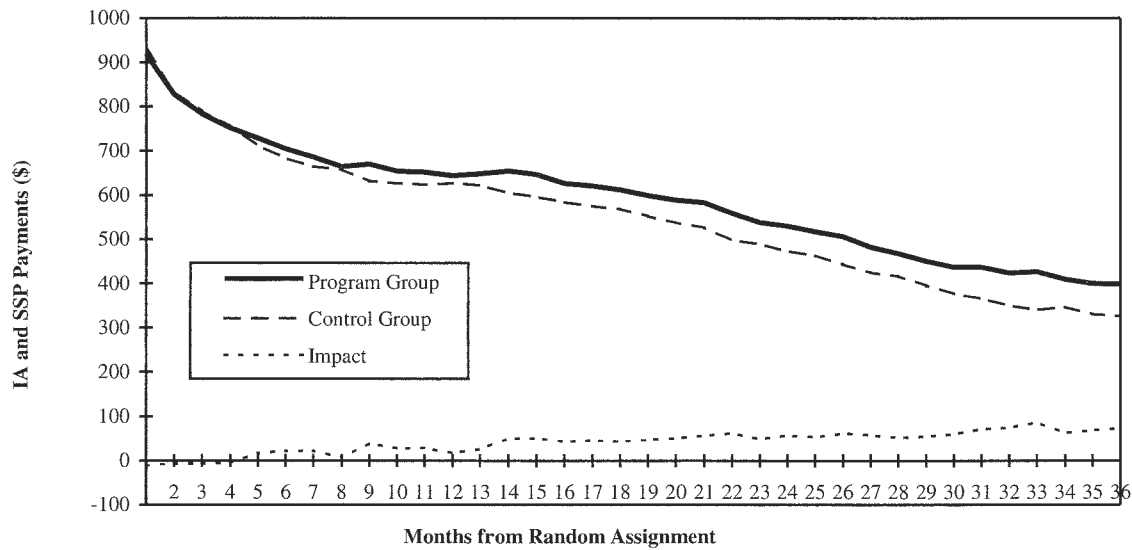
Sources: Calculations from IA administrative records and payment records from SSP’s Program Management Information System (PMIS).

<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.

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.

**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 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.

**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.

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.

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.

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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.

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.

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.

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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		Impact per Eligible Applicant <sup>a</sup>		Impact per Recipient		Impact per Eligible Applicant <sup>a</sup>		Impact per Short-Term Recipient		Difference	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Employed (%)	12.2 ***	11.7 ***	0.5	20.5 ***	11.7 ***	8.9 ***	20.5 ***	15.7 ***	4.8	20.4 ***	13.3 ***	7.1	12	258 **
Employed full time (%) <sup>b</sup>	12.2 ***	13.8 ***	-1.6	20.4 ***	13.8 ***	6.7 **	20.4 ***	13.3 ***	7.1	32 ***	19 ***	12	118	-10.2 *
Average monthly hours	19 ***	19 ***	0	32 ***	19 ***	12 **	32 ***	19 ***	12	376 ***	140 ***	236 ***	118	-8.1 *
Average monthly earnings (\$)	223 ***	140 ***	84 *	376 ***	140 ***	236 ***	376 ***	118	258 **	-18.3 ***	-18.3 ***	-8.1 *	16.5 ***	-5.5
Receiving Income Assistance (%)	-10.9 ***	-10.5 ***	-0.4	-18.3 ***	-10.5 ***	-7.8 **	-18.3 ***	-8.1 *	-10.2 *	11.0 ***	6.8 ***	4.2	-60	-104 *
Receiving Income Assistance or SSP (%)	6.5 ***	6.8 ***	-0.2	11.0 ***	6.8 ***	4.2	11.0 ***	6.5 ***	-5.5	-163 ***	-105 ***	-58 *	204 ***	-108 **
Average IA payments (\$)	-97 ***	-105 ***	8	-163 ***	-105 ***	-58 *	-163 ***	-60	-104 *	96 ***	96 ***	5	61 ***	70 ***
Average IA + SSP payments (\$)	57 ***	91 ***	-34	96 ***	91 ***	5	96 ***	204 ***	-108 **	131 ***	131 ***	79 ***	126 **	43
Average income tax (\$) <sup>c</sup>	78 ***	52 ***	26 **	131 ***	52 ***	79 ***	131 ***	61 ***	70 ***	-48	-48	-79 *	250 ***	43
Average net transfer (IA + SSP + other transfers - taxes) (\$) <sup>d</sup>	-29	31 *	-60 *	-48	31 *	-79 *	-48	126 **	-174 **	293 ***	293 ***	127 **	250 ***	43
Average net individual income (\$) <sup>e</sup>	174 ***	167 ***	8	293 ***	167 ***	127 **	293 ***	250 ***	43	-19.0 ***	-11.5 ***	-7.5 **	-10.7 **	-8.3
Income below the low income cut-off (%)	-11.3 ***	-11.5 ***	0.2	-19.0 ***	-11.5 ***	-7.5 **	-19.0 ***	-10.7 **	-8.3	2,852	2,766	2,852	344	
<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.

## 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, 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.

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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.



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).

### **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.

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

Outcome	Applicants vs. All Recipients			Applicants vs. All Recipients			Applicants vs. Short-Term Recipients		
	Using Applicant Impacts per Eligible Program Group Member			Using Applicant Impacts per Eligible Program Group Member			Using Applicant Impacts per Eligible Program Group Member		
	Impact per Applicant (1)	Impact per Recipient (2)	Difference (3)	Impact per Eligible Applicant <sup>a</sup> (4)	Impact per Recipient (5)	Difference (6)	Impact per Eligible Applicant <sup>a</sup> (7)	Impact per Short-Term Recipient (8)	Difference (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>b</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.

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.

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.

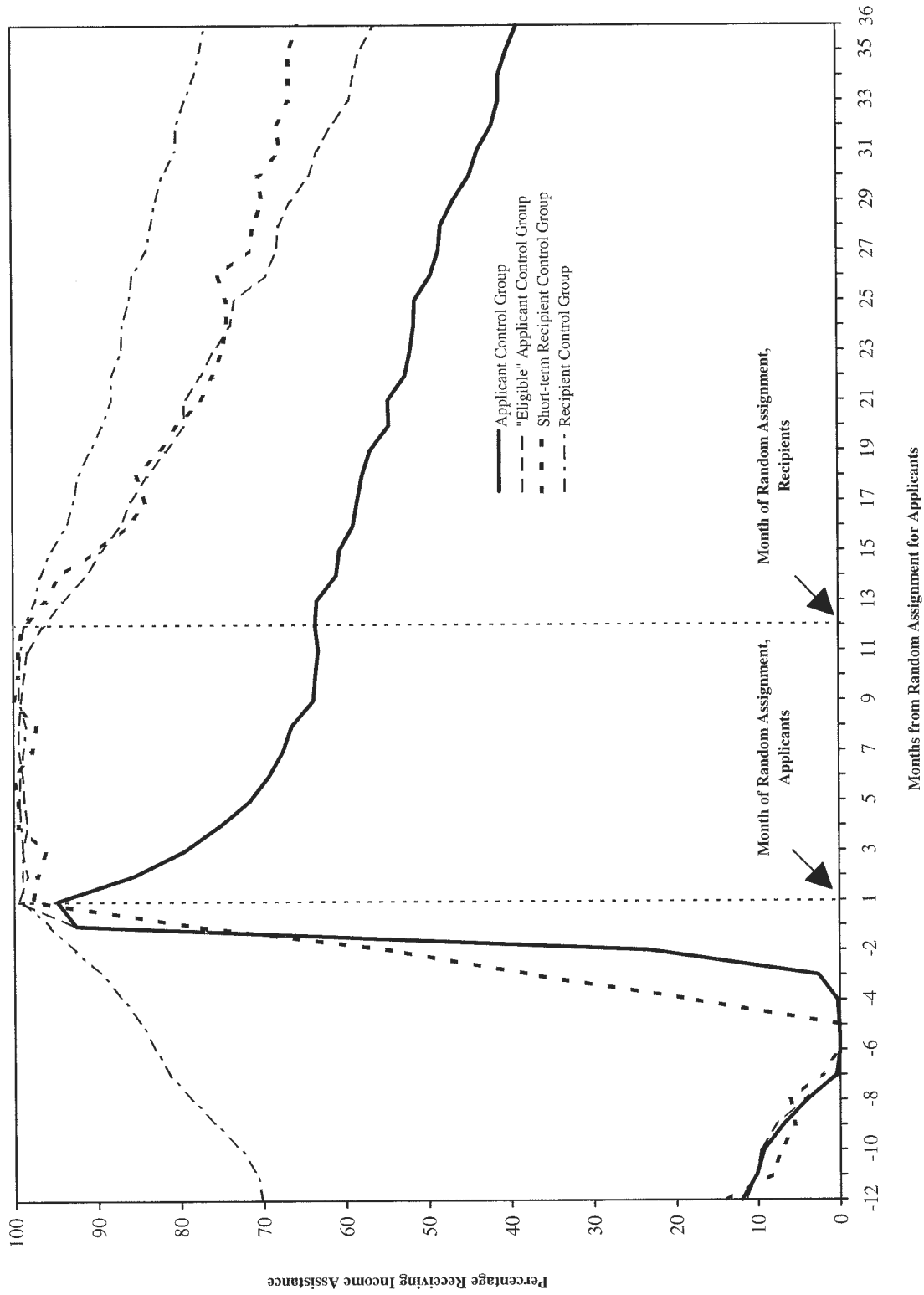
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<sup>32</sup>Recent research on sample selectivity models has underscored the importance of making comparisons based on the probability of satisfying the appropriate selection criteria (see, for example, Heckman et al., 1998, and Rosenbaum and Rubin, 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.

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.

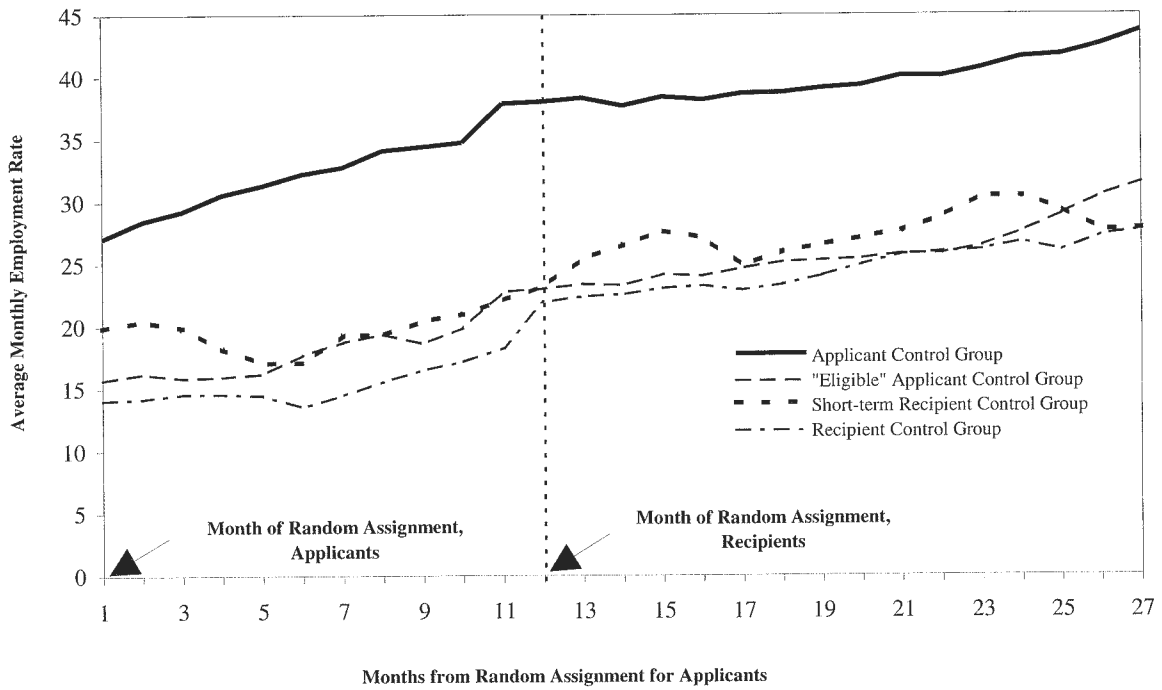
On the basis of these comparisons of the outcomes of the *control groups*, the short-term recipient sample appears to be fairly similar to the group of eligible applicants. As a further check, the personal characteristics of the short-term recipient control group and the eligible applicant control group 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, 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.

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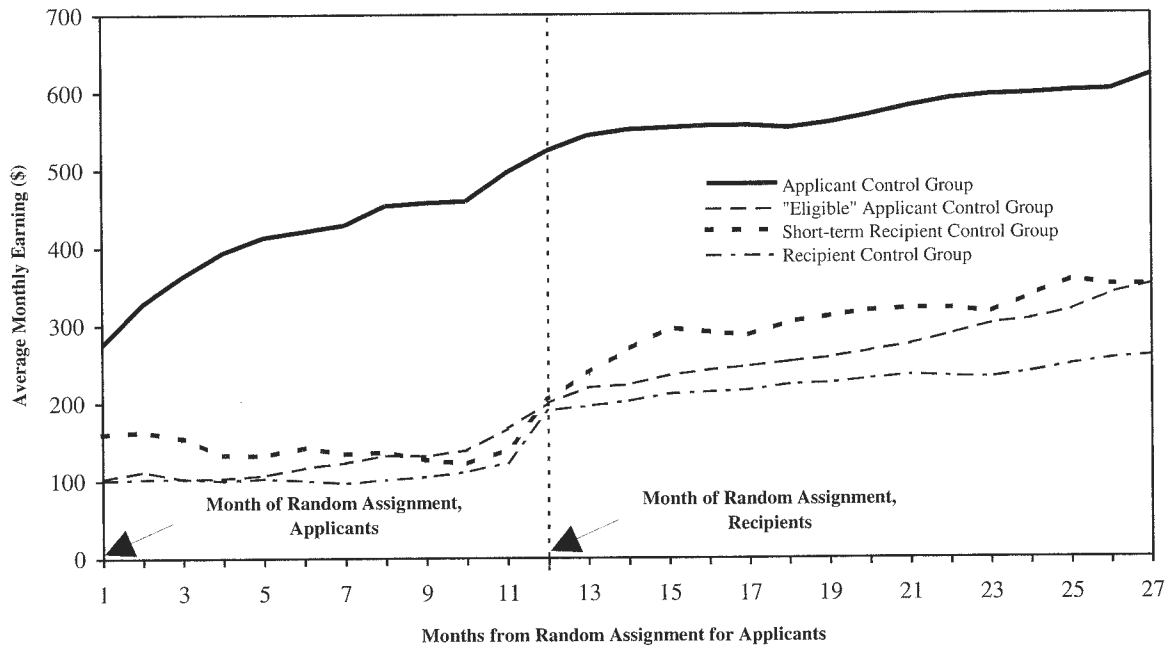
<sup>35</sup>In the next two paragraphs, the phrase "impacts *per* eligible applicant" is used to emphasize that these are nonexperimental estimates calculated by dividing impacts among all respondents to the 30-month interview by the proportion of the program group that was eligible for SSP supplement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

**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.

**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**

<b>Baseline Characteristic</b>	<b>Eligible Applicant Control Group</b>	<b>Short-Term Recipient Control Group</b>	<b>Difference</b>	<b>Standard Error</b>
<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.

**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.



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.

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>1</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>1</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.

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

Baseline Characteristic	Program Group	Control Group	Difference	Standard Error
<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.

## 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>2</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

<sup>2</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.

female, less likely to be of First Nation ancestry, and less likely to report an activity-limiting emotional condition at the baseline interview.<sup>3</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.

## **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>4</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 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.

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<sup>3</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.

<sup>4</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.



**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.

## **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.



## 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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