A Helping Hand Goes a Long Way: Long-Term Effects of Counselling and Support to Workfare Program Participants

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Abstract

We study the medium- and long-run impacts of the Canada Self-Sufficiency Project (SSP) Plus program, which randomly offered *intensive* employment support services for up to three years to long-term welfare recipients eligible for temporary work subsidies. We examine whether this intervention – aiming to address both economic and psychosocial barriers faced by the poor in finding and retaining desirable employment – led to long-run changes in individuals' socioeconomic trajectories. We link study participants to their federal tax and employer-employee matched records for up to 20 years after random assignment. The intensive services treatment led to a 20-27 percent increase in participants' annual earnings over the 20-year period and increases in full-time employment throughout the first decade post-intervention. As possible mechanisms, individuals engage in more job search and job-to-job transitions and obtain jobs paying higher wages and in higher paying firms.

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1 Introduction

The rise in wage inequality over past decades has seen the emergence of a large economic divide between educated workers and those with less education (Goldin and Katz 2008; Autor 2019; Goldin et al. 2020). Across both North America and Europe, highly-educated workers are ever more likely to sort into firms offering earnings premiums while less-educated workers in general—and those from disadvantaged backgrounds in particular—are increasingly shut out of opportunities for better pay and wage growth (Song et al. 2019; Dostie et al. 2021; Card et al. 2013). As a result of these trends towards greater inequality, there is increasing interest among policymakers to understand whether and how active labor market programs can help disadvantaged workers find and keep "good jobs" (Katz et al., 2022).

Practitioners who work with disadvantaged populations argue that for labor market interventions to succeed they must take into strong consideration individuals' beliefs and non-cognitive skills, which in turn can affect individuals' focus, their ability to set and achieve goals, and their engagement while looking for work and while on the job (Babcock et al., 2012).[1] Consistent with the understanding that it is necessary to address the psychosocial barriers disadvantaged individuals face, previous research finds that access to intensive support services can substantially improve a host of labor market outcomes, notably employment and earnings, in the short-run (Kahn 2012; Crépon and Van Den Berg 2016; Card et al. 2018).[2] However, we have a limited understanding of how highly intensive support for welfare program participants can affect individuals' lives in the long run, and whether these types of interventions lead to persistent or permanent changes in individuals' socioeconomic trajectories. To the extent that high-quality employment services improve individuals' attitudes, behavior, and decision-making, which in turn increases the rates of job-finding and retention, it may help induce sustained long-term gains for disadvantaged participants in welfare-to-work settings.

This paper advances the literature on the consequences of decreasing non-financial bar-

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[1] Recent evidence highlighting that less-educated workers with soft skills are better able to find and keep employment at high-paying firms point to the importance of these attributes in the workforce (Aghion et al. 2019; Heller and Kessler 2022).

[2] This growing awareness that it is necessary to address the psychosocial barriers faced by disadvantaged households represents a departure from earlier "welfare-to-work" initiatives with their narrow focus on financial incentives and job search assistance. A recent *New York Times* reporting summarizes the view that conventional employment services may not do enough and highlights the advantages of wraparound services offered to participants in sectoral training programs (Lohr, 2021).

riers to individuals' self-sufficiency. We study the short, medium, and long-run impacts of the Self-Sufficiency Project (SSP) Plus program, one of the randomized controlled trials implemented as part of the Canadian federal government's Self-Sufficiency Project. The SSP was an innovative experimental demonstration conducted in the 1990s to test whether time-limited financial incentives for work and other supports could help long-term income assistance recipients achieve a permanent break from welfare.[3] The SSP Plus study was designed to test whether intensive one-on-one job coaching and employment support services provided for an extended period of time by specialized personnel could complement the offer of an earnings supplement. Carried out in the province of New Brunswick, the experiment assigned single parents who were long-term welfare recipients to one of three experimental groups: the "Plus" treatment arm, which offered a generous—but time-limited—three-year earnings supplement and the offer of intensive employment and support services throughout this period; the "Regular" treatment arm, which offered the same earnings supplement but no intensive support services; or a control arm that remained subject to the provincial welfare system's rules regarding the treatment of earnings and had no access to intensive services.[4]

Building on analyses of SSP Plus by Michalopoulos et al. (2002) and Robins et al. (2008), we measure the short- and medium-run impacts of the SSP Plus services on job search, job retention, and movement along the job ladder for the first five (5) years during and following SSP Plus participation, we reexamine rich longitudinal survey data collected as part of the original evaluation study that also includes a rich set of additional socioeconomic information for each participant. To measure individuals' socioeconomic trajectories over a longer time horizon, we link study participants to their federal tax and employer-employee linked records for the period 1992 to 2015 using individuals' Social Insurance Numbers. This allows us to measure employment, earnings, employer characteristics, and social assistance benefits receipt from two years before random assignment to 20 years afterwards. To estimate the effects of the intensive employment support services offered, we compare outcomes between the SSP Plus and SSP Regular treatment arms; comparisons between these two groups, both of which were eligible to receive the earnings supplement, allow us to isolate the incremental effect of employment services on our outcomes of interest.[5]

The intensive employment and support services of the SSP Plus program led to partici-

[3]Welfare programs are typically referred to as income assistance or social assistance in Canada. We use all terms synonymously.

[4]The other trials estimated the impact of the earnings supplement alone on long-term welfare recipients and recent applicants to welfare, respectively. These demonstration projects have been the subject of multiple studies. See e.g., Blank et al. (2000); Robins and Michalopoulos (2001); Blundell (2001); Blundell (2006); Blundell and Hoynes (2004); Card and Hyslop (2005); Ferrall (2012).

[5]There are separate ongoing studies examining the long-run outcomes for participants in the SSP Recipients and SSP Applicants studies, respectively, and which focus on the long-term effects of being eligible to receive the SSP earnings supplement while having access to the standard services available to all welfare recipients (Card et al. (2024)).

pants increasing their job search rate during the course of the program by 5.6-7.1 percentage points, a substantial increase of 7 to 13 percent. In addition to this increased effort leading to stronger labor force attachment and employment outcomes, SSP Plus participants were more likely to make upward movements along the job ladder: they were 6 to 12 percentage points more likely to experience voluntary separations and job-to-job transitions during the first 18 months of participation in the program, which resulted in them obtaining jobs with 7.8 to 8.9 percent higher hourly wages.[6] This evidence suggests that the one-on-one job coaching provided by the SSP Plus staff resulted in substantial improvements in a diverse set of labor market outcomes throughout the duration of the program.

In terms of individuals' long-term socioeconomic trajectories, the SSP Plus program led to substantial and long-lasting increases in participants' earnings over the 20-year period following the intervention. Participants' annual earnings increase between 21 to 27 percent in proportional terms; in levels, the annual average increase ranges from $1,638 to $2,634 (2010 constant CAD) in the first decade following random assignment and these effects increase to $2,816 well into the second decade. Consistent with the increase in earnings, we find that participants experienced a large 4.5 to 7.4 percentage point increase in the full-time employment rate relative to the earnings supplement-only Regular group up to 12 years following the start of the intervention. Finally, the improved economic trajectories of the SSP Plus program participants are mirrored by a 4.8 to 11.0 percentage point decrease in their receipt of cash welfare throughout the first decade following random assignment. Taken together, our findings reveal that the intensive employment services offered through the program considerably transformed the lives of these individuals.

To understand these long-lasting impacts on employment and earnings, we explore whether the intervention helped individuals obtain more desirable employment at jobs offering wage growth and further career progression. First, we estimate a substantial increase in the number of jobs held by participants during the first four years of the intervention, consistent with the program's ability to aid individuals in moving to "better" jobs over time. Second, we find the support services induced individuals to work in higher-paying firms in the medium term measured by the earnings distribution of workers employed at such firms, consistent with the retention of higher paying jobs or employment with better employers.[7]

This paper's findings offer several important contributions to the literature. A consensus of prior studies summarized in Kahn (2012), Crépon and Van Den Berg (2016), and Card et al. (2018) is that job search assistance and other employment services for individuals from disadvantaged households are effective at increasing employment rates and earnings in the

[6]Consistent with Robins et al. (2008)'s previous work, we find that SSP Plus participants also experienced 5.9 to 7.6 percent higher employment rates, and 18-25 percent more earnings throughout this 5-year period.

[7]Robins, Michalopoulos, and Foley (2008) show in the four-year follow-up of the SSP Plus demonstration that SSP Plus participants were 9.4 percentage points more likely to have jobs with wage rates $2 above the minimum wage than regular SSP participants, a 42-percent difference in proportional terms.

first three years following program participation.[8] Due to data limitations there is very limited evidence on earnings, employment, and other dimensions of individuals' socioeconomic trajectories more than five years after services are delivered.[9] Our study provides compelling evidence that intensive employment support services offered to long-term welfare recipients can have substantial effects on individuals' employment and earnings for up to two decades. The positive long-term impacts of SSP Plus services suggest that intensive, time limited interventions may have long-lasting impacts by affecting the quality of employment matches.[10]

Our findings also contribute to the literature regarding the role of caseworkers in the provision of services to low-income households. Many government agencies rely on caseworkers to support the labor market reintegration of out-of-work individuals; these caseworkers play an important role in shortening the duration of joblessness (e.g., Huber et al. 2017; Arni and Schiprowski 2019; Michaelides and Mueser 2020; Schiprowski 2020; Schmieder and Trenkle 2020). There are relatively few studies, however, that consider whether certain caseworker practices produce better outcomes for individuals receiving services.[11] Our study points to the role of intensive case management and one-on-one job coaching provided both during and after job search in sustaining positive employment and earnings effects that might otherwise have faded, confirming earlier findings of the SSP Plus demonstration's impacts in the short- and medium-term (Quets et al. 1999; Robins et al. 2008).[12]

Finally, the paper also informs the literature on welfare reform and the financial incentives for work faced by low-income households. A large literature examines earnings sup-

[8]Card, Kluve, and Weber (2018) undertake a meta-analysis of estimates of the impacts of active labor market programs (ALMPs) on employment drawn from more than 200 studies using experimental and observational methods, although only a handful of these studies report impacts from more than five years after program completion. A takeaway from studies assessing the long-term effects of employment services is that program impacts may change in magnitude and significance over time, which in turn has important implications for assessments of programs' benefits and cost-effectiveness. See Manoli and Patel (2019) for a summary of recent evidence for the U.S.

[9]Couch (1992), Hotz et al. (2006), Schochet et al. (2006), and Manoli et al. (2018) assess the impacts of active labor market programs up to 10 years following program participation. Schochet (2021) examines the impacts of the U.S.'s Job Corps program up to 20 years and finds modest positive long-term employment impacts but no effects on earnings for cohorts who were in their early twenties at the time of participation.

[10]Our results also parallel Price and Song (2018)'s assessment of the long-term impacts of the Seattle/Denver Negative Income Tax experiment in the US. They find that individuals reduced their work effort while the experiments were ongoing and subsequently went back to work in jobs that were worse in terms of non-pecuniary amenities and possibly were less cognitively demanding but more physically taxing. Working in "worse" jobs ultimately resulted in higher rates of disability applications and earlier retirement.

[11]Riccio et al. (1994) and Scrivener and Walter (2001) are exceptions. Both analyze experiments that vary inputs into the case management production function (the caseworker-to-client ratio and the degree of caseworker specialization, respectively).

[12]Riddell and Riddell (2020) also show that the experimental evidence of the broader SSP demonstration should be reassessed as Social Assistance policy changes implemented during the SSP evaluation period implied that the control group's behavior did not provide an appropriate counterfactual. They document that policy changes were more substantial in BC than NB so this is much less of an issue in the context of New Brunswick and this study in particular.

plements delivered through the personal income tax system as refundable tax credits, the archetypal example of which is the United States' Earned Income Tax Credit (EITC) (Eissa and Liebman 1996; Meyer and Rosenbaum 2001; Hotz and Scholz 2006; Chetty et al. 2013; Hoynes and Patel 2018; Bastian 2020; Schanzenbach and Strain 2021). The consensus from this literature is that the EITC has large extensive margin effects—inducing single mothers to enter the labor force—but small intensive margin responses due to information or adjustment frictions.[13] Kuka and Shenhav (2024) document long-run effects of the EITC expansion on employment and labor earnings for women with children up to two decades following the expansion of the program, similar to those we report here. Our findings indicate that employment services provided both during and after job search are influential in addressing these information and adjustment frictions in a sustained manner, consistent with the earlier literature examining the SSP Plus program.

The article is organized as follows. Section 2 provides contextual information of the study population and describes the intervention. We follow with a description of our data sources in Section 3. Section 4 discusses the experimental design and empirical methodology. Section 5 presents the central empirical results of our study. Section 6 considers potential explanation for our findings, and Section 7 assesses the costs of service provision in relation to its impacts. Finally, Section 8 concludes with a discussion of findings and their broader implications.

2 Context and SSP Plus Program

The Self-Sufficiency Project (SSP) was a welfare-to-work demonstration project funded by the Canadian government starting in the early 1990s, a period which saw sharp increases in the size of Social Assistance caseloads and recipiency rates peaking in 1994 with 12% of all Canadians under 65 on welfare (Kneebone and White, 2014). Most long-term welfare recipients had low earnings potential because of extended absences from the workforce and limited educational attainment (Blank et al. (2000); Card et al. (2018)). For many single parents, leaving welfare for a minimum wage job would not result in any meaningful increase in their net household income since welfare benefits were reduced dollar-for-dollar with employment earnings beyond a small monthly exemption; leaving welfare for work also meant having to pay for childcare and transportation, which further reduced any increase in net income resulting from employment.

The SSP was devised by federal policymakers to test whether changes to financial in-

[13] Kleven (2021) challenges this consensus, arguing that welfare reforms implemented in the 1990s are responsible for much of the increase in single mothers' employment rates that has incorrectly been attributed to the effects of EITC.

centives could help single parents on welfare find work and reduce their reliance on Social Assistance. The program would offer a generous, time-limited earnings supplement to randomly selected single parents in the provinces of British Columbia and New Brunswick who entered the workforce and stopped participating in Social Assistance, with the objective that welfare leavers' wages would increase over time thereby making work more attractive than welfare even after the supplement had ended. The SSP "Plus" study in the province of New Brunswick was designed to estimate the incremental effects of adding intensive employment support services to the offer of the earnings supplement.[14]

Recruitment into the SSP Plus experiment began in November 1994 and ended in March 1995. A total of 892 single parents who were long-term welfare recipients (defined as receiving Social Assistance benefits for at least 11 of the 12 preceding months at the time of the baseline survey) were recruited into the experiment: 293 were randomly assigned to the Plus treatment group, 296 to the Regular SSP treatment group, and the remaining 303 to the control group. The offer of the supplement was made following random assignment, after which time Plus and Regular group members had 12 months to initiate the supplement by finding full-time work and leaving welfare.[15]

Once the supplement payments had started, "initiators" in the Plus and Regular groups were eligible to receive the earnings supplement in any of the subsequent 36 calendar months in which they worked full-time. The SSP earnings supplement was calculated on a monthly basis to be equal to half the difference between actual earnings and a targeted level of earnings. For the SSP Plus study, the targeted level of earnings was equivalent to $30,600 (current CAD) per year in 1994; an individual working 35 hours a week for 52 weeks at the then-minimum wage of $5 per hour would receive an earnings supplement of $10,750, which added to the actual earnings of $9,100 would result in a gross annual income of $19,850. "Non-initiators"—those Plus or Regular group members who were unable to find full-time work within 12 months following random assignment—became ineligible to receive the supplement and reverted to the standard treatment of earnings within Social Assistance.

SSP Plus services were delivered by a non-profit organization, Family Services Saint John, Inc. Shortly after random assignment, Plus and Regular group members were invited to separate information sessions held at the SSP offices in the cities of Saint John and Moncton that

[14]The Self-Sufficiency Project featured three distinct studies: the "Recipient" study carried out in New Brunswick and British Columbia, which examined the impact of the supplement offer on long-term welfare recipients; the "Applicant" study, which took place in British Columbia and assessed whether a supplement reserved for long-term recipients would incentivize new welfare applicants to stay in the caseload for longer to become eligible; and the SSP Plus study. The Self-Sufficiency Project was overseen by a non-profit contracted by the federal government, the Social Research and Demonstration Corporation (SRDC), which was responsible for the design and implementation of the intervention, data collection and analysis, and the dissemination of official reports.

[15]Full-time work is defined as an average of 30 hours per week during a month. In any 12-month period, supplement initiators could work less than full-time in up to two months and have their supplement reduced proportionately.

were staffed by employees of Family Services Saint John, Inc. The purpose of the information sessions was to explain how the earnings supplement worked and to encourage attendees to take advantage of the supplement offer by finding a full-time job and leaving welfare within one year of random assignment. SSP office staff followed up separately with study participants who did not attend the information sessions to provide information one-on-one at home or over the phone.[16]

During the first year following random assignment, SSP staff occasionally contacted Regular group members over the telephone to encourage them to take advantage of the supplement offer. SSP staff could and did refer Regular group members to the services available to all welfare recipients that were offered by government agencies and community organizations; many of these referrals happened following information sessions about the earnings supplements. Provincial welfare office caseworkers could likewise refer any of the study participants who were receiving welfare to the same set of services (Quets et al., 1999).[17] Plus and Regular group members who found a full-time job within a year of random assignment would visit the SSP offices and meet with a staff person to confirm their eligibility and initiate the supplement.[18]

Plus group members received employment support services directly from SSP staff at the SSP offices, as well as at home, and over the phone. Participation in these employment services was voluntary, and Plus group members could choose to participate in all, some, or none of the activities. In the first year after random assignment, all Plus group members could access the employment services through the SSP offices. Plus group members who initiated the earnings supplement could continue to receive services for the duration of the 36 months for which they were eligible to receive the supplement. Those who did not initiate the supplement stopped receiving SSP Plus services when the supplement offer expired 12 months after random assignment and thereafter could only access the same services available to all welfare recipients in the community.

Because of the availability of other employment services delivered through government agencies and non-governmental organizations in the community, SSP staff undertook considerable efforts to encourage Plus group members to participate in the SSP Plus services available to them and to ensure that those services were qualitatively superior to offerings available elsewhere.

[16]The designers of the SSP experiment wanted to ensure that individuals who were offered the earnings supplement correctly understood the incentives they faced so that labor supply responses were not attenuated by information frictions. To that end, study participants were surveyed to assess their knowledge of the supplement: 90.5% of Plus group members and 87.5% of Regular group members understood that with the earnings supplement they would be better off financially by leaving welfare for full-time work (Quets et al., 1999).

[17]Subsidized childcare was one program available to all low-income parents in the province of New Brunswick; childcare was not provided through SSP Plus.

[18]Ongoing payments of the earnings supplement was handled by an out-of-province contractor that processed paystubs mailed in by study participants.

The employment services on offer for Plus recipients through the SSP offices included group activities, such as job club workshops, and personalized offerings, such as employment planning and resume drafting. Individuals' participation in activities was recorded in the SSP case management IT system: nearly all Plus group members completed an employment plan, and approximately two-thirds received resume help, job coaching, and job leads; only one quarter of Plus group members participated in a job club workshop, which was a one- to two-week long in-person group activity (Quets et al., 1999).

A service uniquely available to Plus group members (for which there was no substitute available through the Social Assistance system) was the one-on-one job coaching provided by SSP staff. Following the first information session, every Plus group member was assigned to a job coach. In program documents, the role of the job coach was described as serving as a "counsellor, advisor, advocate, and motivator" (Price, 1995) who provided proactive services to those SSP Plus members. When Plus group members were looking for work, job coaches could help prepare them for interviews, update their resumes, and provide encouragement and feedback before and after meetings with prospective employers.

Once full-time work was secured and the earnings supplement initiated, job coaches continued their outreach to Plus group members, offering advice for retaining employment and advancing careers. Job coaches helped earnings supplement initiators to navigate conflicts with coworkers or bosses and provided encouragement to ask for promotions or raises. Job coaches stayed in touch with Plus group members who had initiated the earnings supplement, having regular check-ins and responding to phone calls. "Any time they called, we called them back", said the former director of the SSP offices.[19] Job coaches sought better employment opportunities for Plus group members by canvassing businesses in the community; leads for jobs were shared with all Plus group members.

We examine evidence from a survey of program participants administered 18 months after random assignment, which supports the view that SSP staff had been successful in creating a "service differential" between Plus group members on the one hand and Regular group members on the other. In Table 1, we report estimates of the treatment differential of SSP Plus participants relative to Regular counterparts: SSP Plus participants were 11.5 percentage points more likely to receive 3+ phone calls, and 28.3 percentage points more likely to receive 10 or more calls from SSP staff, more than a doubling of such contact than the comparison group. In addition, 47.9% of Plus group members reported participating in job search activities, compared to 31.9% of Regular group members, a 16.0 percentage point difference.[20] SSP Plus participants were significantly more likely to receive a referral to a job opening from SSP staff or government caseworker than Regular group participants, a difference of 20.4 percentage points or 57 percent.

[19] Interview with the authors, 2021.

[20] This confirms earlier evidence reported by Quets et al. (1999); Robins et al. (2008).

In the online appendix, we summarize qualitative evidence documenting what Plus group members thought of the services they received and SSP staff members' explanations for the success of the program. Although job coaches provided emotional support and informal counselling to help boost Plus group members' self-esteem and confidence, they did not formally provide mental or behavioural health services. Plus group members who reported serious issues involving mental illness, domestic violence, or substance use were referred to specialized providers in the community.

3 Data

3.1 Data Sources and Construction

To measure the short and medium-run impacts of the SSP Plus intensive case management program on job search, job retention, and movement along the job ladder for the first five (5) years during and following SSP Plus participation, we reexamine rich longitudinal survey data collected as part of the original evaluation study that also includes a rich set of additional socioeconomic information for each participant (Michalopoulos et al. 2002 and Robins et al. 2008). This analysis of program take-up and short-term impacts uses survey data collected at baseline and at 18-, 36-, and 54-months.

The baseline survey, which was administered by Statistics Canada enumerators prior to random assignment, collected information about respondents' demographics, family backgrounds, employment histories, use of childcare, and attitudes towards work and welfare. The baseline survey was completed by all 892 study participants. The next three waves involved telephone surveys of study participants: these asked about participation in employment services, job search and retention, wages, and job amenities. The second (18-month) wave was fielded in February through October 1996; this wave successfully contacted 862 individuals in the sample. The third and fourth waves were fielded towards the end of the program period (36-months) in September through May 1997-1998 and post program completion (54-months) in March through August 1999 to capture such medium-term effects. These waves successfully reached 820 and 765 study participants, respectively. Survey response rates are thus 97, 92, and 86 percent and are balanced across SSP Plus, SSP Regular, and Control groups (see Appendix Table A.3). In addition, administrative data from welfare and SSP offices recorded hours worked and earnings on a monthly basis throughout this five-year period.

To measure individuals' socioeconomic trajectories over a longer time horizon, we link study participants to their federal tax and employer-employee linked records for the period 1992 to 2015 using individuals' Social Insurance Numbers. The baseline survey of study

participants was linked using an anonymized unique identifier derived from individuals' Social Insurance Numbers (SINs) to federal tax records. Specifically, the data were linked to the Longitudinal Worker File (LWF), an administrative dataset containing information from four sources: T1 personal income tax filings, T4 statement of remuneration paid forms issued by firms to their employees each year, records of employment submitted by firms to the federal government when there is an interruption of earnings, and the Longitudinal Employment Analysis Program (LEAP) database which contains annual employment information for each employer in Canada. The records were also linked to T5007 statement of benefits forms submitted by provincial governments to the federal government on behalf of welfare recipients. Whenever possible, linkages are made for the two calendar years preceding random assignment and up to 21 years afterwards. This allows us to measure employment, earnings, employer characteristics, and social assistance benefits receipt from two years before random assignment to 20 years afterwards. Further information about the administrative data and the linkage process can be found in the Online Appendix.

A concern with linking study participants to their tax filings is the possibility of bias arising from differential rates of tax filing across the Plus, Regular, and control groups, particularly if tax filing is correlated with employment status or earnings. Table A.4 lists the linkage rates for study participants to records in Statistics Canada's T1 historical personal master file, which includes all T1 income tax forms filed by study participants (including tax forms filed late, i.e., up to several years after the filing deadline): each estimate represents the average annual filing rate over four-year time periods. The average annual matching in the first four years following random assignment is above 98% for the Plus, Regular, and control groups. The high rates of tax filing among lone parent welfare recipients is attributable to the fact that tax filing is required to receive generous federal child benefits and other refundable tax credits. The average annual match rate declines over time for all three groups, although the rate remains high—between 87% and 90%—even 17 to 20 years after random assignment. There are no statistically significant differences in the match rates between the Plus, Regular, and control group members during any four-year period following random assignment.

Variables detailing employment-related outcomes were constructed using information from T1 and T4 tax filings. If a T1 file was available for the individual, the income from paid employment (referred to as T4 earnings) were taken from the T1; if a T1 file was not available (i.e., an individual did not file taxes), then earnings were set equal to the sum of earnings reported on all T4s filed by employers on behalf of the individual.[21] An individual was defined to be employed if they had earnings equal to three-months of work at the prevailing minimum wage.[22] Full-time employment is defined on the basis of whether an individual

[21] T4 earnings are income from paid employment and include wages, salaries, and commissions. Employers provide T4 forms both to their employees and to the federal government.

[22] The exact formula is $3 \times 4.33 \times 30 \times$ minimum wage, where 4.33 is the average number of weeks in a month

had earnings equal to or greater than the equivalent of 12-months of full-time work at the prevailing minimum wage.[23] The use of earnings thresholds as a proxy for the type of employment was necessitated by the fact that hours worked are not regularly reported in administrative data.[24]

Study participants are considered to have received welfare during the year if they or their spouses or common-law partners reported income from Social Assistance on their respective T1 tax forms or if study participants or their spouses or common-law partners are linked to T5007 statement of benefits slips issued by a provincial government. Participants were linked to the T1 Family File (T1FF), a component file in the LWF, to determine the presence of a spouse or common-law partner.

To investigate whether the services offered through SSP Plus affected the quality of employment found by Plus group members, additional variables were constructed either from T1 personal income tax filings or from Statistics Canada's Longitudinal Worker File (LWF), which contains linked employer-employee data. The first employment quality variable under consideration is an indicator for paying union dues, which is equal to one if study participants deduct annual fees paid to a union or a professional membership organization from the income on their T1 filing. The second is a variable that records the number of firms that a study participant works for over the course of a calendar year; this variable is derived from summing the number of unique firm identifiers associated with a study participant each year in the LWF. The third, the length of job tenure, is a variable that records the number of calendar years that a study participant is employed by a firm. Finally, employer size, mean log earnings and the earnings levels at the 25th-, 50th-, and 75th-percentiles of each firm's payroll distribution are constructed using the LWF database. Further information about the construction of these variables is included in the Online Appendix.

3.2 Descriptive Statistics

For the purposes of illustrating the typical employment, earnings, and Social Assistance trajectories of individuals who were single parents on welfare in the early 1990s, Figure 3 shows the average rates of full-time employment, real earnings, and welfare receipt in the control group over the approximately 20-year time period in our study. Consistent with the conditions for participation in the program, the population of long-term welfare recipients had very low full-time employment rates even two years following the start of the interven-

and 30 is the threshold number of hours used in Statistics Canada's definition of full-time work. The minimum wage is equal to the prevailing minimum wage at the end of the year in the province or territory in which the individual resided (at the end of the tax year).

[23]The formula in this case is $12 \times 4.33 \times 30 \times$ minimum wage.

[24]Firms only report hours worked on record of employment (ROEs) that are issued following an interruption of earnings.

tion, but their employment trajectories improved considerably over the following years: the full-time employment rates of these long-term welfare participants were already 38 percent ten years later, and increased moderately in subsequent years (Figure 3, Panel A). Similarly, we observe substantial increases in the average earnings of these individuals over this long-term period (Panel B), as well as a large reduction in their Social Assistance participation rate (Panel C).

For the main outcome variables considered in this paper, there are no statistically significant pre-treatment differences between study groups in the unadjusted averages in the two years preceding random assignment (see Table A.1).

Additional descriptive statistics and baseline balance on a broader set of baseline individual and household characteristics is presented in Online Appendix Table A.2. Mean values for the Plus, Regular, and Control groups are shown, as well as differences in means and standard errors of these differences.[25] Over 95% of study participants were women; all participants were parents, with 61% having 1 child, 29% having two children, and the remainder having 3 or more children. Close to half of study participants were between the ages of 19 and 29 at the time of random assignment, another third were 30-39 years old, 14% were 40-49 years old, and the small remainder were 50 or older. 55% of participants had never been married; another 42% reported being separated, divorced, or widowed; a small number of study participants, around 2%, responded they were married or in a common-law relationship although they reported being single to the welfare authorities and were thus included in the SSP study. More than 90% of study participants had no more than a high school education, and two-thirds reported having a mother or a father who did not finish high school. With respect to participation in Social Assistance, approximately 20% of respondents had received welfare for 10-23 of the previous 36 months; 25% had received welfare in 24-35 of the previous 36 months, and 44% had received welfare in each of the 36 months prior. More than 90% of study participants reported they had previously held a paid job, with an average of almost 7 years worked. Around a quarter of study participants reported working at baseline, with 8% working 30 hours per week or more.

Consistent with the evidence reported on the short-run effects of the SSP Plus program (e.g., Robins, Michalopoulos, and Foley 2008), there are some statistically significant differences in baseline characteristics across the Plus and Regular groups. Plus group members were less likely to have grown up in single family households or in households that received welfare. They were less likely to report not being able to find work because of limited educational attainment and were more likely to be confident about finding trustworthy childcare. In some instances, these differences might imply that Plus group members were less

[25] Although baseline survey responses are available for all study participants and held by Statistics Canada, many averages cannot be reported due to Statistics Canada's rules for small cell suppression. Accordingly, we reproduce the summary statistics table from Quets et al. (1999). 286 of 293 Plus group members, 288 of 296 Regular group members, and 288 of 303 control group members responded to the 18-month survey.

disadvantaged than Regular group members. Other statistically significant differences in baseline characteristics pointed in the direction of being less able to take advantage of the supplement offer: Plus group members were more likely to have three or more children and to have children of younger ages compared to Regular group members. An F-test of the joint hypotheses of significance fails to reject the null hypothesis that all differences are zero. This test implies that randomization was successful at achieving statistically similar treatment and control groups at baseline.

4 Empirical Methodology

We estimate the average effects of the offer of employment support services on individuals' short and long-term socioeconomic outcomes. First, we graph means for every treatment arm in each year post-randomization to compare outcomes and describe patterns in the data. Second, to focus on the additional impact of the intensive support services, we estimate intent-to-treat (ITT) impacts of the SSP Plus group relative to the Regular SSP group offered the time-limited financial incentives only. These effects are estimated using the linear specification:

$$Y_{it} = \beta_{Plus,\tau} T_{Plus,i\tau} + \beta_{Reg,\tau} T_{Reg,i\tau} + \delta_t + \epsilon_{it} \tag{1}$$

where Y_{it} is the outcome of interest for study participant i in time period t; $\beta_{Plus,\tau}$ is the coefficient on an indicator variable $T_{Plus,i\tau}$ for whether the participant is assigned to the Plus group in post-randomization year t belonging to the period grouping τ; $\beta_{Reg,\tau}$ is the analogously defined coefficient on an indicator variable for assignment to the Regular group, $T_{Reg,i\tau}$; and δ_t are period fixed effects.

Time groups depend on the data sources and outcomes measured. Survey outcomes use survey waves as time units: 18-month, 36-month, and 54-month waves. The SSP Project administrative data on employment and earnings use months between survey waves as groupings (i.e., 1-18 months, 19-36 months, 37-54 months). As for the evaluation using annual tax records, we report estimates for groupings of 4-year intervals τ post-random assignment (i.e., years 1-4, 5-8, 9-12, 13-16, and 17-20); this allows us to effectively summarize the longitudinal patterns in the data and increase statistical precision.[26] We cluster standard errors at the individual level.

The specification above is estimated using observations from all three treatment arms, such that $\beta_{Plus,\tau}$ and $\beta_{Reg,\tau}$ respectively represent the impacts of the SSP Plus and Regular treatments relative to the control group over each time interval. The incremental average

[26]The grouping of years 1 through 4 following random assignment covers the 12-month supplement initiation window and most of the 36-months for which the supplement was available to initiators in the Plus and Regular groups.

impact of access to SSP Plus services is calculated by subtracting the average impact of receiving only the offer of the earnings supplement from the average impact of receiving both the offers of services and the supplement: $\beta_{Services,\tau} = \beta_{Plus,\tau} - \beta_{Reg,\tau}$.[27] We compute standard errors for the difference based on the estimated coefficients and covariance matrices.

We do not convert the ITT estimates into treatment-on-the-treated (TOT) estimates. As was noted in Section 2, usage of SSP Plus services, including involvement in job coaching, was voluntary: the intensity of treatment therefore varied depending on individual Plus group members' willingness to participate and whether they initiated the earnings supplement (as services continued to be provided only to supplement initiators one year after random assignment). In the absence of a way to meaningfully scale the ITT estimates by the intensity of services received, we err on the side of caution by not attempting to calculate any TOT effects.

A concern that is commonly raised in the context of randomized evaluations of labor market interventions is the existence of displacement effects that violate the stable unit treatment value assumption (see Crépon et al. 2013). The experimental design of the SSP Plus study does not allow us to separately identify the direct effects of the offer of employment services from the displacement effects that might arise from Plus group members taking job opportunities away from Regular group members.[28] The estimation of the general equilibrium effects of the widespread provision of intensive employment services is also beyond the scope of this paper.[29] In addition, due to sample size limitations and restrictions in our ability to show estimates for small cell sizes, we do not report treatment heterogeneity analyses of both the survey or administrative data. Finally, because we do not have information on the identity of case workers or case worker characteristics, we are unable to perform heterogeneity analyses to assess the role of caseworker assignment on participant outcomes (e.g., Huber et al. 2017; Arni and Schiprowski 2019; Michaelides and Mueser 2020; Schiprowski 2020; Schmieder and Trenkle 2020).

Recognizing the degree of imbalance in a small set of baseline characteristics (see Section 3.2), we test whether regression adjustment affects the balance in pre-treatment employment and earnings outcomes.[30] Conditioning on baseline characteristics actually leads to

[27] Comparisons between the Plus group and the control group generate estimates of the combined effects of the offer of the earnings supplement and the offer of employment services; these estimates are included in the Online Appendix.

[28] Crépon et al. (2013) vary the share of jobseekers who are randomly assigned to receive an offer of intensive employment counselling across different regions in France; comparisons across regions reveal that control group members were unemployed for longer in regions where the share of jobseekers assigned to treatment was higher.

[29] Lise et al. (2004) use estimates from the SSP Recipients study to parameterize a dynamic general equilibrium model and simulate the effects of expanding the offer of a time-limited earnings supplement to all welfare recipients, not just single parents. They report general equilibrium effects on wages for workers who are not welfare recipients.

[30] In the original SSP Plus reports published by the Social Research and Demonstration Corporation, esti-

an increase in pre-treatment differences in the main outcomes of interest. As a result of this analysis, our preferred specification is one without regression adjustment for baseline differences; we report estimates from the adjusted specification in the Online Appendix.

5 Results

This section employs the empirical strategy described above to investigate the effects of the program on individuals' job search effort, trajectories, and long-term socioeconomic outcomes.

5.1 Effects on Job Search, Separations, and Transitions

In Table 2, we estimate causal effects of the SSP Plus program on participants' job search effort and transitions. The intensive employment and support services of the SSP Plus program lead to participants increasing their job search rate during the course of the three years of the program by 5-7 percentage points, a substantial increase of 7 to 13 percent relative to the comparison group (column 1). This also resulted in stronger labor market attachment, as represented by 4.6-9.9 percentage points higher reported employment rates, a 7-17 percent increase in proportional terms (column 2).

In addition to the stronger labor force attachment, SSP Plus participants were more likely to make upward movements along the job ladder. They were 10.4 percentage points more likely to experience job separations during the first 18 months of participation in the program, a considerable 32 percent increase in such transitions (column 3). These are driven mainly by voluntary transitions: they were respectively 12 and 6 percentage points more likely to experience voluntary separations and job-to-job transitions (as opposed to involuntary ones), approximately doubling such transition rates relative to the comparison group (columns 4-5).

mates were adjusted using a linear regression specification that included as covariates study participants' average monthly earnings in the four quarters prior to random assignment, average monthly welfare payments in the four prior quarters, age, age squared, and indicators for being female, having less than a high school education, working at baseline, whether liking work, whether expected to be married in a year, and indicators for missing responses for any of the preceding variables.

5.2 Short and Medium-Term Effects on Labor Market Outcomes

The additional SSP Plus program helped induce participants to achieve stronger labor market outcomes throughout the duration of the program and the subsequent follow-up period. Figure 1, Panel A shows the trends in monthly employment rates across treatment arms. These suggest that employment rates of Plus group participants were approximately 4-7 percentage points greater throughout the period and were more pronounced 3-4 years following randomization. We observe a similar pattern when we examine trends in monthly earnings: these are on average 18-25 percent higher among SSP Plus participants than the comparison group, with the differences becoming more pronounced and stable during the latter period (Panel B).

We report estimates of equation (1) for such short and medium-term outcomes in Table 3. The estimates for monthly employment rates in each survey round confirm the graphical patterns shown above: these were 4.4-7.6 percentage points greater throughout the period and these were more pronounced in the last survey round, a 10.3-17.3 percent increase in proportional terms (column 1). Similarly, monthly earnings are 73.7 CAD greater on average during the first 18 months, and gradually increase to up to 167 CAD on average during the 3-4 year period following assignment (column 2). This gap in earnings is partly driven by increases in the extensive and intensive margin of labor supply: monthly hours worked are approximately 3.2-9.8 hours greater among treated individuals relative to the comparison group, although these are somewhat imprecisely estimated (joint p-value = 0.09; column 3).

An important driver of the increase in earnings is the fact that Plus participants obtain jobs with better pay. Figure 2, Panel A shows the trends in hourly wage rates (in constant 2010 CAD) across treatment arms among employed individuals. Hourly wages start diverging following the first 18 months after random assignment; the hourly wage gap is approximately 0.50 CAD and increases to approximately 0.75-1.00 CAD on average during the latter two-year period. The gap is pronounced in spite of possible compositional differences resulting from Plus group being more likely to be employed during this period.

Analogous estimates of equation (1) for hourly wage rates among those employed confirm the graphical patterns shown above. These were not significantly greater during the first 18-month period but increase substantially by 0.64-0.78 CAD on average during the three subsequent years (a 7.8 to 8.9 percent increase in proportional terms; column 4). We also find suggestive evidence that such higher-paying jobs are more likely to have union coverage or to offer health/drug/dental or pension benefits, although the gap relative to the Regular group is not statistically robust (columns 5-6). In overall terms, the evidence strongly points to the additional supports and one-on-one job coaching provided by the SSP Plus staff resulting in substantial improvements in a diverse set of labor market outcomes throughout the duration of the program. Importantly, the incremental impacts of

Plus services on full-time employment and earnings were larger at the end of study period as incentive payments ended.

It is important to qualify some aspects of the interpretation of these medium-term impacts. First, it is plausible that these impacts depend to a certain extent on the presence of a large income infusion in the early years of the program as a result of the SSP income supplement; it is possible that the support services in addition to the income supplements jointly generate such differential response. Second, since the initiation rates for the income supplement were 16.3 percentage points greater in the SSP Plus group than the Regular SSP group (53.1% vs. 36.8%, as highlighted in Robins et al. (2008)), it is plausible that the differential income supplement receipt among the SSP Plus group is one of the drivers of the increase in agency for the Plus program participants. In line with the previous study, we show that the impacts for the SSP Regular group fade out after four years, as labor market outcomes for the Regular SSP and the control group converge. This suggests that the income supplement alone is not the driver of such responses among the Plus group.

5.3 Long-Term Effects of the SSP Plus Program on Employment, Earnings, and Welfare Receipt

A central objective of the SSP Plus demonstration was to determine whether combining the offer of a time-limited earnings supplement with intensive employment services would do more to help lone parents on Social Assistance find and keep jobs than offering the supplement alone. To that end, this section considers the long-term incremental impacts of SSP Plus support services on employment, full-time employment, real earnings, and welfare receipt.

5.3.1 Employment

Figure 4 provides an illustration of the trends in the annual rates at which Plus, Regular, and control group individuals were employed (defined as having total employment income equivalent to at least three months' earnings from full-time work at minimum wage). As shown in Panel A, individuals in both Plus and Regular groups were employed at higher rates than those in the control group in the first two calendar years after random assignment, which corresponds to the 12-month period during which time it was necessary to secure a full-time job in order to become eligible to receive supplement payments over the subsequent 36 months.[31] Throughout the first decade post-randomization, the Plus group's em-

[31] For most SSP Plus study participants, the 12-month window for initiating the earnings supplement spans part of year 1 and part of year 2 in our data. This is because our years after random assignment variable uses

ployment rate is higher than the Regular group's; by the second decade post-randomization, the rates of employment for both the Regular and control groups catch up to the Plus group such that the employment rates for all three groups overlap from year 14 onward.

Trends in the rates of annual full-time employment in the Plus, Regular and control groups are depicted in Panel B of Figure 4. In the first four years following random assignment, Plus and Regular group participants are more likely to be employed full-time than are control group participants, consistent with the effects of the incentive for full-time work provided by the earnings supplement. In the fifth year after random assignment, the rates of annual full-time employment drop steeply for both Plus and Regular groups but not for the control group: the timing of the decline corresponds to the termination of the earnings supplement and the reversion to the status quo treatment of earnings within the federal and provincial tax-and-transfer systems. From year 6 until year 12, the SSP Plus group experiences consistently greater full-time employment rates than the comparison group. The trend in the rates of full-time employment is increasing for all three groups, although there is little difference in the level of full-time employment between the Regular and control groups.

Panels C and D of Figure 4 present the four-year average estimates of the incremental impact of SSP Plus services as horizontal dashed line segments spanning four-year periods; 90% confidence intervals for these estimates are represented by transparent grey bars, and the difference in the annual rates of employment are overlaid as a solid black line with statistically significant annual differences at the 90% level denoted by a cross marker. As noted in column 1 of Table 4, in years 1-4, Plus group members are on average 8.2 percentage points more likely to be employed (a 20% increase relative to Regular group members, of whom an average of 40% are employed over the four-year period). For years 5-8, Plus group members are 6.8 percentage points more likely to be employed (a 13% increase over the Regular group average of 52%). For years 9-12, 13-16, and 17-20, the estimates of the incremental employment impacts of SSP Plus services are positive in sign but smaller in magnitude and not statistically significant.

Table 4, column 2 reports the point estimates and standard errors for the four-year impacts of SSP Plus services on the rates of full-time employment. The point estimates indicate that the full-time employment rate in the Plus group is higher than the Regular group's by 6.4 percentage points in years 1-4 (a 27% increase relative to the Regular group's four-year average of 24%), by 6.4 percentage points in years 5-8 (a 21% increase relative to the Regular group's four-year average of 30%), and by 7.4 percentage points in years 9-12 (a 19% increase relative to the Regular group's four-year average of 38%). The year-specific estimates show robust evidence of differential increases in employment between the third and ninth years post-randomization (Figure 4, Panel D). Point estimates of the incremental effects of

calendar years and most study participants' 12-month initiation windows spanned two calendar years. For study participants randomized in the last two months of 1994, 1994 is designated year 1 and 1995 is year 2; for study participants randomized in the first three months of 1995, 1995 is year 1 and 1996 is year 2.

SSP Plus services for years 13-16 and 17-20 post-random assignment are positive in sign but not statistically significant.

5.3.2 Earnings

Panel A of Figure 5 depicts trends in the level of earnings for the SSP Plus, Regular, and control groups. Throughout the SSP demonstration period, average earnings for the Plus group were higher than the Regular group, and average earnings for both the Plus and Regular groups were higher than for the control group. Both the Plus and Regular groups experience a decline in average earnings between years 4 and 5, which as noted above corresponds to declines in employment and the termination of the SSP earnings supplement. After year 5, the Plus group continues to have robustly higher average earnings compared to both the Regular and control groups throughout the 20-year follow-up period. In contrast, average earnings for the Regular group are no higher than the average earnings in the control group.

Turning to the estimates of the incremental impact of Plus services presented in Table 4, the average effect of SSP Plus services leads to an increase in real annual earnings in years 1-4 by $1,638 compared to the Regular group annual average of $6,025, or a 27% relative increase.[32] For years 5-8, Plus group members earn on average $2,010 more per year than Regular group members who have average annual earnings of $7,575, again a 27% relative increase. And for years 9-12, 13-16, and 17-20, the estimates of the average earnings effects are $2,634, $2,998, and $2,816, respectively, representing increases of approximately 27%, 23%, and 21% relative to the average annual earnings of Regular group members.

The long-term increase in average earnings for Plus group members may be attributable to a combination of extensive and intensive margin labor supply effects and to impacts on wages earned. In earlier years post-random assignment, the incremental impacts of Plus services on the probability of having any employment are larger in magnitude than the impacts on the probability of full-time employment, which implies that extensive margin responses may explain at least some of the higher average earnings for the Plus group. Later in the post-randomization period, Plus group members are no more likely than Regular group members to have any employment but are still significantly more likely to be employed full-time; this implies that a combination of additional hours worked and higher wages—but not higher rates of labor force participation—may explain the observed earnings differential over most of the follow-up period.

[32]This estimate of the average effect on earnings is qualitatively similar to the implied estimates from those obtained from survey and administrative data: $1,286, during the 4.5 years evaluation period.

5.3.3 Welfare Receipt

The increase in Plus group members' rates of employment and earnings relative to Regular group members is mirrored by a decrease in welfare receipt. Annual trends in welfare receipt by experimental group are presented in Panel A of Figure 6: from year 1 through year 4 post-randomization, the rate of welfare receipt declines for the Plus and Regular groups relative to the control group, with the decline being greatest for the Plus group. After year 5, there is little difference in the rates of receipt between Regular and control groups, although Plus group members continue to receive Social Assistance at lower rates. Over time the rate of decrease in welfare participation for the Regular and control groups overtake the rate of decrease for the Plus group, resulting in convergence in the rate of welfare participation in the second decade post-randomization.

Estimates of the four-year average treatment effects associated with the incremental effects of SSP Plus services, with annual differences in welfare participation between the Plus and Regular groups overlaid, are presented in Panel B, and point estimates and standard errors are presented in column 4 of Table 4. In years 1-4, Plus group members are 5.9 percentage points less likely to participate in Social Assistance than Regular group members (of whom approximately 83% receive welfare, a relative difference of 7%); in years 5-8, Plus group members are 11 percentage points less likely to be on Social Assistance (compared to an average of 61% in the Regular group a relative difference of 18%). Estimates of the average annual incremental effects of SSP Plus employment services on welfare receipt in years 9-12, 13-16, and 17-20, respectively, are all negative in sign but are smaller in magnitude and not statistically significant.

Taken together, the decrease in welfare receipt along with the increases in any employment, full-time employment, and earnings show that the intensive employment support services offered to the Plus group through SSP offices had impressive short- and long-term impacts on labor market outcomes. That the SSP Plus treatment would produce sustained impacts was not a foregone conclusion while the study and earnings supplement payments were ongoing: official reports detailing results at 18 and 36 months post-random assignment noted that the difference in the monthly rate of full-time employment between the Plus and Regular groups was not statistically significant even though Plus group members had initiated the earnings supplement at a higher rate (52% of Plus group members initiated the supplement by finding full-time employment within 12 months after randomization; only 35% of Regular group members did so) (Quets et al. 1999; Lei and Michalopoulos 2001). These initial results suggested that Plus employment services may have pushed less work-ready welfare recipients into full-time jobs they could not hold on to. It was only towards the end of the SSP Plus study that there began to emerge differences between the Plus and Regular groups: using survey data at 54 months following random assignment Michalopoulos et al. (2002) and Robins et al. (2008) find that the Plus group had significantly higher rates of

full-time employment, higher average earnings, and lower welfare receipt than the Regular group. The persistence of treatment effects for the Plus group as the earnings supplements were wound down stands in contrast to the rapid fade out of impacts for the Regular group, whose rates of full-time employment and earnings converged to the control group's shortly after the end of the supplement offer.

6 Mechanisms

We move now to a consideration of potential mechanisms that could explain how the Plus treatment's support services generated long-term impacts on employment and earnings. First, we examine whether Plus group members were more likely to find better jobs that offered opportunities for wage growth and career progression. Second, we assess whether Plus group members were more likely to pursue educational upgrading as a way to improve their long-term employment prospects. Finally, we look at how the Plus treatment may have affected participants' non-cognitive skills by changing beliefs about agency and the ability to affect one's own circumstances in life.

6.1 Quality of Employment and Employers

To explore whether SSP Plus services helped individuals find higher-quality, better-paying jobs, we first consider whether there are differences between the Plus and Regular groups with respect to the number of employers. Although a long-standing literature documents a positive association between longer job tenure and higher wages (Abraham and Farber 1987; Topel 1991), it may be the case that on-the-job search and more frequent job-changing can improve the quality of worker-firm matches, leading to more output and higher wages (Menzio and Shi, 2011). While service provision was ongoing, SSP staff encouraged working Plus group members to seek out raises and promotions with their current employers and provided job leads for better-paying positions at other firms. Quets et al. (1999) note that, among supplement initiators, Plus group members were less likely than Regular group members to be working in the same job as the one in which they started receiving the supplement and were more likely to have left a firm for a better employment opportunity elsewhere.[33, 34]

[33] Because the share of supplement initiators was higher in the Plus group than the Regular group, differences across the two sets of initiators could be the result of treatment or differences in composition.

[34] Using a dynamic structural model, Ferrall (2012) argues that the Plus treatment generated a higher rate of job offers for Plus group members, which allowed them to reject unfavourable offers before accepting a better alternative. We do not observe job offers or rejections in our data.

The estimates in the first column of Table 5 show that Plus group members work for an additional 0.17 firms over the first four years post-randomization relative to the Regular group's four-year average of 0.55 firms per year. Since the average number of employers is calculated using all study participants, including those who are not employed and therefore have zero employers, the higher number of employers per year among Plus group members may be attributable to the fact that more Plus group members were employed compared to the Regular group.[35]

To see if Plus group members were more likely to work for "better" employers over time, we test for differences in measures of the distributions of earnings across firms, namely earnings at the 25th, 50th, and 75th percentiles of each employer's payroll distribution. As evidenced by point estimates in columns 2 and 3 in Table 5, in the first four years post-random assignment (corresponding to the time that the earnings supplement was available to initiators), there is no difference between the Plus and Regular groups. In years 5-8 post-random assignment, Plus group members are employed at firms whose workers at the 25th- and 50th percentiles of the payroll distribution have earnings that are 13.5% and 11.4% higher, respectively, than workers at the 25th- and 50th percentiles for firms at which Regular group members are employed. There is suggestive evidence of differences in these outcomes for years 9-12, although these are not statistically significant; similarly, during these years there is suggestive—but not statistically significant— evidence for differences in earnings at the 75th-percentile of the firm payroll distribution (see Figure A.1 in the Online Appendix).[36] A possible interpretation of these results is that while employer quality did not initially differ between the Plus and Regular groups during the years that the earnings supplement was on offer, the skills that Plus group members learned from their job coaches about how to seek out better opportunities helped them move to higher-paying firms over time.

One caveat with respect to interpreting the results for the firm payroll distributions is that we have observations only for those study participants who work for an employer that satisfies our definition of a firm (i.e., an organization that has 10 or more employees whose total earnings are equal to at least one quarter full-time minimum wage). Large differences in the shares of study participants who are linked to employers meeting our definition of a firm across experimental groups would make it difficult to disentangle the treatment's effects on the quality of employment from changes in composition of study participants who are employed in firms that are included in our sample. Table A.6 in the Online Appendix shows that differences in the rates of linkages between Plus and Regular group members and

[35]Due to Statistics Canada's restrictions on the disclosure of statistics generated by dropping small numbers of observations, it is not possible to use Lee bounds to determine whether the number of employers was higher in the Plus group compared to the Regular group among those study participants who would have been employed in either treatment arm.

[36]In Table A.7 in the Online Appendix, we consider other correlates of employment and employer quality, including the duration of job tenure, unionization coverage, firm size, and mean log earnings at each firm; we do not, however, find any statistically significant differences for these variables.

employers meeting our definition of firms are statistically significant only during the first four years post-random assignment. Because the magnitude of the differences in linkage rates for the Plus and Regular groups are small for most of the post-earnings supplement period (i.e., after year 4 relative to random assignment), we have greater confidence that our statistically significant increases in years 5 to 8 for mean log earnings and earnings at the 25th- and 50th-percentiles are indicative of improvements to employer quality rather than being artefacts of changes to the composition of matched employees across treatment arms.[37]

6.2 Educational Upgrading

We next examine whether the long-run differences in the Plus and Regular groups' earnings and employment trajectories can be explained as a result of differential investments in human capital. The design of the SSP earnings supplement—specifically, the one-year time limit on the initiation of payments—is characteristic of a "work first" intervention that prioritizes short-term job-finding over long-term investments in human capital through education and training that may incur short-run costs. Using data from the SSP Recipients study, Riddell and Riddell (2014) find that the time-limited earnings supplement offered as part of the SSP study may have led some treatment group members to forgo upgrading their skills through education and to instead enter the labor force quickly. In turn, this helps to explain why the effects of the earnings supplement dissipated for the treatment group of the Recipients study: control group members of that study were more likely to have received a high school diploma or to have attended community college or vocational school by the end of the study period.

We undertake a similar analysis of educational upgrading but instead compare the Plus group to the Regular group. Although both treatment groups faced similar incentives to find full-time work within the first year following random assignment, we hypothesize that Plus group members may have been encouraged to pursue educational upgrading by supportive case workers. Columns 1 and 2 of Table 6 present results showing the difference in the share of individuals who reported having a high school diploma or who had ever attended a community college or vocational school. While the share of Plus group members with a high school diploma is statistically significantly higher by approximately 4 percentage points by the time of the second survey at 36 months after random assignment, by the endline survey at 54 months there is no significant difference between Plus and Regular groups. With respect to the question of whether the respondent had ever attended a course at a community college or vocational school, at endline the Plus group was approximately 9.5 percentage

[37] As noted previously, Statistics Canada's small cell disclosure restrictions prevent us from presenting analyses using Lee bounds.

points more likely than the Regular group to report ever having attended. These results provide some evidence that educational upgrading may partly explain why the Plus group had higher earnings in the two decades following random assignment.[38]

6.3 Non-Cognitive Skills

As noted above, recent evidence highlights that less-educated workers with stronger non-cognitive skills are better able to find and keep employment at high-paying firms, pointing to the importance of these attributes in the workforce (Aghion et al. 2019; Heller and Kessler 2022).[39] One non-cognitive skill that has received particular attention is the "locus of control", the set of beliefs and attitudes that individuals have regarding the causal relationship between their behavior and its consequences (Cobb-Clark, 2015). Individuals with an internal locus of control believe that it is primarily their own actions that affect their life outcomes, whereas individuals with an external locus of control believe that factors outside themselves are what matter. With respect to the relationship between the locus of control and the labor market, studies have found that unemployed individuals with an internal locus of control search for jobs more intensely than individuals with an external locus of control (Caliendo et al., 2015), set higher reservation wages in expectation of receiving more job offers (McGee, 2015), and are more likely to participate in training (Caliendo et al., 2022).

Evidence that labor market interventions may affect the locus of control comes from Gottschalk (2005), who uses survey responses from the SSP Recipients study, comparing the outcomes of Regular SSP participants to individuals in the pure control group.[40] We build on this previous study to determine what effect Plus services had on participants' locus of control. To do this, we examine responses to survey questions asked while the SSP Plus study was ongoing. At the baseline, 36-month, and 54-month surveys, study participants were asked whether they strongly agreed, agreed, disagreed, or strongly disagreed with the following statements: (1) there is little that I can do to change many of the important things in my life; (2) I have little control over the things that happen to me; (3) sometimes I feel as if I'm being pushed around in life; and (4) I am often angry that people like me never get a fair chance to succeed. We examine responses to each question using an indicator variable equal to one if the respondent agrees or strongly agrees with the statement. Affirmative responses are indicative of an external locus of control; disagreement indicates an internal

[38] Riddell and Riddell (2014) found in the SSP Recipients study that there was much more educational upgrading in BC than in NB; the weak effect reported here for NB is consistent with their findings.

[39] Kautz et al. (2014) as the "personality traits, goals, character, motivations, and preferences that are valued in the labor market, in school, and in many other domains." Because non-cognitive skills are important in many facets of life, an intervention that modifies those skills may have long-lasting impacts.

[40] Gottschalk instruments for cumulative hours worked using an indicator to the Regular SSP group in the Recipients study (i.e., assignment to the offer of the earnings supplement) and finds that exogeneous increases in hours worked increases the internality of the locus of control.

locus of control.

As is shown in columns 3 through 6 of Table 6, compared to Regular group members, Plus group members were less likely to agree with almost all of the statements providing some suggestive evidence that Plus services may have changed mindset. The attenuation in differences between Plus and Regular group responses at 54 months relative to 36 months may indicate a reversion-to-the-baseline phenomenon, as documented by Preuss and Hennecke (2018); one possible explanation is that Plus services made participants feel more in control of their lives while they were available, but these effects dissipated once the services ended. At the 36-month mark, Plus group members who had initiated their earnings supplement would still have been in contact with their job coaches. However, by the 54-month mark, all job coaching had been completed for six months or longer.

Because of the relatively small sample sizes of the SSP Plus study, we lack the statistical power necessary to conclude that the differences between the Plus and Regular groups are significant; nonetheless, we believe that understanding the psychological effects of employment services may be a fruitful avenue for future studies to consider.

7 Benefits and Costs of SSP Plus

At the time that the SSP demonstration was conceived, a central question for policymakers was whether the offer of a generous, time-limited earnings supplement would "pay for itself" by decreasing dependence on welfare. The answer from the SSP Recipients study was "no": although welfare payments were reduced and income tax receipts increased with additional earned income, these increases to the government's net revenue were offset by the additional costs of earnings supplement payments (Michalopoulos et al., 2002). The absence of any persistent employment impacts once supplement payments ceased also meant that it was unlikely that program would cover its costs in the long run.

Unpublished project reports from SSP Plus estimate that the cost of administering the Plus program, including staff time for outreach, orientation, and employment services, was $3,090 (2010 CAD) per Plus group member. In comparison, the operating cost for the Regular SSP program, which still required staff involvement for orientation and supplement payment initiation, was $1,376 per group member.[41] Thus, the incremental cost of the employment services provided through the SSP Plus program was $1,714 per Plus group member.

[41] From Michalopoulos et al. (2002): "The average cost per program group member was calculated by first estimating a unit cost—the cost per participant for one-time activities or per month for ongoing activities. The unit costs include staff time, overhead expenses, and management. The unit cost was then multiplied by the participation rate (for one-time activities) or the average duration of participation (for longer-term activities)."

To quantify the reduction in net government spending resulting from the Plus services, we combine the average incremental cost of $1,714 with the cumulative difference in net taxes and transfers paid by study participants, using linked T1 personal income tax files.

For each SSP Plus study participant, we calculate the cumulative transfers received and taxes paid, adjusting all Canadian dollar-denominated figures to present discounted value using a 3% real discount rate following Chetty et al. (2014). Among total transfers received, we distinguish Social Assistance benefits from work-related transfers and other transfers. Whereas increases in employment earnings typically reduce Social Assistance payments—a program of last resort whose benefits are clawed back as other sources of income rise–work-related transfers (comprising unemployment insurance benefits, government pension plan payments, and in-work refundable tax credits) are only available to individuals with labor market attachment, meaning they may be higher for those with a longer history of employment. Other transfers include child and family benefits and refundable tax credits administered through the tax system.

Columns (3) to (5) in Table A.8 present estimates of the difference in cumulative transfers received by Plus group members compared to the Regular group, categorized by these three types of transfers. Over 21 years post-random assignment, Plus group members received $9,000 less in Social Assistance. This reduction was partially offset by increases in work-related transfers ($2,400) and other transfers ($2,700). Due to their higher earnings, Plus group members contributed an additional $3,700 to government revenues over the same period. The difference in cumulative net taxes and transfers equals the difference in taxes paid, plus the absolute value of the Social Assistance reduction, minus the increases in work-related and other transfers. Column (6) shows that the difference in cumulative net taxes and transfers between the Plus and Regular groups amounts to $7,500 in present discounted value. This estimate is, however, noisy, and not statistically significant; we cannot rule out the possibility that the government incurred additional net costs as a result of offering Plus services. Subtracting the estimated net tax-and-transfer amount from the direct cost of $1,714 for Plus service provision, we arrive at an estimated net cost of –$5,786 in present discounted value.

Following Hendren and Sprung-Keyser (2020), we use our calculated costs savings as an input to estimate the Marginal Value of Public Funds (MVPF). The MVPF of spending an additional dollar on an in-kind transfer such as employment services is $\frac{W}{1+FE}$, where W is the individual willingness to pay for the services received and $1 + FE$ is the marginal cost to government and includes both the direct cost and the fiscal externality arising from behavioural responses to the program. Using our estimates of the change in net taxes and transfers, we find that the fiscal externality is negative and larger than the direct cost of service provision: in such cases where a program "pays for itself", the MVPF is infinity so long as the willingness-to-pay is positive. Because Plus services were provided free of

charge, we use the cumulative difference in after-tax income as the metric for willingness-to-pay. Column (7) of Table A.8 shows that the estimated difference in cumulative after-tax income in real present value terms is a statistically significant $22,900. Taking into account the standard errors of our estimates of net government costs and willingness-to-pay, we estimate that the MVPF is ∞ with a 95% confidence interval of $[0.20, \infty]$.[42] This indicates that every additional dollar on Plus services produced more than a dollar in additional tax revenue and reduced transfer spending. Whether this and other results identified in this study persist upon scale-up without being attenuated by general equilibrium effects or by a reduction in program effectiveness when scaled up is a subject for future research.

8 Conclusion

The Self-Sufficiency Project (SSP) was one of the Government of Canada's largest field experiments ever funded. Policymakers wanted to test whether offering temporary but significant financial incentives could spur single parents reliant on welfare back to full-time work and get them to stay working even after the three-year supplement eligibility period ended. Anticipating that many of those lone parents offered the supplement might have difficulty finding work, a smaller experiment in the province of New Brunswick was conducted to explore whether adding intensive support services could help. Those offered the SSP Plus treatment were eligible for a range of employment services that were designed to help them find work, retain jobs, and advance in a career. Those that wanted it were matched to a job coach who proactively connected one-on-one to offer practical advice and emotional support throughout the one-year supplement initiation period and during the three-year period of subsidy eligibility, even after a parent began working full-time.

We provide a more definitive picture of the impact of the SSP Plus program by reanalyzing existing survey data and linking participants to subsequent administrative tax records and following them for twenty years. The results point to the importance of the proactive and sustained empathetic support caseworkers in the Plus program provided that those in the Regular program did not receive. The intensive employment and support services of the SSP Plus program led to participants increasing their job search rate and to make upward movements along the job ladder, including obtaining higher-paying jobs and jobs in higher-paying firms. Full-time employment increased steadily by 4.5 to 7.4 percentage points relative to the SSP Regular group and these effects did not fade until after ten years. We find even longer lasting earnings effects. While average earnings differences for the SSP Regular group drifted to zero shortly after the incentives ended, earnings among the SSP Plus group remained about 21 to 27 percent higher each year over the twenty-year period examined.

[42] We calculate standard errors using the parametric bootstrap method described by Hendren and Sprung-Keyser (2020)

The improved economic trajectories of the SSP Plus program participants are mirrored by a 4.8 to 11.0 percentage point decrease in their receipt of Social Assistance throughout the first decade following random assignment. Taken together, the increase in full-time employment and earnings, along with the decrease in welfare receipt, indicate that the intensive employment services offered through the program considerably transformed the lives of these individuals.

Qualitative evidence from focus group interviews indicates that the supports received by Plus group members raised self-esteem and helped them advocate for themselves while looking for work and while on the job. It is worth noting that the overwhelming majority of study participants were women and that there is a growing body of evidence that women are disadvantaged in the labor force relative to men if they sort into lower-paying firms or because they are less willing to bargain over wages or to ask for promotions (Card et al. 2015; Azmat and Petrongolo 2014). One interpretation of our long-term findings with respect to earnings is that the Plus treatment helped women to secure better employment by overcoming this hesitancy to demand better jobs and better pay.

While we acknowledge that the SSP Plus study comprised a relatively small number of participants served by highly motivated and capable caseworkers, the potential for high-quality employment services to significantly improve the socioeconomic trajectories of low-income households merits further consideration. Regarding future research, the expansion of a Plus program-style at larger scale might not pay for itself (due to the changes in the target population, the expansion of such case services, and general equilibrium effects). A longstanding debate in social science research revolves around the generalizability of findings from pilot studies to inform the effectiveness of programs implemented at scale (Rossi 1987; Davis et al. 2017). Future studies might consider different approaches to scaling intensive services to effectively serve the greatest number of low-income households.[43] It might also be worthwhile to assess the impact of a standalone program that offers intensive services that are not tied to "work-first"-style incentives requiring rapid job-finding; such services would support both those who seek additional education and training before entering the labor force as well as individuals who decide to look for work right away. Finally, it would be valuable for further work in this area to improve our understanding of how intensive employment services and psychosocial interventions affect individuals' beliefs and subsequent labor market engagement behaviours, as shown in recent studies examining assistance programs in both developed and developing country settings (Heller 2014; Heller

[43]Bergman et al. (2019) analyze a program featuring caseworkers—referred to as navigators—providing intensive assistance to help families use housing rental vouchers to rent units in low-poverty neighborhoods. Qualitative evidence suggests that families relied particularly heavily on navigators to find suitable shelter and to negotiate leases with landlords. Follow-up studies have found that reducing the intensity of navigator services halves the effectiveness of the program in encouraging households to move to lower poverty neighborhoods.

et al. 2017; Blattman et al. 2017; Abebe et al. 2021; Bandiera et al. 2021).[44]

[44]There are some indications that behavioral and labor market interventions such as cognitive behavioral theory (CBT) can lead to short-term changes in behavior (e.g., Heller 2014; Heller et al. 2017; Blattman et al. 2017). CBT explicitly seeks to influence the meta-cognition of individuals—the way they "think about thinking"—in order to manage learned, automatic behaviors that may be useful in dangerous, high-risk environments but are maladaptive in more quotidian settings such as a school or a workplace. Heller (2014) finds that participation in a youth summer jobs program in Chicago led to short-term reductions in violent crime arrests among participants. A hypothesis for this finding is that the holding a summer job improved participants' self-control, confidence, and ability to manage interpersonal conflicts.

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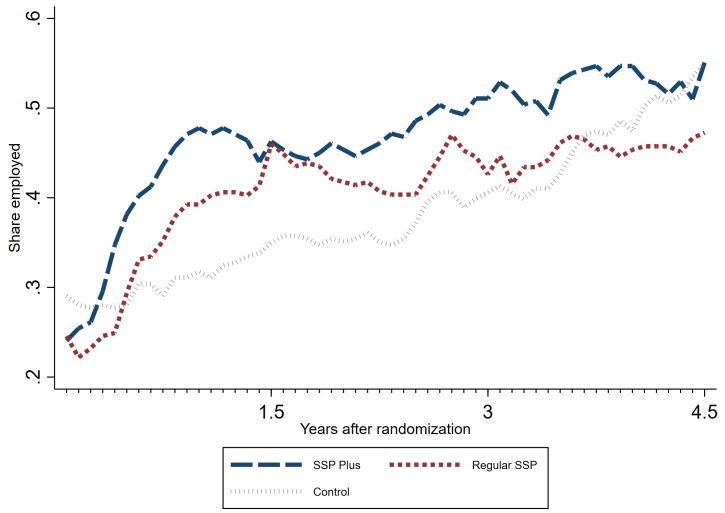
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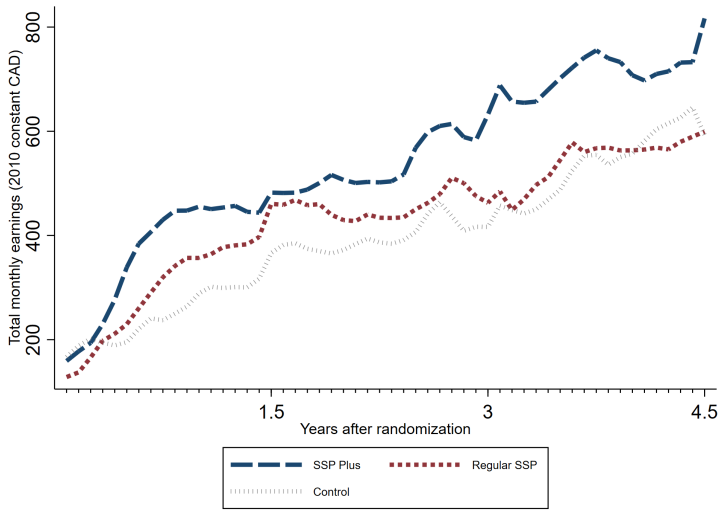
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Figure 1: Short-Run Effects of the Self-Sufficiency Program Plus on Employment and Earnings

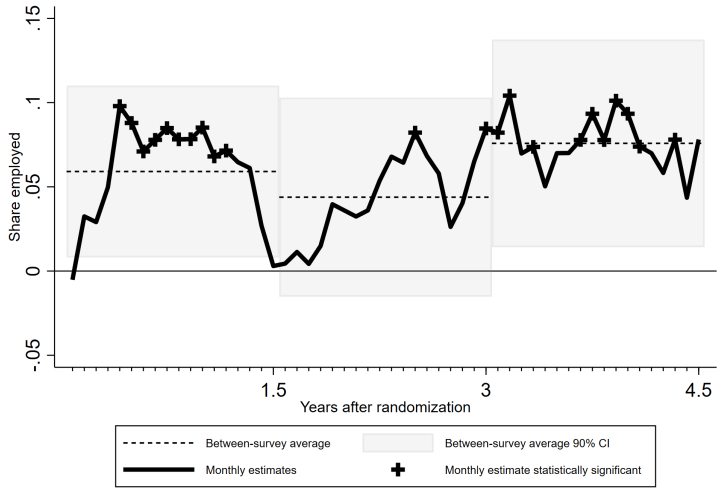
Panel A: Trends in Monthly Employment



Panel B: Trends in Monthly Earnings

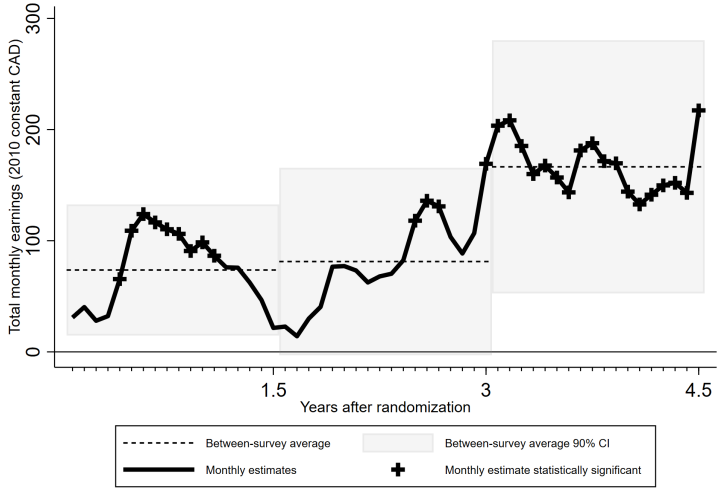


Panel C: Treatment Effects on Monthly Employment



Comparison of SSP Plus to Regular SSP

Panel D: Treatment Effects on Monthly Earnings



Comparison of SSP Plus to Regular SSP

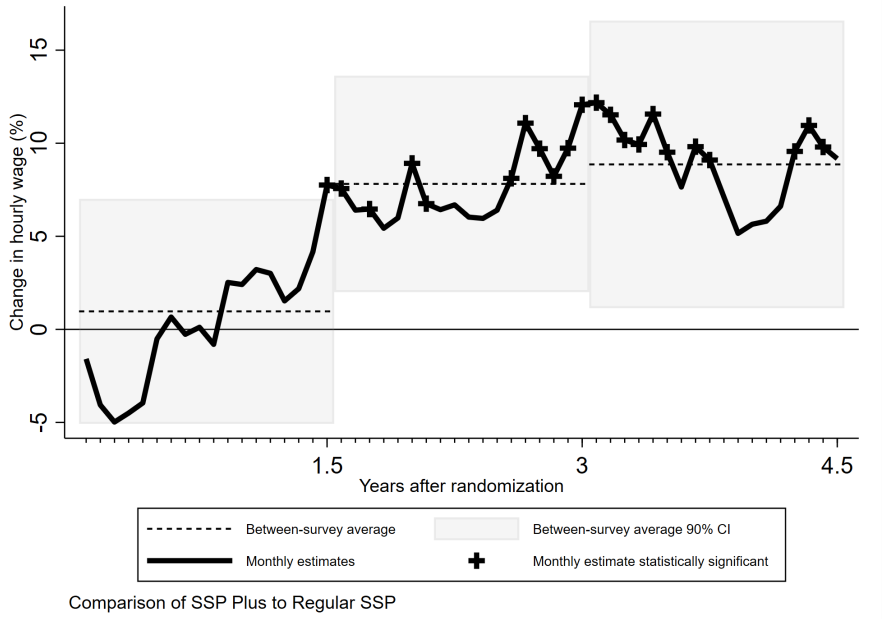
Notes: Panels A and B report means for every experimental arm in each month post-randomization. Panels C and D report monthly (solid line) and between-survey group-specific (horizontal dashed line segments) intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on estimates of equation (1). 90% confidence intervals for the between-survey group specific estimates are represented by transparent grey bars. Monthly differences are overlaid as a solid black line with statistically significant monthly differences at the 90% level denoted by a cross marker.

Figure 2: Short-Run Effects of the Self-Sufficiency Program Plus on Average Hourly Wages

Panel A: Trends by Experimental Arm



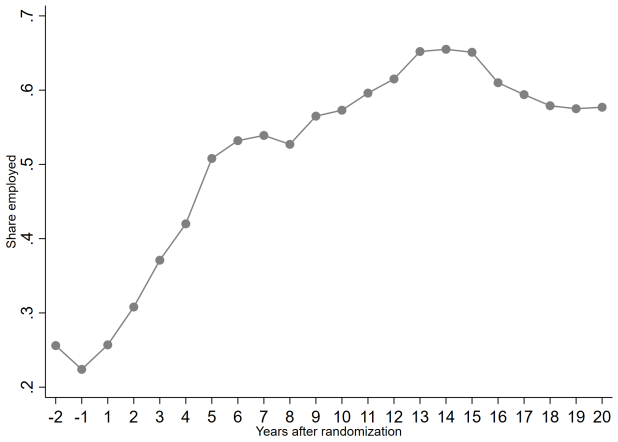
Panel B: Treatment Effect Estimates



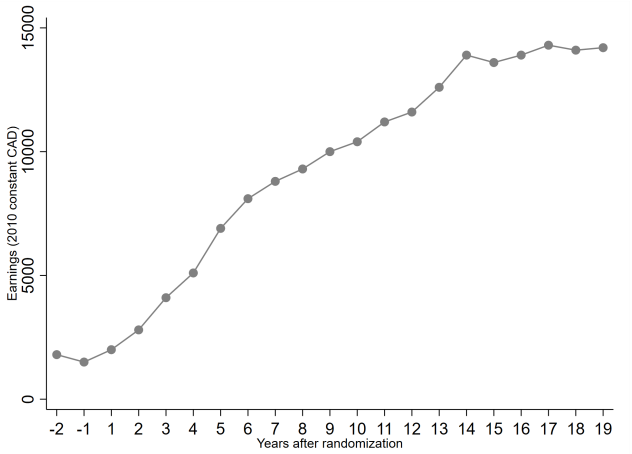
Notes: Panel A reports means for every treatment arm in each month post-randomization. Panel B reports monthly (solid line) and between-survey group-specific (horizontal dashed line segments) intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on estimates of equation (1). 90% confidence intervals for the between-survey group specific estimates are represented by transparent grey bars. Monthly differences are overlaid as a solid black line with statistically significant monthly differences at the 90% level denoted by a cross marker.

Figure 3: Employment, Earnings, and Social Assistance Participation Rate among Control Group Members

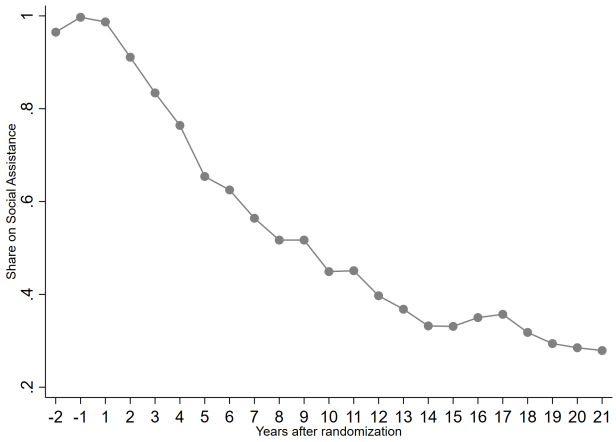
Panel A: Employment



Panel B: Real Earnings



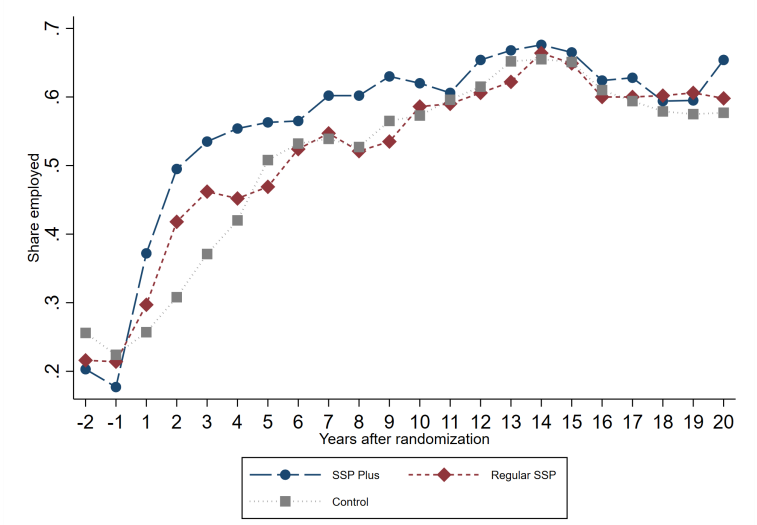
Panel C: Social Assistance Participation



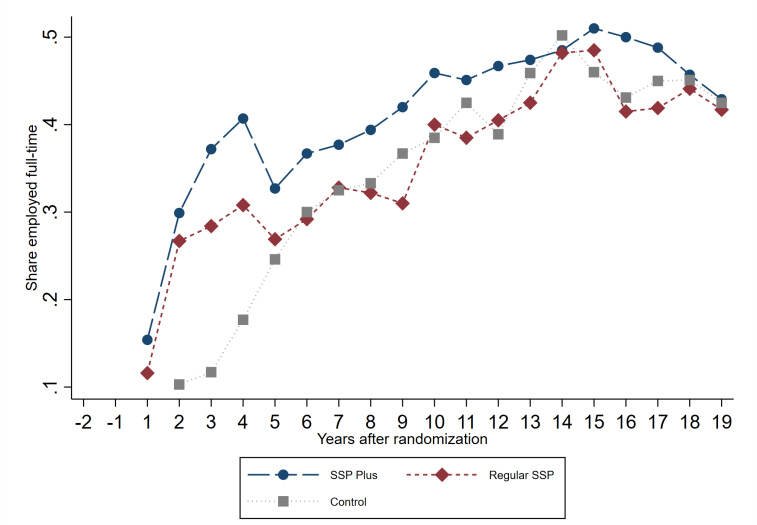
Notes: Panel A presents the fraction employed among the SSP Plus control group (where employment is an indicator for having earned over 3×30×4.33×minimum wage). Panel B presents earnings (in 2010 constant Canadian dollars). Panel C presents the rates of participation in Social Assistance.

Figure 4: Long-Run Effects of the Self-Sufficiency Program Plus on Employment

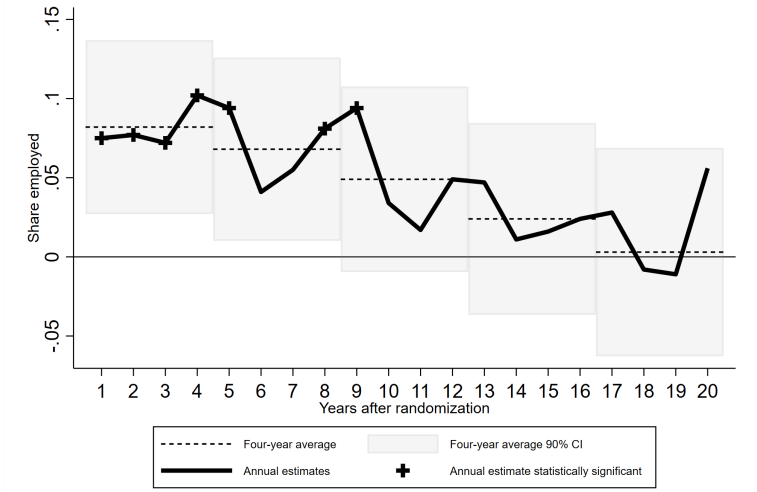
Panel A: Trends in Any Employment by Experimental Arm



Panel B: Trends in FT Employment by Experimental Arm

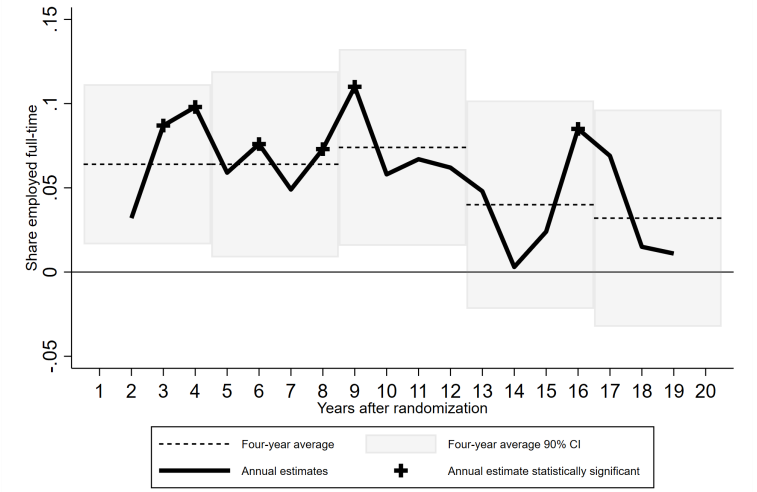


Panel C: Treatment Effects on Any Employment



Unadjusted specification, comparison of SSP Plus to Regular SSP

Panel D: Treatment Effects on Full-Time (FT) Employment

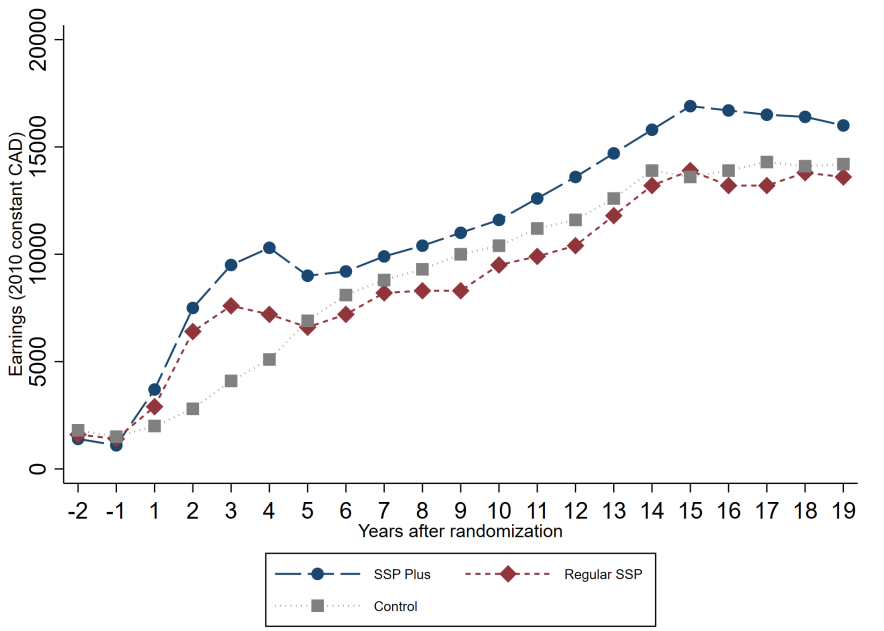


Unadjusted specification, comparison of SSP Plus to Regular SSP

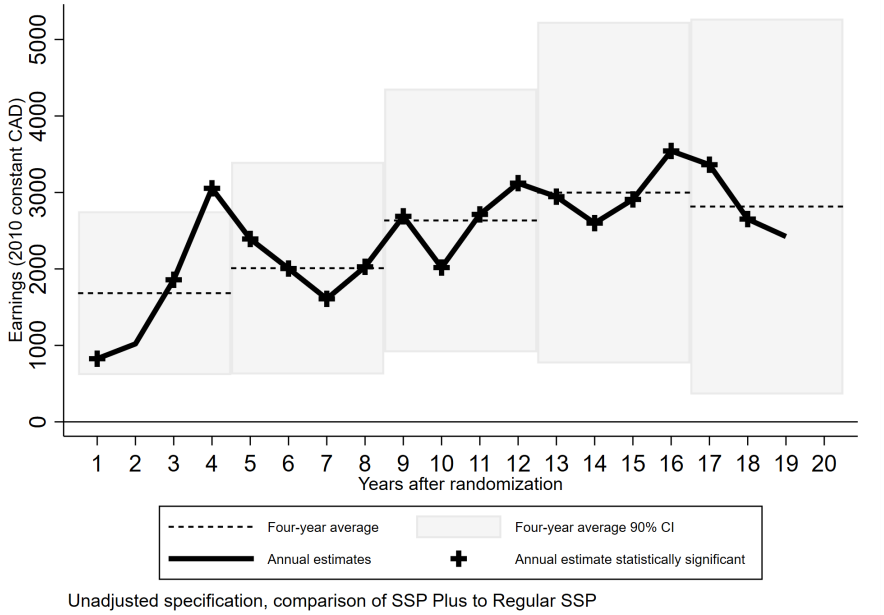
Notes: Panels A and B report respectively means for annual any and full-time employment for every experimental arm in each year pre and post-randomization. Panels C and D report annual (solid line) and 4-year group-specific (horizontal dashed line segments) intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on estimates of equation (1). 90% confidence intervals for four-year group specific estimates are represented by transparent grey bars. Annual differences are overlaid as a solid black line with statistically significant annual differences at the 90% level denoted by a cross marker.

Figure 5: Long-Run Effects of the Self-Sufficiency Program Plus on Individual Earnings

Panel A: Trends by Experimental Arm



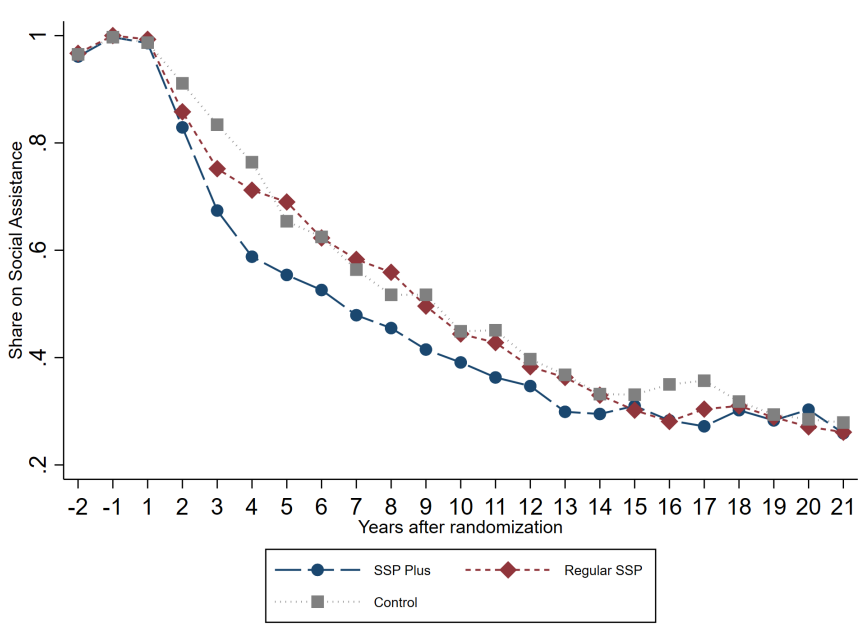
Panel B: Treatment Effect Estimates



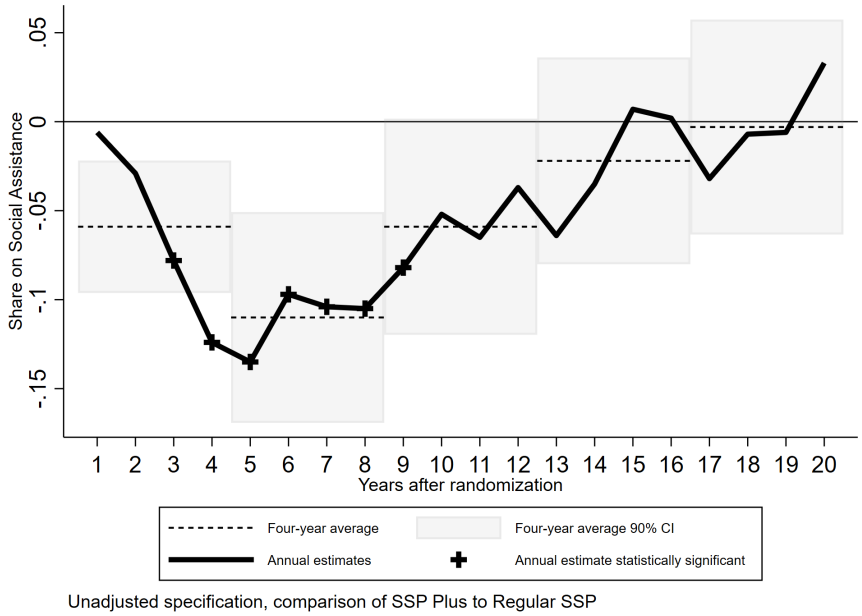
Notes: Panel A reports means for every treatment arm in each year pre and post-randomization. Panel B reports annual (solid line) and 4-year group-specific (horizontal dashed line segments) intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on estimates of equation (1). 90% confidence intervals for four-year group specific estimates are represented by transparent grey bars. Annual differences are overlaid as a solid black line with statistically significant annual differences at the 90% level denoted by a cross marker.

Figure 6: Long-Run Effects of the Self-Sufficiency Program Plus on Welfare Receipt

Panel A: Trends by Experimental Arm

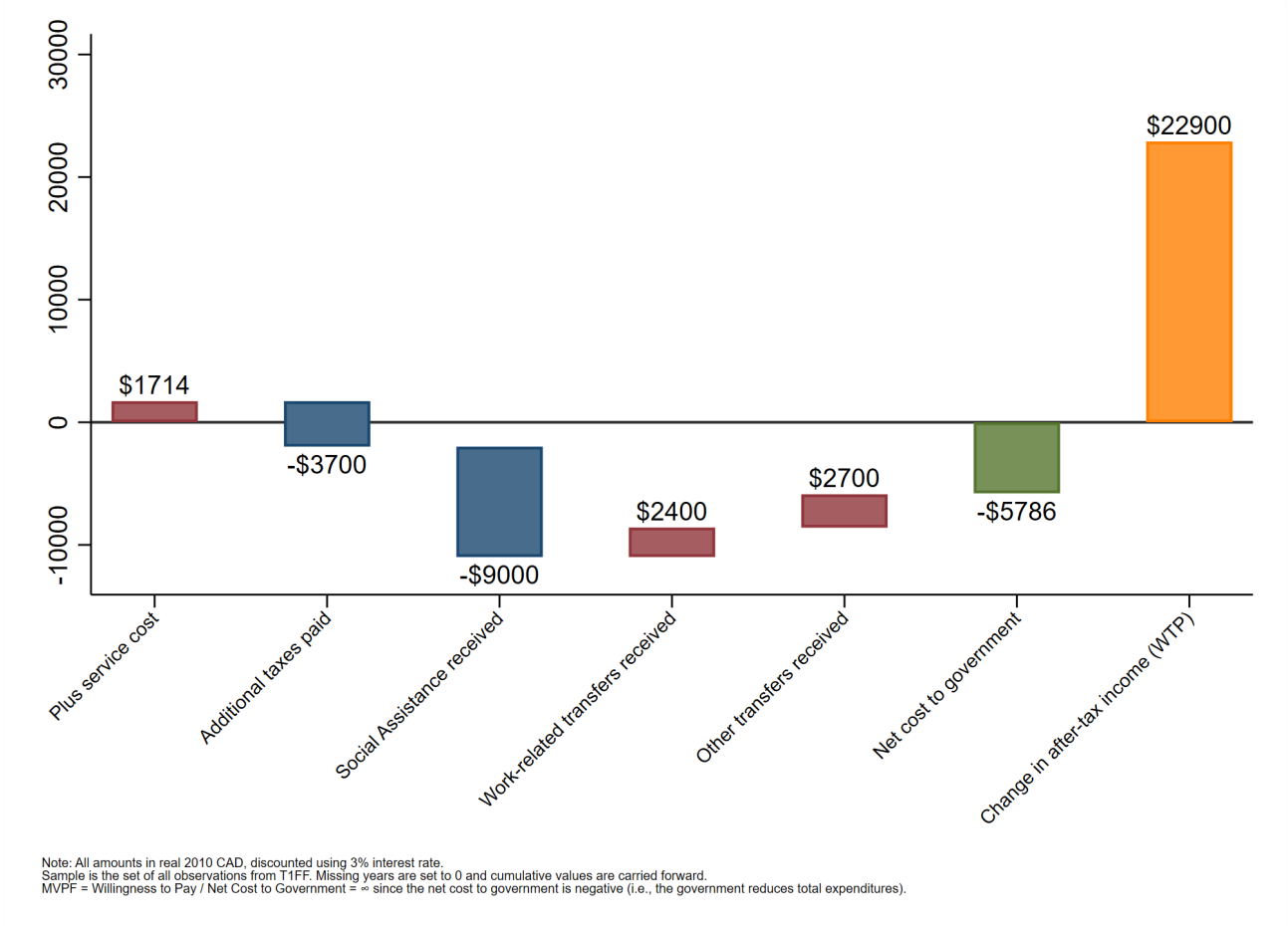


Panel B: Treatment Effect Estimates



Notes: Panel A reports means for every treatment arm in each year pre and post-randomization. Panel B reports annual (solid line) and 4-year group-specific (horizontal dashed line segments) intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on estimates of equation (1). 90% confidence intervals for four-year group specific estimates are represented by transparent grey bars. Annual differences are overlaid as a solid black line with statistically significant annual differences at the 90% level denoted by a cross marker.

Figure 7: Net Government Costs and Willingness to Pay



Notes: All amounts in real 2010 CAD, discounted using 3% interest rate. Analysis based on sample which consists of all program participants; calculations based on the T1FF. Totals over a period of 21 years starting in the year of random assignment. Missing years are set to 0 and cumulative values are carried forward. Plus service cost is the estimated additional cost per Plus group member. Work-related transfers include income from Employment Insurance (EI), Canada Pension Plan (CPP), Quebec Pension Plan (QPP), Canada Pension Plan Disability (CPP-D), Quebec Pension Plan Disability (QPP-D), workers' compensation, and the Working Income Tax Benefit (WITB). Other transfers include income from the Old Age Security (OAS) program, GST tax credits, federal and provincial child benefits, and provincial family benefits. MVPF = Willingness to Pay / Net Cost to Government.

Table 1: Interaction with SSP Staff, Job Search, and Referral Activities at 18-Month Survey

	Dependent variables:				
	Phone calls with SSP staff:				
	3+ calls	10+ calls	20+ calls	Participated in an organized job search activity	Received a referral to a job opening from SSP staff or welfare caseworker
	(1)	(2)	(3)	(4)	(5)
SSP Plus	0.115***	0.283***	0.187***	0.160***	0.204***
	(0.029)	(0.038)	(0.027)	(0.040)	(0.041)
Mean of dependent variable (Regular SSP group)	0.804	0.210	0.035	0.319	0.355
N	570	570	570	574	573

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group. Questions were asked only of Plus and Regular group members in the 18-month survey as Control group did not have any contact with SSP staff.

Table 2: Short-Run Effects of SSP Plus Program on Job Search, Separations, and Transitions

	Dependent variables:				
	Looked for a job	Were employed at some point since last interview	Experienced one or more job separations since last interview	Experienced a voluntary separation since last interview	Experienced a job-to-job transition since last interview
	(1)	(2)	(3)	(4)	(5)
SSP Plus × Survey Round 1	0.056*	0.099**	0.104**	0.123***	0.063***
	(0.033)	(0.040)	(0.040)	(0.034)	(0.021)
SSP Plus × Survey Round 2	0.071*	0.046	-0.020	0.023	0.021
	(0.043)	(0.041)	(0.042)	(0.035)	(0.024)
SSP Plus × Survey Round 3	0.050	0.075*	0.003	0.015	0.024
	(0.044)	(0.041)	(0.041)	(0.038)	(0.027)
Time Fixed Effects	Y	Y	Y	Y	Y
Test of homogeneous effects (p-values):					
$H_0 : \beta_1 = \beta_2 = \beta_3$	0.911	0.027	0.100	0.027	0.276
$H_0 : \beta_1 = \beta_2 = \beta_3 = 0$	0.200	0.037	0.201	0.004	0.025
N individuals	892	878	878	878	880
N observations	2476	2514	2505	2513	2456
Mean of dependent variable (Regular SSP group):					
Survey Round 1	0.764	0.587	0.323	0.153	0.038
Survey Round 2	0.526	0.626	0.393	0.207	0.074
Survey Round 3	0.419	0.640	0.354	0.255	0.089

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on equation (1); standard errors clustered at the individual level. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Table 3: Short-Run Effects of SSP Plus Program on Employment and Job Quality

	Dependent variables:					
	Monthly employment	Monthly earnings (constant 2010 CAD)	Monthly hours worked	Hourly wage (constant 2010 CAD)	Current or most recent job offered health, drug, dental, or pension benefits	Current or most recent job had union coverage
	(1)	(2)	(3)	(4)	(6)	(5)
SSP Plus × Survey Round 1	0.059*	73.66**	7.67*	0.077	0.047	-0.021
	(0.031)	(35.83)	(4.27)	(0.291)	(0.044)	(0.021)
SSP Plus × Survey Round 2	0.044	81.28	3.18	0.641**	0.135***	0.036*
	(0.036)	(51.30)	(5.46)	(0.290)	(0.047)	(0.022)
SSP Plus × Survey Round 3	0.076**	166.49**	9.77	0.783*	0.047	-0.005
	(0.037)	(69.22)	(6.18)	(0.415)	(0.044)	(0.024)
Time Fixed Effects	Y	Y	Y	Y	Y	Y
Test of homogeneous effects (p-values):						
$H_0 : \beta_1 = \beta_2 = \beta_3$	0.549	0.250	0.265	0.090	0.218	0.130
$H_0 : \beta_1 = \beta_2 = \beta_3 = 0$	0.121	0.057	0.090	0.076	0.027	0.246
N individuals	880	880	880	652	630	610
N observations	44,597	43,572	44,353	17,732	1238	1170
Mean of dependent variable (Regular SSP group):						
Survey Round 1	0.342	297.44	39.606	7.926	0.164	0.040
Survey Round 2	0.428	456.97	56.919	8.196	0.096	0.009
Survey Round 3	0.452	710.72	61.958	8.830	0.174	0.052

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on equation (1); standard errors clustered at the individual level. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Table 4: Long-Run Effects of the SSP Plus Program on Employment, Earnings, and Welfare Receipt

	Dependent variables:			
	Employment	Full-Time Employment	Earnings (2010 $)	Welfare Receipt
	(1)	(2)	(3)	(4)
SSP Plus × Years 1-4	0.082**	0.064**	1,683***	-0.059***
	(0.033)	(0.029)	(651)	(0.023)
SSP Plus × Years 5-8	0.068*	0.064*	2,010**	-0.110***
	(0.035)	(0.034)	(845)	(0.036)
SSP Plus × Years 9-12	0.049	0.074**	2,634**	-0.059
	(0.036)	(0.036)	(1,048)	(0.037)
SSP Plus × Years 13-16	0.024	0.040	2,998**	-0.022
	(0.037)	(0.038)	(1,358)	(0.035)
SSP Plus × Years 17-20	0.003	0.032	2,816*	-0.003
	(0.040)	(0.039)	(1,494)	(0.037)
Time Fixed Effects	Y	Y	Y	Y
N individuals	892	892	892	892
Mean of dependent variable (Regular SSP group):				
Years 1-4	0.407	0.244	6,025	0.829
Years 5-8	0.515	0.303	7,575	0.614
Years 9-12	0.579	0.375	9,525	0.438
Years 13-16	0.634	0.452	13,025	0.319
Years 17-20	0.602	0.426	13,533	0.294

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on equation (1); standard errors clustered at the individual level. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Table 5: Long-Run Effects of the SSP Plus Program on Employer Quality

	Dependent variables:		
	Number of employers	Earnings at the 25th percentile (% difference)	Earnings at the 50th percentile (% difference)
	(1)	(2)	(3)
SSP Plus × Years 1-4	0.17**	-0.8	-2.4
	(0.08)	(4.4)	(4.1)
SSP Plus × Years 5-8	0.04	13.5**	11.4*
	(0.06)	(6.5)	(5.6)
SSP Plus × Years 9-12	-0.04	9.0	8.3
	(0.06)	(6.2)	(5.3)
SSP Plus × Years 13-16	0.01	1.7	1.1
	(0.06)	(5.8)	(5.1)
SSP Plus × Years 17-20	0.07	6.3	6.7
	(0.06)	(6.2)	(5.8)
Time Fixed Effects	Y	Y	Y
N individuals	892	892	892
Mean of dependent variable (Regular SSP group):			
Years 1-4	2.01	12,300	21,000
Years 5-8	1.55	13,300	21,100
Years 9-12	1.48	14,500	23,000
Years 13-16	1.43	17,900	27,300
Years 17-20	1.32	18,900	28,200

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on equation (1); standard errors clustered at the individual level. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Table 6: Effects on Educational Upgrading and Locus of Control

	Dependent variables:					
	Educational upgrading		Locus of control Share agreeing or strongly agreeing:			
	Has high school diploma	Ever attended community college or vocational school	There is little I can do to change the important things in my life	I have little control over the things that happen to me	Sometimes I feel as if I'm being pushed around in life	I am often angry that people like me never get a fair chance to succeed
	(1)	(2)	(3)	(4)	(5)	(6)
SSP Plus ×	1.11	3.53	-	-	-	-
Survey Round 1	(1.89)	(3.98)				
SSP Plus ×	4.18*	3.78	-5.52	-6.91*	4.66	-3.42
Survey Round 2	(2.36)	(4.03)	(4.35)	(3.89)	(4.47)	(4.53)
SSP Plus ×	3.31	9.49**	-3.64	-3.64	-0.75	-1.24
Survey Round 3	(2.38)	(3.90)	(3.43)	(3.70)	(4.25)	(4.53)
Test of homogeneous effects (p-values):						
$H_0 : \beta_1 = \beta_2 = \beta_3$	0.298	0.249	0.692	0.466	0.309	0.678
$H_0 : \beta_1 = \beta_2 = \beta_3 = 0$	0.300	0.105	0.340	0.187	0.522	0.752
N individuals	880	880	661	661	661	661
N observations	2445	2446	1322	1322	1322	1322
Mean of dependent variable (Regular SSP group):						
Survey Round 1	9.8%	26.1%	-	-	-	-
Survey Round 2	10.2%	22.2%	35.3%	26.7%	40.3%	48.0%
Survey Round 3	13.5%	14.3%	19.0%	20.8%	32.6%	48.0%

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on equation (**??**); standard errors clustered at the individual level. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Online Appendix - Not for Publication

Data Sources and Variable Construction

Information about study participants' annual earnings and employment status is primarily derived from Statistics Canada's T1 historical personal master file, which includes all T1 personal income tax forms filed by study participants, including prior-year tax returns filed several years later. Whenever T1 files are available, study participants' annual earnings from employment is set equal to the amount of T4 income reported on line 101 of the T1 form. In years for which a study participant's T1 is missing, annual employment earnings are calculated by summing the earnings reported by employers on all T4 slips issued on behalf of the participant. Nominal employment earnings in each year are converted to constant 2010 Canadian dollars using Statistics Canada's Consumer Price Index.

Because neither T1 forms nor T4 slips report hours worked, annual employment status is inferred based on study participants' total employment income. Total employment income is equal to the sum of all T4 earnings, net self-employment income, and other employment income, all of which are available on the T1 form. Two annual employment status variables are derived using this definition of total employment income: one variable is an indicator for having total employment income equal to or greater than the amount of gross earnings from working for three months full-time at the minimum wage. The other is an indicator for having a total employment equal to or greater than the amount of gross earnings from working twelve months full-time at the minimum wage. The statutory minimum wage used in this calculation is for the province of residence listed on each year's tax filing.[45]

Study participants are considered to have received welfare during the year if they or their spouses or common-law partners report income from Social Assistance on their respective T1 tax forms[46] or if study participants or their spouses or common-law partners (if any) are linked to T5007 statement of benefits slips issued by a provincial government. Participants were linked to the T1 Family File (T1FF), a component file in the LWF, to determine the presence of a spouse or common-law partner. Linkages to the T5007 are possible only from 1994 onward, meaning that participation in welfare in the one to two years prior to random assignment into the SSP Plus study (which took place between November 1994 and March 1995) is based solely on T1 filings. Although Social Assistance benefits are not considered taxable income they do affect the amount of refundable tax credits received and are therefore supposed to be included in the T1 filing.

[45] In a small number of cases where the province of residence is not available for a given year, the information from the nearest available year is used instead.

[46] In cases where an individual lives with a spouse or common-law partner while receiving social assistance payments, the person with the higher net income for the year reports those payments on his or her T1 form.

The number of employers that a study participant works for in a given year is equal to the number of firms that issue a T4 slip to the individual that year. Job tenure is equal to the number of consecutive years that a study participant receives a T4 slip from the firm that is the main employer in that year (i.e., the firm that pays the participant the most). The size of the main employer in a given year is derived from the firm's annual payroll and estimates of annual average earnings.

To generate mean log earnings at each employer and the level of earnings at the 25th, 50th, 75th percentiles of each employer's payroll distribution, we use Statistics Canada's linked employer-employee database, the Longitudinal Worker File. We limit our analysis to firms for which there are 10 or more employees aged 20-60 who report total earnings greater than or equal to one-quarter the contemporary minimum wage.[47] Total earnings for an employee are determined by summing over all earnings reported on all T4s issued for that employee, even if those T4s come from different firms. For workers with multiple T4s in a given year, we assign each worker to the firm that pays the largest share of total earnings; we also assign all of the worker's earnings to that firm, including earnings that are reported on other T4 slips.[48]

[47] Limiting the analysis to firms with 10 or more more employees makes it possible to differentiate the 25th, 50th, and 75th percentile of the firm payroll distribution.

[48] Our definition of firms and employees is similar to that used by Song et al. (2019) for their analysis of firm wage premia.

Table A.1: Baseline Balance in Main Outcomes of Interest from Administrative Data

	SSP Plus	Regular SSP	Control	Regular SSP - Control [(1)-(3)]	Regular SSP - Control [(2)-(3)]	SSP Plus - Regular SSP [(1)-(2)]
	(1)	(2)	(3)	(4)	(5)	(6)
Employment	0.177	0.214	0.224	-0.047	-0.010	-0.037
				[0.153]	[0.765]	[0.262]
Earnings (in 2010 CAD)	1,100	1,400	1,500	-321	-51	-300
				[0.142]	[0.831]	[0.228]
Social Assistance	0.997	1.000	0.997	0.000	0.003	-0.003
				[0.985]	[0.318]	[0.318]
N	293	296	303			

Notes: Columns 1-3 report baseline (year $t = -1$) mean share employed, mean earnings, and mean share on Social Assistance for each experimental group. Columns 4-6 report differences in means between experimental groups; p-values of tests of significance are reported in parentheses.

Table A.2: Balance Tests - Extended Set

		SSP Plus	Reg. SSP	Control	SSP Plus - Control	Reg. SSP - Control	SSP Plus - Reg. SSP
		(1)	(2)	(3)	(4)	(5)	(6)
Gender							
	Share female (%)	97.2	96.9	95.1	2.06	1.74	0.33
Age (%)							
	19-24	28.3	26.1	22.6	5.75	3.56	2.19
	25-29	23.1	17.4	21.2	1.90	-3.76	5.66*
	30-39	37.1	36.9	35.8	1.30	1.17	0.13
	40-49	8.7	16.0	19.4	-10.70***	-3.42	-7.29**
	50 or older	2.8	3.5	1.0	1.76	2.44*	-0.69
Marital status (%)							
	Married or living common law	1.4	2.4	2.4	-1.03	0.00	-1.03
	Never married	57.0	54.5	55.6	1.44	-1.04	2.48
	Divorced, separated, or widowed	41.6	43.1	42.0	-0.41	1.04	-1.45
Education							
	Completed education (%)						

	SSP Plus	Reg. SSP	Control	SSP Plus - Control	Reg. SSP - Control	SSP Plus - Reg. SSP
	(1)	(2)	(3)	(4)	(5)	(6)
Less than high school education	50.0	55.2	51.7	-1.74	3.47	-5.21
Completed high school, no post-secondary education	40.2	36.8	37.5	2.71	-0.69	3.40
Some post-secondary education	9.8	8.0	10.8	-0.97	-2.78	1.80
Enrolled in school at random assignment (%)	16.1	9.7	9.0	7.06***	0.69	6.36**
Family background						
Mother did not finish high school (%)	69.9	72.5	70.8	-0.92	1.68	-2.60
Father did not finish high school (%)	64.7	70.1	66.1	-1.40	3.99	-5.38
One or both parents absent when growing up (%)	31.5	41.3	35.4	-3.95	5.90	-9.85**
Family received welfare when growing up (%)	26.9	34.8	30.4	-3.45	4.39	-7.84**

	SSP Plus	Reg. SSP	Control	SSP Plus - Control	Reg. SSP - Control	SSP Plus - Reg. SSP
	(1)	(2)	(3)	(4)	(5)	(6)
Recent welfare history						
Number of months on SA in prior 3 year (%)						
10-23	21.3	19.4	21.2	0.15	-1.74	1.88
24-35	36.4	35.8	33.0	3.38	2.78	0.60
All 36	42.3	44.8	45.8	-3.53	-1.04	-2.48
Average SA payments in prior month	725	707	698	27.01*	9.74	17.27
Work history and labor force status						
Ever had a paid job (%)	92.0	95.1	91.3	0.64	3.82*	-3.18
Average years worked	6.5	6.9	7.0	-0.54	-0.05	-0.49
labor force status at random assignment (%)						
Employed 30 hrs/week or more	8.4	6.6	9.0	-0.64	-2.38	1.75
Employed less than 30 hrs/week	13.3	14.0	17.0	-3.73	-3.03	-0.70

	SSP Plus	Reg. SSP	Control	SSP Plus - Control	Reg. SSP - Control	SSP Plus - Reg. SSP
	(1)	(2)	(3)	(4)	(5)	(6)
Looking for work, not employed	25.9	22.0	21.5	4.35	0.50	3.85
Neither employed nor looking for work	52.4	57.3	52.4	0.02	4.91	-4.90
Activity-limiting conditions (%)						
Reported physical problem	24.8	25.1	25.8	-0.96	-0.70	-0.26
Reported emotional problem	7.3	9.1	6.6	0.72	2.47	-1.75
Children						
Number of children under age of 19 (%)						
1	59.8	62.0	61.8	-2.02	0.22	-2.23
2	28.3	31.7	27.4	0.89	4.28	-3.39
3 or more	11.9	6.3	10.8	1.12	-4.49*	5.62**
Age of youngest child (%)						
0-2	30.9	31.2	25.8	5.07	5.44	-0.38
3-5	24.8	19.3	24.7	0.08	-5.44	5.52
6-11	29.1	25.6	26.8	2.25	-1.22	3.46

	SSP Plus	Reg. SSP	Control	SSP Plus - Control	Reg. SSP - Control	SSP Plus - Reg. SSP
	(1)	(2)	(3)	(4)	(5)	(6)
12 or older	15.2	23.9	22.6	-7.40**	1.21	-8.61**
Opinions and expectations						
Said greatest need was (%)	36.8	37.5	42.0	-5.17	-4.51	-0.66
Immediated full-time employment	9.8	8.0	9.4	0.45	-1.39	1.84
Immediate part-time employment	43.5	39.2	35.4	8.09**	3.82	4.27
Education or training	8.4	12.8	11.8	-3.38	1.04	-4.43
Something else	1.4	2.4	1.4	0.01	1.04	-1.03
If I got a job, I could find someone I trust to take care of my children						
Agree	69.8	64.6	61.3	8.50**	3.26	5.24
Disagree	13.7	12.8	17.1	-3.39	-4.23	0.84
No care required	16.5	22.6	21.6	-5.11	0.97	-6.08*
Resident						
Share urban (%)	67.8	70.5	69.4	-1.61	1.04	-2.65

	SSP Plus	Reg. SSP	Control	SSP Plus - Control	Reg. SSP - Control	SSP Plus - Reg. SSP
	(1)	(2)	(3)	(4)	(5)	(6)
Ethnic background						
First Nations ancestry (%)	5.2	4.5	7.0	-1.72	-2.45	0.73
Asian ancestry (%)	0.3	0.0	0.7	-0.35	-0.70	0.35
French-speaking (%)	28.7	24.0	25.0	3.67	-1.04	4.71
Immigration						
Not born in Canada (%)	2.8	2.8	2.4	0.37	0.35	0.02
Immigrated in last 5 year (%)	0.7	0.3	0.3	0.35	0.00	0.35
N	286	288	288			

Notes: Columns 1-3 report means of baseline observable characteristics for each experimental arm. Columns 4-6 report differences in across experimental arms; standard errors clustered at the individual level are reported in parentheses. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Table A.3: Survey Response Rates

	Dependent variable:
	Responded to survey
	(1)
SSP Plus ×	0.003
Survey Round 1	(0.013)
SSP Plus ×	0.023
Survey Round 2	(0.022)
SSP Plus ×	0.002
Survey Round 3	(0.028)
Time Fixed Effects	Y
Test of homogeneous effects (p-values):	
$H_0 : \beta_1 = \beta_2 = \beta_3$	0.644
$H_0 : \beta_1 = \beta_2 = \beta_3 = 0$	0.750
N individuals	892
N observations	2676
Mean of dependent variable (Regular SSP group):	
Survey Round 1	0.973
Survey Round 2	0.912
Survey Round 3	0.872

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on equation (1); standard errors clustered at the individual level.

Table A.4: Linkage Rates to Administrative Data (T1H Personal Master File)

	SSP Plus	Regular SSP	Control	Regular SSP - Control [(1)-(3)]	Regular SSP - Control [(2)-(3)]	SSP Plus - Regular SSP [(1)-(2)]
	(1)	(2)	(3)	(4)	(5)	(6)
Years 1-4	0.987	0.987	0.993	-0.006	-0.006	0.000
				(0.006)	(0.007)	(0.007)
Years 5-8	0.964	0.972	0.976	-0.012	-0.004	-0.008
				(0.012)	(0.012)	(0.013)
Years 9-12	0.946	0.947	0.949	-0.003	-0.002	-0.001
				(0.015)	(0.016)	(0.016)
Years 13-16	0.892	0.914	0.903	-0.012	0.010	-0.022
				(0.022)	(0.021)	(0.022)
Years 17-20	0.871	0.873	0.893	-0.022	-0.021	-0.001
				(0.024)	(0.024)	(0.026)
N	293	296	303			

Notes: Columns 1-3 report linkage rates for each experimental arm across time periods. Columns 4-6 report differences in linkage rates across experimental arms are estimated based on regressions that adjust for year fixed effects; standard errors clustered at the individual level are reported in parentheses.

Table A.5: Effects of the SSP+ and Regular SSP on Employment, Social Assistance Participation, and Earnings

	Dependent variables:					
	Employment		Social Assistance		Earnings	
	(1)	(2)	(3)	(4)	(5)	(6)
SSP Plus × Years 1-4	0.200***	0.197***	-0.105***	-0.101***	4,200***	4,000***
	(0.024)	(0.023)	(0.022)	(0.021)	(570)	(540)
SSP Plus × Years 5-8	0.065**	0.061**	-0.087**	-0.082**	1,400	1,100
	(0.033)	(0.03)	(0.035)	(0.032)	(900)	(840)
SSP Plus × Years 9-12	0.058	0.054	-0.075**	-0.069**	1,400	1,100
	(0.035)	(0.033)	(0.036)	(0.034)	(1,100)	(1,100)
SSP Plus × Years 13-16	0.029	0.024	-0.049	-0.044	2,500*	2,300*
	(0.038)	(0.036)	(0.036)	(0.034)	(1,400)	(1,300)
SSP Plus × Years 17-20	0.016	0.009	-0.023	-0.016	2,100	1,800
	(0.04)	(0.038)	(0.037)	(0.035)	(1,500)	(1,400)
SSP Reg. × Years 1-4	0.136***	0.151***	-0.045**	-0.053***	2,500***	2,900***
	(0.024	(0.022)	(0.021)	(0.019)	(550)	(530)
SSP Reg. × Years 5-8	0.001	0.016	0.024	0.016	-640	-310
	(0.032)	(0.030)	(0.035)	(0.032)	(820)	(770)
SSP Reg.× Years 9-12	-0.017	0.000	-0.016	-0.022	-1,270	-880
	(0.034)	(0.032)	(0.037)	(0.034)	(990)	(920)
SSP Reg. × Years 13-16	-0.011	0.004	-0.026	-0.033	-490	-100
	(0.037	(0.035)	(0.03)	(0.033)	(1,200)	(1,100)
SSP Reg. × Years 17-20	-0.016	-0.007	-0.02	-0.024	-730	-470
	(0.039)	(0.037)	(0.037)	(0.035)	(1,300)	(1,200)
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Controls	No	Yes	No	Yes	No	Yes

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program and the Regular SSP group relative to the control group based on equation (1); standard errors clustered at the individual level. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Table A.6: Share of Study Participants Linked To a Firm in Administrative Data

Year	SSP Plus (%) (1)	Reg. SSP (%) (2)	Control (%) (3)	SSP Plus - Control (4)	Reg. SSP - Control (5)	SSP Plus - Reg. SSP (6)
1	38.9	36.5	31.7	7.2*	4.8	2.4
2	53.9	44.6	33	20.9***	11.6	9.3**
3	53.9	46.6	38.6	15.3***	8.0	7.3*
4	53.2	46.2	42.2	11.0***	4 .0	7.0*
5	53.6	47.6	46.2	7.4*	1.4	6.0
6	49.5	49	48.5	1.0	0.5	0.5
7	54.3	50.3	50.5	3.8	-0.2	4.0
8	54.3	51.7	50.2	4.1	1.5	2.6
9	54.6	51.3	52.1	2.5	-0.8	3.3
10	51.2	53	53.8	-2.6	-0.8	-1.8
11	52.3	53.1	53.5	-1.2	-0.4	-0.8
12	57.0	59.5	54.8	2.2	4.7	-2.5
13	54.9	56.7	55.1	-0.2	1.6	-1.8
14	54.9	58.1	55.4	-0.5	2.7	-3.2
15	55.3	55.4	54.1	1.2	1.3	-0.1
16	52.9	53	52.1	0.8	0.9	-0.1
17	51.2	54.4	50.5	0.7	3.9	-3.2
18	47.8	52.7	47.9	-0.1	4.8	-4.9
19	48.8	50.7	49.5	-0.7	1.2	-1.9
20	50.8	49.3	47.5	3.3	1.8	1.5

Notes: Share of participants linked to a firm that has at least 10 employees who make at least 1/4 full-time minimum wage earnings. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Table A.7: Long-Run Effects of the SSP Plus Program on Other Job and Employer Outcomes

	Dependent variables:			
Incremental impacts of SSP Plus services in:	Job tenure (1)	Union dues (2)	Firm size (3)	Mean log earnings at firm (4)
Years 1-4	-0.11	n/a	-399	0.003
	(0.11)	n/a	(1284)	(0.032)
Years 5-8	-0.03	-0.006	-599	0.079
	(0.18)	(0.016)	(1402)	(0.045)
Years 9-12	-0.05	-0.005	3262	0.068
	(0.24)	(0.020)	(3748)	(0.044)
Years 13-16	0.18	-0.001	6104	0.000
	(0.32)	(0.023)	(4531)	(0.047)
Years 17-20	0.40	0.001	8540	0.047
	(0.44)	(0.024)	(6402)	(0.049)

Notes: Intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on equation (1); standard errors clustered at the individual level. Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively. n/a = estimates suppressed for privacy protection.

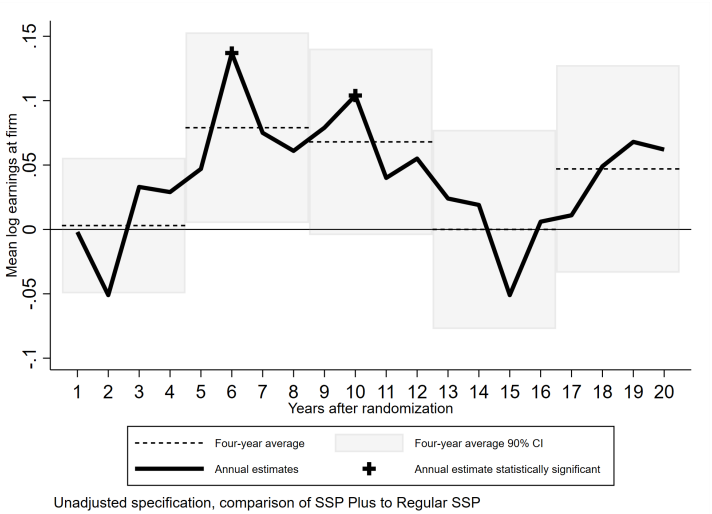
Table A.8: Marginal Value of Public Funds

		Components of net taxes-and-transfers:						
	Plus service cost	Taxes paid	Social Assistance received	Work-related transfers received	Other transfers received	Net taxes-and-transfers	Willingness to pay (change in after-tax income)	Marginal value of public funds
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
SSP Plus	1,714	3,700	-9,000**	2,400	2,700	7,500	22,900**	∞
	-	(2,700)	(4,200)	(2,400)	(2,800)	(7,000)	(10,900)	[0.20, ∞]
N individuals	-	589	589	589	589	589	589	-
N observations	-	12,369	12,369	12,369	12,369	12,369	12,369	-
Mean of dependent variable (Regular SSP group):								
	-	14,900	67,500	17,900	46,900	177,300	268,800	-

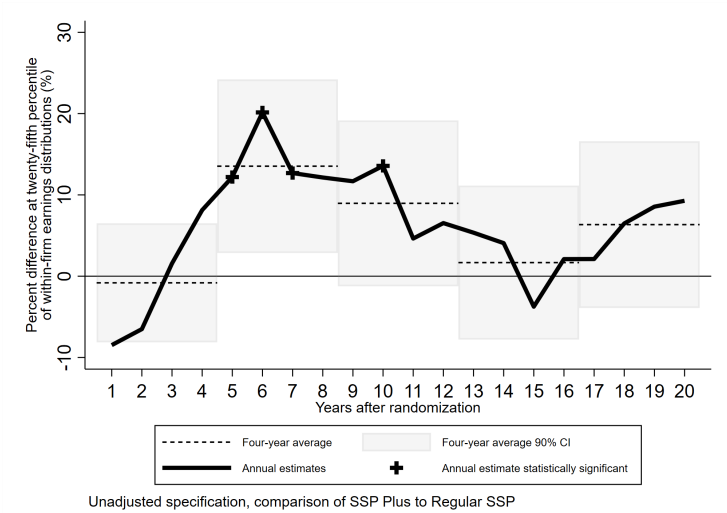
Notes: Statistically significant at *** 99 percent, ** 95 percent, and * 90 percent confidence levels, respectively.

Figure A.1: Long-Run Effects of the Self-Sufficiency Program Plus on Employer Quality

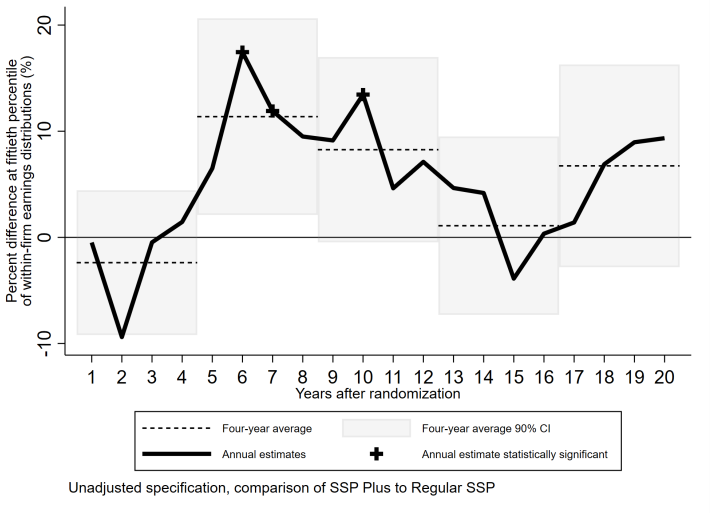
Panel A: Mean Log Earnings



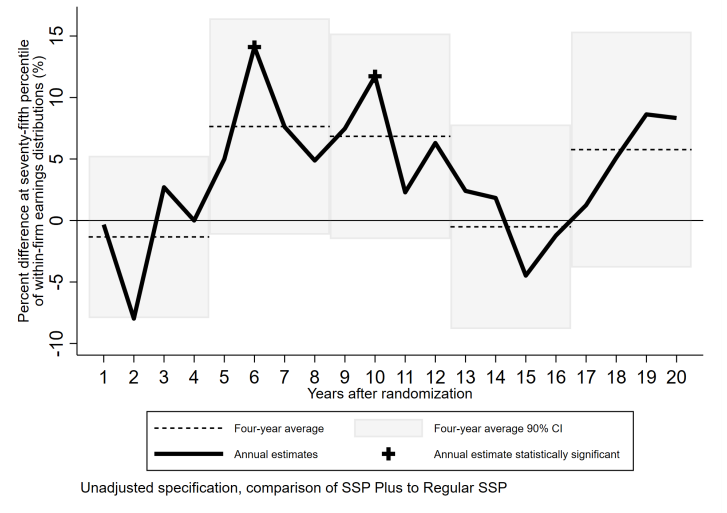
Panel B: 25th Percentile



Panel C: 50th Percentile



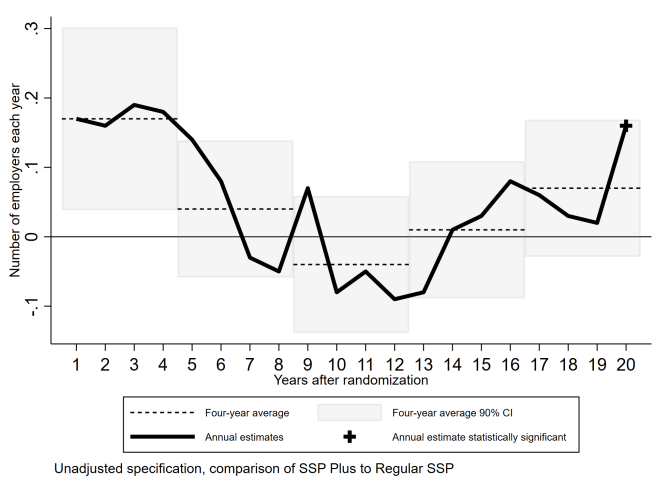
Panel D: 75th Percentile



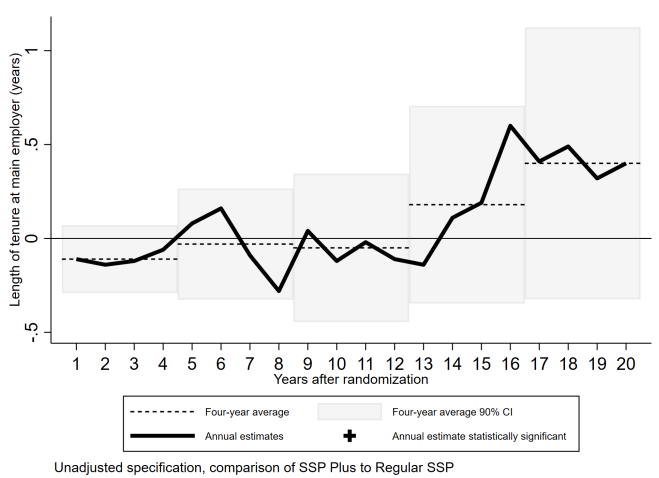
Notes: Panels A-D report annual (solid line) and 4-year group-specific (horizontal dashed line segments) intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on estimates of equation (1). 90% confidence intervals for four-year group specific estimates are represented by transparent grey bars. Annual differences are overlaid as a solid black line with statistically significant annual differences at the 90% level denoted by a cross marker.

Figure A.2: Long-Run Effects of the SSP Plus Program on Other Job and Employer Outcomes

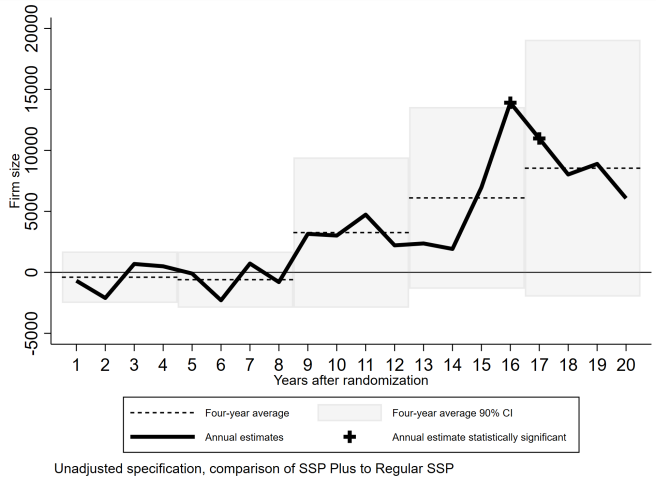
Panel A: Number of Employers



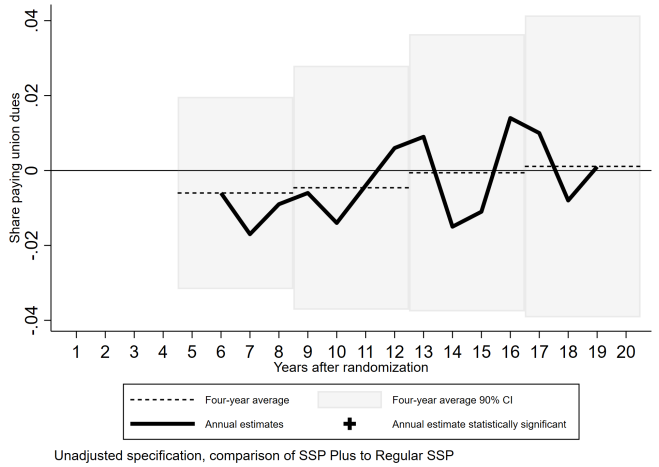
Panel B: Job Tenure



Panel C: Size of Main Employer



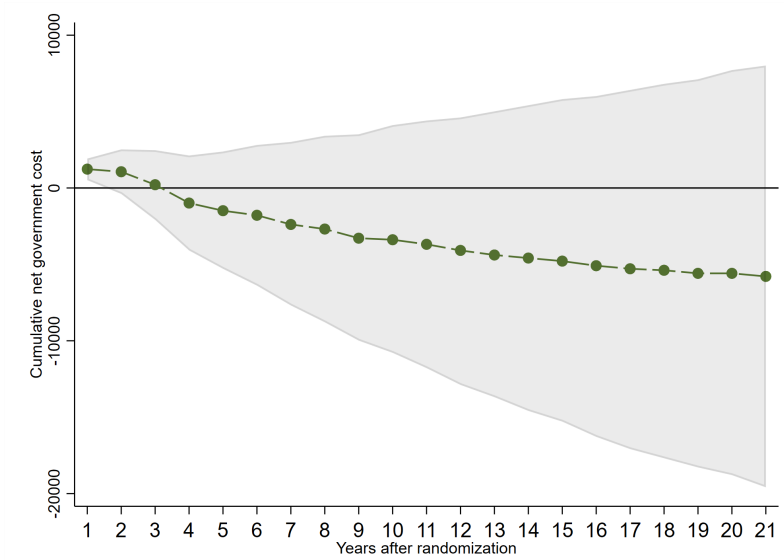
Panel D: Share Paying Union Dues



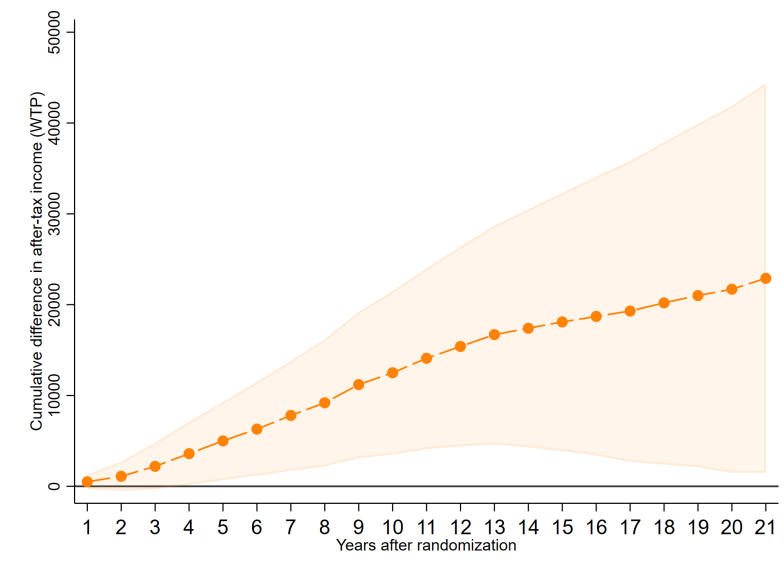
Notes: Panels A-D report annual (solid line) and 4-year group-specific (horizontal dashed line segments) intent-to-treat (ITT) impact estimates of the SSP Plus program relative to the Regular SSP group based on estimates of equation (1). 90% confidence intervals for four-year group specific estimates are represented by transparent grey bars. Annual differences are overlaid as a solid black line with statistically significant annual differences at the 90% level denoted by a cross marker.

Figure A.3: Marginal Value of Public Funds – Cumulative Estimates

Panel A: Cumulative Difference in Net Government Cost



Panel B: Cumulative Difference in After-Tax Income



Notes: Graphs plot the cumulative difference between the Plus and Regular group at each year post-random assignment. 95% confidence intervals are indicated by the shaded areas. The sample comprises Plus and Regular group members who are observed in any year in the T1FF post-random assignment, with missing years treated as zeroes and cumulative amounts carried forward from the last non-missing year.

Qualitative Evidence Regarding the SSP Plus Program

Focus groups conducted with Plus group members at the time the experiment was ongoing indicate that the high-quality counseling provided through the SSP Plus program helped to address multiple barriers to finding and retaining employment.[49] SSP staff helped Plus group members learn the skills necessary to search for work, apply for jobs, and interview with hiring managers; SSP Plus members also gained confidence and were more motivated to find and keep employment. The responsiveness of SSP staff and ongoing support helped Plus group members overcome on-the-job challenges once they were working and encouraged them to continue progressing in their careers. Even Plus group members who were not able to initiate the earnings supplement had positive feelings towards the SSP staff and reported feeling motivated to continue looking for ways to better their circumstances in life.

Plus group members who spoke during focus group sessions described how the assistance they received from SSP staff helped hone their skills in applying for jobs. For instance, many Plus group members had never used formal resumes and did not know how to write one. As a focus group participant stated, "I just found there was a lot I didn't know, just about the format of a resume. I didn't know the proper way it should be. I was shown the proper way it should be; I was shown, just a different way to bring the qualities that I have across to somebody else where before I wouldn't have had a clue how to do it." Resume preparation had the additional benefit of increasing confidence while searching for work: "I was proud to have such a nice-looking, complete, resume", said one Plus group member; another noted: "It gives you self-esteem; makes you stand out. Like, you go in with your head held high—something to show for it. Like, I mean, it's not like everybody else's."

Plus group members also received instruction from SSP staff about how to interact with prospective employers while submitting resumes and during interviews. As relayed by one focus group participant: "When I applied at [company name], I asked to speak to the head guy. I would never have made a request like this before.... All of a sudden, I can talk to people! I found out I wasn't a dumb person." Another participant described how the support from SSP staff helped her navigate the interview process: "It gave me the tools that I needed to go out and do a proper interview, instead of being tongue tied and not knowing what to say. And, not knowing how to get the qualities that I had, and that I knew I had, across to them."

Plus group members praised the dedication and empathy of SSP staff. As one Plus group member said, "...they made me feel very important. Each time they spoke to me, each time I called, they really made me feel glad I had called. They would do whatever they could to help...they made me feel that I wasn't bothering them." Even Plus group members who were not able to find full-time work soon enough to initiate the earnings supplement had favourable perceptions of the SSP staff:

> *"They made me feel really pretty good to know that there were people out there who really and truly did care whether you got work or not, and that were there to encourage you.*

[49] All direct quotes from focus groups are drawn from Bancroft and Taylor-Lewis (1996)

And, I mean, before that, you think, 'I'm the only one who cares,' but when you were out there with, and working with, the Self-Sufficiency people, you knew that they did care too.... They didn't put you down, and they tried to encourage you... they were there for you...."

Plus group members reported that SSP staff boosted self-esteem and encouraged them to apply for jobs rather than assume their prospects were hopeless:

"The staff, the way they made you feel really confident about yourself. Being on [Social Assistance], you feel like you're nobody. You can go and put in an application, but you're on Assistance so they're going to take somebody who is out of college before you. That's just the way you look at yourself. The SSP staff make you feel you're just as good as everybody else."

The contrast between the supportive relationships Plus group members established with their job coaches and the impersonal interactions they had with provincial welfare office caseworkers was summarized as follows: "The [SSP] staff treat you like you're a human being, not a number, which is a big difference from what you were on [Social Assistance]. On [Social Assistance], you were just a number." Plus group members described difficulties they had encountered trying to in access services through Social Assistance and their perceptions of indifferent caseworkers: "I didn't get no help from them. They didn't seem like they wanted to help me", was the impression of one focus group participant.

A recurring criticism of provincial welfare office caseworkers was their failure to respond to requests for referrals. A Plus group member, reflecting on her prior experiences with the Social Assistance system, said, "Anytime I've ever called and asked for help or for information, it's like they'd get back to me and they've never got back to me. And I've called again and they just never gave me any information that was helpful." The difficulties encountered in trying to access services through Social Assistance compounded feelings of low self-esteem:

"I found the services—if I knew about them and I tried to tap into them—for some reason there was always something that made me not qualify. Or just trying to get a hold of somebody to talk to is nearly impossible.... As for how I felt, how could I feel about something that I couldn't get a hold of? It made me feel left out; feel bad. Because you couldn't get a hold of it and, when you did get a hold of it, you were turned down. That's like rejection—another disappointment on the road of recovery."

To supplement the contemporaneous accounts of Plus group members from the mid-1990s, and to better understand how Plus services worked, we conducted in-depth interviews in the winter of 2021 with personnel from the SSP offices. A theme that emerged from these interviews was the degree to which the intensive services offered to the Plus group were able to address the unique needs of each participant.

The former executive director of the non-profit that delivered Plus services noted the importance of establishing close working relationships with participants for the purposes of addressing barriers to employment:

> *"They needed support. You're talking about a community of people who, for the most part, had fairly low self-esteem and had other issues in their life that had really impacted them....We got to know the participants. They got to know us by name; we weren't strangers doing their resume....When we were working with the participants, we challenged them about what they think they should do. We weren't there to say 'we'll get you into this' or 'we'll set you up here' or 'we'll get you this extra money'. We didn't do that. The whole purpose of this was for them not just to get a job but to get on their feet to create a career and lifestyle for themselves that was better for them and their children."*

Encouraging Plus group members to use the services on offer was another important aspect of job coaches' work. An SSP staff member confirmed the lengths to which job coaches went to ensure there was ongoing participation in services:

> *"If they don't show up—and in that group, a lot of them didn't show up—then you need the time to find them to get them back on track. The focus completely was on 'let's have this be successful and whatever way we need to do that let's find the way'....If they didn't show up to an appointment, once or twice [the job coach] might give a call and get it back on track but if it wasn't they'd go to the home. [The participants] had a lot of financial incentive to continue on but even then folks had some dark days and didn't feel like moving on."*