SRDC⬩SRSA

SOCIAL RESEARCH | SOCIÉTÉ
AND DEMONSTRATION | DE RECHERCHE
CORPORATION | SOCIALE APPLIQUÉE

ENCOURAGING WORK AND SUPPORTING COMMUNITIES

Final results of the Community Employment Innovation Project

David Gyarmati | Shawn de Raaf | Boris Palameta
Claudia Nicholson | Taylor Shek-Wai Hui

November 2008

SRDC Board of Directors

Chair

Richard A. Wagner
Partner, Ogilvy Renault

Members

Peter Barnes
President, Peter Barnes Enterprises Inc.

Paul Bernard
Professor, Department of Sociology, Université de Montréal

Jocelyne Bourgon
Distinguished Visiting Professor, Public Administration and Public Service Reform, University of Waterloo

Distinguished Fellow, Centre for International Governance Innovation

Monica Boyd
Professor, Department of Sociology, University of Toronto

Yvon Fortin
Advisor, statistical organization

John F. Helliwell
Professor, Department of Economics, University of British Columbia

Sharon Manson Singer
President, Canadian Policy Research Networks

Elizabeth Parr-Johnston
President, Parr Johnston Economic and Policy Consultants

Ian Stewart

Jean-Pierre Voyer
Executive Director, Social Research and Demonstration Corporation

Encouraging Work and Supporting Communities

Final Results of the
Community Employment Innovation Project

David Gyarmati

Shawn de Raaf

Boris Palameta

Claudia Nicholson

Taylor Shek-Wai Hui

November 2008

The **Social Research and Demonstration Corporation** (SRDC) is a non-profit research organization with offices in Ottawa and Vancouver. SRDC was created specifically to develop, field test, and rigorously evaluate social programs. SRDC's two-part mission is to help policy-makers and practitioners identify policies and programs that improve the well-being of all Canadians, with a special concern for the effects on the disadvantaged, and to raise the standards of evidence that are used in assessing policies. As an intermediary organization, SRDC attempts to bridge the worlds of academic researchers, government policy-makers, and on-the-ground program operators. Providing a vehicle for the development and management of complex demonstration projects, SRDC seeks to work in close partnership with all levels of governments — federal, provincial and local — as well as with communities where these projects take place.

This report is available on our Web site at www.srdc.org.

For copies of this report or other SRDC publications, contact

Social Research and Demonstration Corporation
55 Murray Street, Suite 400
Ottawa, Ontario K1N 5M3
Tel.: 613.237.4311
Fax: 613.237.5045
E-mail: info@srdc.org

Ce document est également publié en français.

Table of Contents

Figures

Tables

Preface

Why not offer people receiving income support benefits and facing poor re-employment prospects the chance to make a contribution and preserve their self-esteem by participating in projects that are valued by their community and society as a whole? This is the general idea behind the Community Employment Innovation Project (CEIP) — a research and demonstration project launched to test an alternative form of government support for the unemployed.

CEIP was conceived as an active re-employment strategy for unemployed individuals who volunteer to work on local community projects in areas hit by chronic unemployment. CEIP aimed to offer participants wages instead of income transfers and to improve their long-term employability by helping them preserve and possibly raise their human and social capital.

Although CEIP's designers saw this project based on community employment as a promising approach, there was considerable uncertainty about how it would actually work. Could communities come up with jobs that would meet their needs and those of participants? Would recipients of employment insurance or income assistance want to participate in such a project? Would these new jobs help increase their employability and social networks?

Government expenditures on a new program can be justified only if its benefits outweigh the costs or if its net benefits exceed those of the programs it would replace. That is why Human Resources and Social Development Canada and the Nova Scotia Department of Community Services called on the expertise of the Social Research and Demonstration Corporation to test CEIP under real-world conditions and evaluate the project using the most rigorous evaluation methods.

This report presents the final results of CEIP and assesses its effects on workers and communities that participated in this unique demonstration project. The results confirm that community-based employment can be an alternative form of government support for many recipients of employment insurance or income assistance. While CEIP cannot replace existing income support programs, it represents a cost-efficient option that governments could offer to the long-term unemployed and communities to help them improve their economic situation and well-being.

Jean-Pierre Voyer

Executive Director

Social Research and Demonstration Corporation

Acknowledgements

Introduction

Canada has experienced nearly 15 years of sustained economic growth, though the benefits of these prosperous conditions are not shared equally throughout the country. Indeed, there are still regions where the unemployment rate exceeds twice the national average. Job-seekers in these communities, often victims of plant closures, run the risk of experiencing unemployment for a long period of time. For these unemployed workers, the Employment Insurance (EI) system offers temporary relief but when jobs are scarce and the local economy lacks diversity, job-seekers often end up exhausting their benefits and having to rely on income assistance. Extending the period of EI benefits is not a viable solution as individuals experiencing long periods of unemployment run the risk of seeing their skills deteriorate, and their employability being reduced. The longer they rely on government income transfers, the more difficult it becomes to find a job. What should governments do then to help these workers and communities?

This is what prompted Human Resources and Social Development Canada (HRSDC) to conceive the Community Employment Innovation Project (CEIP) — a long-term research and demonstration project that is testing another form of income transfer payment for the unemployed in areas of chronic high unemployment. CEIP is an active re-employment strategy, which takes the form of a "community wage" paid to unemployed individuals who volunteer to work on locally developed community-based projects. Beyond fulfilling the need for immediate employment, CEIP hopes to influence participants' longer-term employability by helping them preserve and possibly improve their human and social capital. At the same time, CEIP aims to facilitate community development by supporting the "third sector" and encouraging activities that are meaningful for both the participant and the community.

Although CEIP represented a promising approach, there was considerable uncertainty about how it would actually work. Its effectiveness was unproven, as various forms of job creation programming had been tried, but few had been carefully evaluated. The expenditures associated with a new government program can be justified only if the benefits they produce outweigh the costs or if it can be shown that the net benefits exceed those of the programs it would replace. Consequently, HRSDC and the Nova Scotia Department of Community Services (NS-DCS) decided to test CEIP under real-world operating conditions, and to evaluate it using the most rigorous evaluation methods available.

CEIP was implemented in the Cape Breton Regional Municipality (CBRM) in Nova Scotia in 1999. Industrial Cape Breton is one such area where closure of the coal mines and a declining steel industry have resulted in double-digit unemployment rates over a decade, even during a period when the national economy has been thriving. The implementation and evaluation of the project has been contracted out to the Social Research and Demonstration Corporation (SRDC), a non-profit social policy research organization that specializes in developing, implementing, and evaluating large-scale, long-term demonstration projects to test innovative social policies and programs.

Scope of this Report

This is the final report in a series of publications that evaluate the effects of CEIP on unemployed individuals who participated in the program and the communities that developed the projects that employed them. Gyarmati et al. (2007) presented promising results from the participant impact study, which demonstrated large sustained impacts of CEIP on employment, earnings, and income over the full three years of program eligibility. The quality of jobs held was also improved, and some additional, positive effects were observed on participants' social capital, transferable skills, attitudes towards work, and life satisfaction. The question, however, remained whether these impacts would be sustainable once program eligibility had ended after three years. The present report addresses this question by reviewing the post-program impacts of CEIP on participants.

Gyarmati et al. (2008) presented the effects of CEIP on participating communities, which also demonstrated promising results with positive changes in several indicators of local capacity and social conditions. These effects, however, were considered in isolation from participant impacts and their monetary value was not quantified in a systematic way. The present report integrates the full set of participant impacts with results from the community effects study and conducts a comprehensive cost-benefit analysis to determine the program's overall effect on government budgets and net value to Canadian society as a whole.

As for this report's structure, **Chapter 1** reviews the background and theory of CEIP, providing a brief primer on community employment programs across Canada and the country's social economy. It then outlines the program model that CEIP was designed to test, distinguishing its key features from earlier initiatives. **Chapter 2** reviews the implementation of CEIP, including the engagement of communities and recruitment of participants.

Following the background on implementation, **chapters 3 and 4** present the post-program impacts of CEIP on the central economic outcomes of interest in the study. Chapter 3 reviews the longer-term impacts on employment rates, earnings, wages, and receipt of Employment Insurance (EI) and Income Assistance (IA) benefits. It also looks briefly at the impacts on personal and household income, the incidence of low-income individuals, and any effects on hardship, health, and well-being of participants. Chapter 4 considers the gains participants experienced from stable CEIP employment in terms of their future employability. This includes a review of CEIP's impacts on the quality of post-program occupations of participants, their transferable skills, and a number of other factors related to education and training as well as their residential mobility and migration.

Chapter 5 moves beyond economic outcomes and presents impacts of CEIP on social capital and the extent of volunteering among participants, two important outcomes for both individuals' employability and the capacity of local organizations in the communities they reside. Turning to community effects, **Chapter 6** provides a more complete summary of CEIP's effects on residents and organizations, with particular focus on outcomes related to local capacity and social conditions facing key community sectors and groups at risk of social exclusion.

Chapter 7 integrates the results from participant impact and community effects studies in a comprehensive cost-benefit analysis that reviews the program's net value to society.

Chapter 8, finally, provides a summary of findings by revisiting the key research questions under evaluation in CEIP. It also offers a number of policy implications arising from these findings that are important to related interventions, which may be implemented in partnership with communities.

Chapter 1

Background, Theory, and Design

The Community Employment Innovation Project (CEIP) is a long-term research and demonstration project that is testing an alternative form of income transfer payment for unemployed individuals, aiming to improve their employability, while supporting communities in areas of chronic high unemployment. In exchange for their entitlements to Employment Insurance (EI) and Income Assistance (IA), CEIP offered volunteers up to three years of work on projects that were developed by local communities in the Cape Breton Regional Municipality (CBRM). This provided participants a significant period of stable earned income, and an opportunity to gain varied work experience, acquire new skills, and expand networks of contacts. At the same time, this represented a substantial, free-labour supply for communities of up to 2,250 worker-years.

A Brief History of Community Employment Programs

Government responses to the problem of chronic regional unemployment in Canada have included a variety of direct job creation programs — many of which were implemented in Cape Breton — that were able to both involve and support communities with varying degrees of success. In developing CEIP's program model, designers sought to build upon the challenges and lessons from earlier approaches. This section provides a brief review of program developments to give a flavour for how approaches have changed over time.

1970s: Temporary Community Employment

During the 1970s, a number of temporary community employment programs were implemented — the Local Initiatives Program (LIP), the Local Employment Assistance Program (LEAP), and Canada Works — that had dual goals of job creation and community betterment. For example, LIP's created off-season jobs for unemployed individuals and aimed at fostering the creation of new facilities and services that would benefit whole communities. LIP also tried to involve communities in developing and managing projects.

Given some of their similarities, evaluations of LIP and subsequent, related employment programs sets a baseline expectation for CEIP in that these approaches created large numbers of temporary jobs that, by and large, involved work that was of some benefit to communities. They did not succeed, however, in revitalizing the Cape Breton economy, and two potential pitfalls were noted. First, temporarily provided useful community services that could not be sustained when the project ended, possibly leading to additional hardship for those who relied on these services. Second, individual workers employed by the programs might come to depend on temporary jobs, making them worse off than they otherwise would have been without it. Rather than seeking full-time, yearlong work, some workers might simply cycle

between temporary work and the unemployment insurance benefits for which the community work qualified them.

In addition to possibly encouraging transfer dependence, LIP and similar programs have been criticized for offering employment that is much less desirable than a "real" job (Sherwood, 1999), as many offered lower-skilled positions of less than a year in duration in a single work placement. Although the programs may have helped workers preserve employability by maintaining a presence in the workforce, the characteristics of the jobs offered hampered one of the programs' overriding objectives, which was to improve longer-term employability.

1980s: Industry Labour Adjustment and Development Assistance

The example of the Industry Labour Adjustment Program (ILAP) highlights another important set of challenges facing earlier community employment programs, in terms of the nature of community involvement, the types of projects, and sources of job creation. Sydney, Nova Scotia, was one of four communities selected to take part in ILAP, which was implemented in 1981 to provide new employment opportunities for unemployed steel-workers. ILAP explicitly required that community adjustment committees be composed of "community knowledgeables" who would play an important role in determining the nature of the projects undertaken and think strategically about how projects could yield long-term, sustainable benefits to both communities and workers. The program targeted the private sector as a primary job source, with workers assigned to projects developed by businesses in industries designated by the federal government. As ILAP was implemented, however, it was not always clear the extent to which projects were linked to the needs of the workers. The focus of local representatives tended to be directed towards projects for existing local businesses as opposed to diversifying the local economy in ways that might help workers find sustainable employment.

During the 1980s, three challenges continued to plague most programs of community employment: the lack of sustainability of projects and services; the questionable benefits to workers' employability and, perhaps worse, possible dependency of workers on the programs; and the lack of strategic community involvement in planning and decision-making. Although there was a growing belief that community economic development was a way to fire the engines of local development, most programs had limited success in involving communities, as they did not often reach beyond local elites.

The introduction of the Community Futures Program (CF) in 1985 represented another significant attempt by the federal government to integrate economic development into a wider process of engagement and strategic planning at the community level. The program was originally designed to assist communities facing major layoffs, plant closures, chronic unemployment, or economic decline, and aimed to reduce unemployment permanently by promoting the creation of permanent jobs, supporting existing employment, providing training, or moving unemployed workers out of a local labour market.

The Community Futures Program supports the development of Community Futures Development Corporations (CFDC) and Community Business Development Corporations (CBDC) in conjunction with regional government agencies, such as the Atlantic Canada

Opportunities Agency (ACOA) in Eastern Canada. CFDC and CBDC are independent, non-profit organizations that are guided by a volunteer board of directors, and that provide their communities with a variety of services, including development loans to small and medium-sized businesses, technical support, and training.

CF achieved more success than earlier community-based programs in incorporating an element of local control and priority-setting over the direction of development efforts, which provide important lessons for future initiatives. In addition to business development, some CF organizations participate in a wide array of community initiatives, including strategic planning processes, research and feasibility studies, and the implementation of community economic development projects, particularly in rural communities. For example, CF organizations that have led projects funded by the Rural Community Economic Development Project (RCED), in Alberta, have compiled a list of best practices at all stages of capacity-building, including planning, managing, and evaluating projects, engaging the community, collaborating, and maintaining momentum.[1]

1990s: Active Labour Market Policies and Welfare Reforms

Since the late 1980s, labour market policy discussions have shifted towards what is known as active labour market policy measures.[2] The idea is that transfer programs should encourage recipients to work rather than passively providing cash benefits, regardless of whether they work while receiving them. This interest in active measures has affected policy developments in EI,[3] and is relevant to CEIP's rationale and design.[4] Parallel with the federal government's interest in active labour market measures was a general trend in provincial governments towards "reforming welfare through work." To this end, measures aimed at increasing participation in the labour market were seen as essential steps towards reducing welfare dependency and social exclusion.

Although the emphasis on direct job creation programs was substantially reduced in Canada during the 1990s — particularly at the federal level —, some active measures in the 1996 *EI Act*[5] still do provide for limited funding of Job Creation Projects (JCP). Of course, these measures still encounter many of the same challenges as earlier employment programs. In particular, there is rarely a strong link between projects and any broader community development goals,[6] where project sponsors are either public agencies or private firms with

---

[1] For more information on the program, see www.communityfutures.ca.

[2] See, for example, the discussions in Organization for Economic Co-operation and Development (1989; 1990).

[3] For a more complete review on the developments within the EI and IA programs relevant to the design of CEIP, see Greenwood et al. (2003).

[4] In the case of CEIP, transfer recipients would be encouraged to take up community employment, recognizing the limited possibilities for market work in areas of high and continuing unemployment. The goal of testing an active labour market policy alternative had several implications for the CEIP's design. The program model could not provide participants with financial benefits to participants that were substantially higher than those for which it was an alternative were. Moreover, it could not provide large amounts of capital, financial or otherwise, since the provision of such capital is not a role typically assumed by a transfer program. Although the program could, in principle, also provide job training, other existing components of the EI system provide training, and the funders had other ways to learn about the effects of training and human capital accumulation.

[5] *Employment Insurance Act* (1996, c. 23).

[6] See Roy and Wong (1998) for a review of evaluation studies of Canadian job creation programming.

objectives that are disconnected from any locally identified community needs. Arguably, this is a result of models that lack an overriding commitment and structure for creating community control, and one in which public agencies or private firms are typically the only source of job creation.

Governments in the United States have also utilized community-based jobs in various capacities. In the 1980s, community work experience programs (CWEP) were initiated in several states as part of mandatory "workfare" (Holzer, 2002). With the welfare reforms in 1990s, several large-scale projects utilizing community service employment (CSE) were implemented, often as components of larger demonstration projects, including Vermont's Community Service Employment Program (Sperber and Bloom, 2002), and Milwaukee's New Hope Project (Brock, Doolittle, Fellerath, & Wiseman, 1997). In these two projects, participants were provided with incentives to work full-time, but were given short-term — less than one year — community service jobs if they were unable to find other employment. The projects were designed to make unsubsidized employment more attractive, so only a minority of participants ever took a subsidized job.

The U.S. experience with community job creation offers similar lessons to that in Canada, and emphasizes the need to "tie work projects explicitly to community needs."[7] Indeed, one large-scale community initiative — the Neighborhood Jobs Initiative, implemented in high-poverty neighbourhoods in five U.S. cities (Molina & Howard, 2003) — illustrates the value of using community-based organizations (CBO) as vehicles for mobilizing and brokering the delivery of locally tailored employment services to unemployed and under-employed residents. CBO that were well connected to the community, and that had local knowledge of employment barriers could communicate this knowledge to other institutions and act as a go-between, so that local employment services matched the needs of residents and communities more closely.

Social Economy: An Alternative Source of Job Creation and Development

Parallel to these shifts in employment policies, there has been a growing interest in alternative sources of job creation and mechanisms for supporting local development. In recent years, governments have attempted to form partnerships with non-governmental institutions in pursuit of social objectives, with considerable attention paid to the possible role of the social economy in helping to facilitate economic adjustment or to strengthen the ongoing life of communities. While definitions of the *social economy* vary, a common element is that of organizations and institutions, which neither entirely produce goods and services for sale in the market, nor entirely operate as part of a tax-funded government bureaucracy, but which share characteristics of both private and public sectors – often referred to as the "third sector."

---

[7] See Johnson (1997) for a review of lessons learned from U.S. community employment programs.

The Policy Research Initiative (PRI) convened a round-table on the social economy to help define the sector and promote a policy and research agenda to support its development. As part of this work, the social economy is generally defined through the features of the organizations that make up the sector. They are different from for-profit businesses in that they involve a diverse collection of stakeholders in decision-making, they generally operate on democratic principles, and they seek to generate their own revenue through commercial activities. Furthermore, their organizational missions are based on a combination of common interest and public service objectives, rather than a profit motive (Policy Research Initiative, 2005).

Ninacs (2002) points out, however, that this concept is not new, and has been evolving, from the "old" social economy defined in terms of the structural aspects of the organizations that comprise it, to the "new" social economy defined in terms of "relational and sociological" aspects of organizations, their activities, and the people who comprise them.

The "Quebec Model"

The most extensive experience with the social economy in Canada has been with what has become known as the "Quebec Model." Lévesque and Ninacs (1997) give many concrete examples of social economy projects in Quebec, including:

- *Housing co-operatives*: With funding from the federal government, the province, and the City of Montreal, more than 20,000 people have been involved in the creation and operation of over 1,000 co-operative housing projects.

- *Worker co-operatives*: These worker-owned and managed firms produce saleable goods and services. Financial support and technical assistance are provided by unions and provincial agencies. In Quebec, there are 175 co-operatives; 45 operate in the forestry industry.

- *Childcare centres*: Quebec has a network of non-profit childcare centres, home childcare agencies, and school childcare facilities that provide over 90,000 childcare spaces. These agencies are largely under direct parental control and employ over 15,000 individuals. Funding comes from a mix of user fees and governmental grants.

Examples from Quebec give some idea of the diversity of social economy initiatives that are embodied largely within social enterprises or third-sector organizations. While there is no universally accepted definition of a *social enterprise*, they typically have a wider social or community objective, operate on democratic principles, and seek to generate their own revenue through commercial activities, which supports other sources of funding. Though most generate revenue through the sales of goods or services, they are not profit-oriented as the proceeds of their activities are used to advance the mission of the organization for the benefit of their wider members or community. While achieving financial independence appears to be an implicit goal of most social enterprises, many of them have found it to be a challenge given the disadvantaged populations they serve.

Social Economy in Nova Scotia

While strong government support has lead to a very strong and well-documented model of social enterprise development in Quebec, there is evidence of more piecemeal development in other Canadian provinces. However, distinguishing such initiatives from the community economic development (CED) projects with which they are commonly associated can prove difficult.[8]

Probably the best example of a community development organization working in the social economy in Nova Scotia is New Dawn Enterprises, which works in real estate and health services, and offers an array of projects for the disadvantaged. New Dawn bears similarity to the Halifax-based Human Resources Development Association (HRDA) Enterprises Limited, whose initial model was a two-sided focus on employment and enterprise. It recruited out-of-work welfare recipients, and met half their wage and benefit costs for the first year from welfare funds, while undertaking business development activity to create permanent jobs.

These examples illustrate how umbrella development organizations have been able to create small businesses with a strong employment focus. In the case of New Dawn, there is also a strong social element to the goods and services produced. While both New Dawn and HRDA are community oriented and draw on local community expertise, neither has a strict democratic model that would meet the Quebec definition of a social enterprise.

International Initiatives

Internationally, there are several examples of successful employment and development programs that utilize the social economy in a broader sense with less focus on the structure of organizations involved, often utilizing the non-profit and voluntary sectors. McGregor, Clark, Ferguson, and Scullion (1997) estimate that there are some 3,700 organizations operating in the social economy of lowland Scotland that employ 42,000 people, and that among the principal benefits of their activities is the creation of employment opportunities to facilitate the reintegration into society of people from disadvantaged groups. The Conference of Religious of Ireland (1998) reports on a pilot project that made paid part-time employment opportunities available to unemployed individuals on a voluntary basis doing work of "public or social value." In addition, Borzaga (1999) describes the widespread use in Italy of "work integration social enterprises" that produce not only private goods and services, but also public goods, and social and community care services in order to create jobs for disadvantaged workers.

---

[8] CEIP's designers were clear in their desire to test the effectiveness of community development projects in the social economy rather than in CED projects. There is potentially considerable overlap between CED projects and community development through the social economy. Perry and Lewis (1994), in reviewing Canadian CED initiatives, associate CED projects with "real community control," community "'ownership' of decisions," and "devolution of control" that is "not merely an ideological commitment to a democratic ethic," but "a practical avenue to successful development." Both CED projects and the social economy have a focus on job creation. The key difference appears to be in the definitive focus in the social economy on production of goods and services to meet social needs, outside of the public and private sectors. The CED is less restrictive on the types of organization, including for-profit, commercial concerns, or products considered. Nonetheless, it can be argued that many of Perry and Lewis's case-study CED organizations work in the social economy, even if they are not labelled as such.

A broader view of the social economy, encompassing the non-profit and voluntary sectors, is often taken when estimating the size of this sector in Canada (Policy Research Initiative, 2005). This approach is also more consistent with a model where communities have control over project development and one that the CEIP's designers favoured. Unlike the "Quebec Model," this notion of the social economy does not require that employers have particular governance structures or that they are entirely independent of government, giving communities more flexibility in their development efforts. By following this approach, CEIP allows communities in Cape Breton to tap into the existing development infrastructure, as described above, even though these organizations and initiatives may not conform to a strict definition of the social economy along the lines of the "Quebec Model."

CEIP Program Model

The Role of Communities: Empowerment and Capacity-Building

Building on the challenges and lessons from earlier programs, CEIP placed extensive community control over project development in order to explicitly link projects with local priorities and needs. The role played by the communities had two main dimensions. First, each community had to create a democratic structure to make decisions regarding the use of workers supplied by CEIP. These decision-making bodies were initially charged with developing strategic plans and setting priorities for the kinds of projects that would have access to this free labour. Second, communities were responsible for mobilizing local project sponsors to develop projects that would employ CEIP workers. It was hoped that the organization, planning, and mobilization of projects would serve as a catalyst for community action. In turn, these processes — along with project output — would support community capacity growth and improve social and market conditions in ways that were consistent with locally identified community needs.

The main element of CEIP's offer to communities was the chance to be the beneficiaries of the free labour provided by the project — up to 2,250 worker-years over a five-year period, which it was hoped would serve as a catalyst for community action. CEIP's design, however, recognized that communities would vary in their capacities to undertake the responsibilities required of them. Consequently, each community received a planning grant of up to $30,000 to defray some of the direct costs of engaging in CEIP activities at the local level. In addition, CEIP's budget included funds to hire and make available to community boards expertise to support them in undertaking CEIP-related tasks, including setting up and running the volunteer community boards, marketing, implementing communications activities, mobilizing the community, and strategic planning.

Types of Community Projects: The Social Economy

CEIP grows from the body of knowledge and practical experience with the social economy and is evaluating whether this third sector can be used to develop opportunities for work, recognizing that some communities have smaller market sectors than others. The central idea is to encourage activities that are meaningful for both the participant and the community, while avoiding duplication with public- and private-sector activities.

In the context of community control, CEIP did not impose a strict definition of the social economy on communities. They were free to determine the precise nature of the projects, within limited guidelines, and could choose, for example, to focus their resources on existing non-profit organizations or development agencies rather than create new social enterprises. A test of a program based on the "Quebec Model" would impose constraints on the types of projects developed by local communities, which is arguably inconsistent with the notion of community control. Furthermore, developing social enterprises would take considerable time, expertise, and capital investment, and would likely produce significantly fewer work opportunities for individuals than an experimental test would require, given the time constraints on its implementation.

Furthermore, CEIP provided communities with essentially free labour, with little capital support, as it is testing an option for supporting EI or IA recipients rather than a pure economic development project. The idea is to test this approach using a rigorous design, to determine if the social economy can provide a range of opportunities in the form of meaningful jobs — some possibly higher-skilled than traditional programs — without large capital investments.

Jobs and Program Services: Varied Opportunities and Support

Similar to earlier programs, CEIP was designed to replicate "real" employment. Participants were required to work for 35 hours a week on assigned, locally developed projects. In return, they were paid a community wage of $325 per week.[9] CEIP employment was insurable under EI and covered by the Nova Scotia Workers' Compensation program and the Canada Pension Plan. Participants were paid for statutory holidays, and they accumulated an entitlement to "personal days" that could be taken as paid vacation or sick days. They could also choose to enrol in a private health plan, with premiums shared between CEIP and the participants who opted for coverage.

There are several unique features of CEIP related to the length of eligibility, the nature of the available job placements, and the supporting program services. First, participants were eligible for CEIP for three years, as long as they did not return to regular EI benefits or IA as their primary source of income. This would provide more significant employment duration than was possible in earlier programs. In addition, rather than a singular work placement, participants were able to take on a number of successive new job assignments to obtain a wider range of work experience. This was actively encouraged through case management and a job-matching coordinator.

Although the principal CEIP activity for participants was working on community-based projects, a number of ancillary activities were also built into the program model, including an employability assessment, basic job-readiness training, limited transferable skills training, and job-search support, to aid in the transition to other market employment.

---

[9] The community wage was initially set at $280 per week, and increased over the course of the project to $325, in line with increases in the provincial minimum wage.

Social Capital, Skill Acquisition, and Enhancing Employability

CEIP was not an intervention that explicitly sought to develop human capital; rather, its focus is on the maintenance and acquisition of skills and social capital through work experience. In particular, the varied nature of many job opportunities in the social economy can require flexibility, collaboration, and multi-tasking that might be expected to produce effects on skills that are transferable to a number of different jobs. These are often referred to as generic or soft skills, like adaptability, working in teams, and commitment to learning (McLaughlin, 1992).

At the same time, CEIP also aimed to enhance the social capital of participants and community residents. Consistent with recent conceptual developments, especially work done by the Policy Research Initiative (2003), CEIP adopts a definition of social capital that emphasizes the availability of resources and support within social networks. The concept of social capital has garnered significant attention among policy-makers in recent years, with growing interest in possible policy measures to enhance networks as well as the links to employment and self-sufficiency that they may provide for unemployed individuals.

Some mechanisms were built into CEIP's program model to encourage the development of social capital and skills in ways that earlier programs did not. For example, the long duration of CEIP eligibility and availability of multiple, varied job placements was meant to provide for a wider range of opportunities for skill development and expansion of participants' social networks. As such, participants who work together may develop stronger peer support networks. Furthermore, participation also brings participants into contact with both project-sponsoring organizations and residents at large. This gives them a chance to develop stronger social networks both within and outside their immediate local community.

There may also be a positive contribution to social capital among non-participants at a community level. By participating in CEIP, communities benefit from the processes by which citizens communicate and interact with each other — namely, how they are engaged in setting priorities for action and in identifying and mobilizing community assets. All of these actions can potentially strengthen local social networks as well as engage new players and increase the number of individuals who are willing to participate in community-led activities. By taking on these responsibilities, some of the players will also develop new skills. Over the longer term, this may enhance a community's capacity to overcome adversity and create opportunities.

CEIP Evaluation Design

CEIP has been designed to assess the feasibility of implementing a community-based jobs program for long-term unemployed individuals, to estimate the benefits generated by such a program, and to determine whether the benefits are worth the cost of producing them. In considering benefits, CEIP is considering both those that accrue to individuals who work on the community-based projects and those experienced by the communities where the projects took place.

CEIP's program model could produce beneficial effects for individual participants. The program may enhance their employability, leading to more employment and increased earnings in the future as well as reduced reliance on transfers. Working on community-based projects offers them an opportunity to gain work experience and acquire new skills. In addition to adding to human capital, CEIP may also contribute to an individual's social capital. Participants who work together may develop stronger peer support networks. Project participation also brings participants into contact with project-sponsoring organizations and with individuals and organizations that benefit from the services being provided. This gives participants a chance to develop stronger social networks in the community.

There may also be a positive contribution to community development. The products or services provided by the community projects are focused on needs identified at the local level, and thus can directly provide value to the community. The availability of the free labour provided by CEIP participants, or the services provided by the organizations employing them, may strengthen existing community organizations, or lead to the creation of new ones. The volunteers who participate on community boards, or get involved in sponsoring projects, may themselves develop new skills or stronger social networks. Over the longer term, a community's resiliency and its capacity to overcome adversity may be enhanced.

Finally, for the governments that are funding CEIP and for society as a whole, this program model may be a cost-effective option that governments could use alongside traditional transfer payments.

Formally, the following set of research hypotheses has been developed for CEIP. The overarching research question is as follows: *Is there a cost-effective way of providing transfer payments to unemployed workers that is linked both to work and to desirable community outcomes?* Because this broad question actually has several questions embedded within it, the research hypotheses for the experiment have been divided into those concerning individual outcomes, community outcomes, and the cost-effectiveness of the program.

Two hypotheses concern individual outcomes:

- An offer of a significant period of stable employment on a series of community-based projects will be accepted by a significant number of unemployed workers.

- By taking part in community-based projects, individuals will acquire skills and work experience, and will develop stronger social networks, which will improve their post-program labour market outcomes, increasing their employment and income, and reducing their receipt of EI benefits and IA payments.

Two hypotheses concern community outcomes:

- Communities can generate worthwhile community development projects that will provide meaningful work opportunities for unemployed workers.

- Planning for and operating these projects will contribute to local capacity growth and longer-term community development by strengthening the social and market economies.

The final hypothesis relates to the cost-effectiveness of the program:

- Based on a cost-benefit analysis, the program will be a cost-effective means of achieving the twin goals of increasing the employability of transfer recipients and contributing to the development of economically depressed communities.

The evaluation strategy for CEIP is designed to address all these hypotheses. It includes four main components:

- *Implementation research* to carefully document how the project was implemented, to assess how closely the program in the field matched the original design, to evaluate potential participants' understanding of CEIP's offer, and to identify delivery issues that can aid in better understanding how and why the program worked or failed.

- *An individual impact study,* using a random assignment design, to compare the experiences of program group members with those of a control group who were not eligible to work on community-based projects.

- *A community effects study*, using both a theory of change approach[10] and a quasi-experimental, comparison sites design, to evaluate the effects on the communities that participated in CEIP.

- *A cost-benefit analysis* to compare the economic benefits that accrue to participants and communities with the cost to governments of producing those benefits.

The first component, implementation research, has been completed and published (Greenwood et al., 2003), as has an interim impact study (Gyarmati et al., 2007), and the community effects evaluation (Gyarmati et al., 2008). The primary focus of this report is the 54-month, post-program impact study of participants, the methodology and data sources of which are described below. This report will also summarize the major results of the earlier community effects study, and integrate them into a comprehensive cost-benefit analysis in order to address the final research hypothesis regarding the overall net value of the program for society.

Methodology

One of the more important features of CEIP that sets it apart from earlier community employment initiatives is its rigorous evaluation design. A multiple-methods approach is used to evaluate its effects on both individuals and communities. This includes a random assignment evaluation design — widely accepted as the most reliable way to estimate a program's impacts — in order to assess the effect of CEIP on individuals who take part in the program. The effect of CEIP on communities is being evaluated with a multiple-methods, quasi-experimental design using a theory of change approach. A comprehensive cost-benefit

---

[10] Theory of change is a methodology for evaluating Comprehensive Community Initiatives (CCI). The theory, derived through extensive stakeholder consultation, identifies what community changes CEIP may produce, and how these changes will take place. If data supports the theory, effects can be more reliably attributed to CEIP. See Connell and Kubisch (1998) for more on theory of change methodology.

analysis will also help determine if CEIP is a cost-effective means of achieving the dual goals for individuals and communities.

Individual Impacts: A Random Assignment Design

The goal of the individual impact study is to measure the changes in outcomes that CEIP produces for the individuals who take part. The methodology in use to conduct the analysis is a random assignment evaluation design. In isolation, simply looking at the outcomes of those who take part in a program, such as the one offered by CEIP, will almost always overstate that program's achievements, as all positive developments will be attributed to the said program. These do not identify the extent to which the observed outcomes simply reflect what people would have done on their own. The challenge in an impact evaluation is to determine the difference that the program in question makes, the changes in outcomes that result from the program itself.

The difference between the observed outcome of participants and what the outcome would have been without the program is called an impact. The measure of what the outcome would have been in the absence of the program is called the counterfactual. Most commonly, a counterfactual is created by identifying a comparison group that resembles as closely as possible the group that takes part in the program. It is generally accepted that the best method of creating a comparison group is by means of random assignment. Starting with a group of individuals, all of whom meet selection criteria for the program to be tested, each individual is randomly assigned to a group that either will be eligible to take part in the program or not. Those assigned to the latter group provide the comparison for evaluation purposes, and, when random assignment is used, the comparison group is referred to as a control group.

The process of random assignment ensures that there are no systematic pre-existing differences between the program and control groups.[11] They differ only in that one group is eligible for the program, and the other is not. Therefore, any differences that are observed over time in the experiences of the two groups can be attributed, with confidence, to the program.

Community Effects: A Quasi-Experimental, Multiple Methods Approach

Since random assignment is usually infeasible for studying community-level effects, CEIP incorporates a multiple-methods research design that relies on both a theory of change approach and a quasi-experimental design to evaluate its effects on the six program communities. Theory of change methodology requires that evaluators lay out explicit, or implicit, theories about how and why a program should work or not in order to validate the findings from the various sources of data. All expected outcomes and critical assumptions

---

[11] Strictly speaking, the expected values of the averages for all pre-existing characteristics of the program and control groups are the same, even though their actual values may differ, especially in small samples. Random assignment ensures that the two groups will not differ systematically, but it does not guarantee that they will be identical. Random differences can still occur, and even though they do not introduce systematic bias into the impact estimates, they do reduce the precision of the estimates. Data on the characteristics of the sample can be collected just before random assignment, and can be used subsequently in regression models to adjust for these random differences and improve the precision of the estimates. See, for example, Mohr (1995) and Orr (1999).

built into the program — logic, timing, and thresholds for changes — are specified in detail. Methods for data collection and analysis are then constructed to track unfolding outcomes, and show which theories the evidence best supports. To be credible, theories must be developed through consultation with key stakeholders who have interest and knowledge about the program and its potential effects.

The quasi-experimental, comparison sites evaluation collected data in a group of communities in Cape Breton and mainland Nova Scotia that were similar to the CEIP program communities. The data was compared across program communities and comparison sites using statistical techniques to adjust for differences not related to CEIP, allowing evaluators to validate any changes that are observed in program communities over time by providing implicit thresholds for observed changes where only changes that are statistically different from comparison sites are considered possible effects of CEIP (see Gyarmati et. al. (2008) for more detail on the econometric approach to modeling community effects).

Data Sources

Individual Impact Study

There are four quantitative data sources in use to evaluate CEIP's effects on individual participants: a baseline survey, three follow-up surveys, administrative data files, and CEIP's Project Management Information System (PMIS). A baseline survey was administered to all CEIP volunteers at the point of enrolment in the study. The survey collected information on a range of demographic characteristics, household composition, income, and employment history. Beyond being useful to describe the population involved in the study, the baseline survey provides data to support the impact analysis.

Baseline data is also used to construct covariates to adjust for any differences that have arisen between the program and control groups in the follow-up survey samples. Although the two groups are expected to be similar in characteristics due to random assignment, some differences may be observed due to sampling variation, which can be dealt with through regression adjustment using baseline characteristics. Although this report presents unadjusted impacts, regression-adjusted impacts have been calculated and are mentioned where adjusted impacts diverge significantly (see Appendix C for a full set of adjusted impact tables). Additionally, baseline data is used to create subgroups to assess variations in impacts across the program group. For this report, subgroup impacts are discussed briefly throughout each chapter, where relevant (see Appendix D for a selection of subgroup impact tables).

The primary data sources used for the individual impact study are the 18-, 40-, and 54-month follow-up surveys. Statistics Canada administered these as telephone surveys to program and control group members approximately 18, 40, and 54 months after their enrolment in the study. Modules covered all of the key outcomes of interest that could not be analyzed through administrative data sources, including employment history, personal and household income, social capital, employability skills, household composition, attitudes, and health and well-being. Additionally, the PMIS was used to derive the employment and earnings outcomes of participants, which provided data on participation rates in CEIP, types of community jobs, duration of work, and amounts of community wages received. The

survey and PMIS data is augmented by EI and IA administrative records, which are used to determine the amounts and duration of transfer receipt by sample members both during and after CEIP eligibility.

Community Effects Study

The central data source for the community effects study is the three-wave longitudinal survey administered to a random sample of adult residents from six CEIP program communities and seven comparison communities. The design of the survey allows for both a cross-sectional and longitudinal analysis as it is administered with a panel of community residents as well as a top-up sample at each wave to correct for migration effects within communities.

In addition to the survey, a series of quantitative and qualitative secondary data sources have been collected throughout the study including local administrative data, in-depth interviews and focus groups with key community stakeholders, local observations, and environmental scans of local media. Any observed changes in the social and market economies are gauged through regular audits of the local economy.

Summary

CEIP is a research and demonstration project that is testing an alternative form of income transfer payment for unemployed individuals that aims to improve their employability while supporting communities in areas of chronic high unemployment. The program model builds on a number of lessons learned through previous community-based employment initiatives including the need for local community-level oversight and a wider range of longer duration work opportunities for participants, which are linked with community priorities. Similarly, the program has grown from a growing body of knowledge on the social economy and seeks to evaluate whether this third sector can be used to develop opportunities for work and support communities, in ways that the public and private sector have not.

One of the more important features of CEIP that sets it apart from earlier community employment initiatives is its rigorous evaluation design, which includes a multiple-methods approach to assess effects on both individuals and communities. This includes a random assignment design — widely accepted as the most reliable way to estimate a program's impacts — in order to assess the effect of CEIP on individuals who take part in the program.

Previous reports have presented promising results from CEIP's impact studies demonstrating a range of positive effects on employment and earnings, social capital, and transferable skills of participants over the full three years of program eligibility. The question, however, remained whether these impacts would be sustainable once program eligibility had ended after three years. Promising community effects have also been presented previously but have been considered in isolation from the participant findings. This present report integrates the full set of participant impacts with results from the community effects study and conducts a comprehensive cost-benefit analysis to determine the program's overall effect on government budgets and net value to Canadian society as a whole.

Chapter 2

Engaging Communities and Recruiting Participants

This chapter provides a brief review of the early implementation of the Community Employment Innovation Project (CEIP), which involved a parallel process of engaging communities and recruiting participants (Greenwood et al., 2003; Gyarmati et al., 2007; 2008). The first section summarizes the process by which communities were mobilized, and the key role they played as partners in the study. The second section presents an overview of the recruitment of participants, their response to the offer, and details on the characteristics of the sample.

Engaging Communities

The process of community engagement was expected to involve several steps and a number of critical players. The Social Research and Demonstration Corporation (SRDC) would first deliver the offer through public consultation meetings, and, after considering its merits, residents would either agree to move forward or decline involvement. Once communities agreed, a series of processes were expected to occur as a result of their initial engagement.

Board Formation, Strategic Planning, and Sponsor Mobilization

First, each community was required to elect a functional democratic body, or board, within 18 months to represent their interests in CEIP and make decisions about the project's resources. Second, following the board's approval by CEIP officials, it was required to develop a strategic plan and set priorities for the use of CEIP workers. A $30,000 planning grant and technical assistance were made available to each community to support this effort. Third, each community would need to begin mobilizing sponsors to submit proposals for projects that would employ CEIP workers. The first project in each community was required to be approved within 24 months.

As part of the above processes, community boards were expected to effectively engage and mobilize residents in their communities, resulting in increased visibility, awareness, and support for CEIP among residents. This, in turn, would lead to higher levels of actual involvement in CEIP-related activities, with residents serving on steering committees, volunteering as board members, attending public meetings, planning activities, and providing capacity assessment. Furthermore, community boards were expected to effectively mobilize organizations in their communities to become involved in and provide contributions to early planning activities.

Project Development and Service Delivery

Although project development was expected to begin fairly early in the study, it was also expected to continue expanding in subsequent years, as more workers were made available to

communities. CEIP workers were to be recruited into the program over a two-year period beginning in the second year of the study. With a three-year participant eligibility period, communities would therefore have up to five years to make use of the new workforce, depending on how quickly they completed their organizational and planning responsibilities.

Throughout this period, the number, scale, and type of projects undertaken by communities could vary depending on the identified needs and priorities as well as each community's existing local capacity. For instance, some communities could approve projects more quickly, while others could choose to focus their efforts on a smaller number of more localized sectors or target groups.

The Process: Community Engagement, Organization, and Mobilization

Results suggest that despite a number of early implementation difficulties and initial resistance among some local organizations and groups, communities effectively engaged, organized, and mobilized their resources to develop projects and jobs for CEIP participants. Specifically, program communities were able to fulfil most of their responsibilities in establishing representative boards, preparing strategic plans, mobilizing residents and organizations, and developing projects that would employ workers.

The initial delivery of CEIP's offer was largely effective, conducted through public consultation meetings in six communities in the Cape Breton Regional Municipality (CBRM).

The meetings were conducted in the four lead communities of Sydney Mines, New Waterford, Dominion, and Whitney Pier in May and June 1999, and in the second-round communities of Glace Bay and North Sydney in January and February 2001.

All communities accepted CEIP's offer through open votes at public meetings, and formed steering committees to coordinate their initial involvement in the project.

The relative success of the engagement process, however, was mixed across program communities. Specifically, poor turnout in Dominion, the smallest community, and significant displays of dissent among residents in Whitney Pier resulted in the postponement of their initial votes pending further consultation. CEIP's offer was often misunderstood and viewed by some residents as a grants or workfare program, requiring extended discussions in some communities to clarify the intent of the project. Ultimately, all six communities agreed to participate in CEIP and formed steering committees to oversee their early involvement in the project.

Each community successfully organized a representative and functional board.

Although some community boards had difficulty in finding skilled volunteers to serve as board members, a sufficient number of nominees were put forth by each steering committee for consideration by the community. Board members were subsequently elected through open and democratic votes in each community within the 18-month timeline, even though the turnout for some of these elections was quite low — particularly in Dominion, the smallest

community. Once approved, community boards began to successfully establish themselves, develop constitutions, and formalize decision-making structures, committees, bylaws, and other policies. They also began to hold regular meetings, employ methods to ensure attendance, and establish some regular information dissemination practices.

Each program community prepared a strategic plan to guide project development that was largely consistent with local priorities.

While each community board was also successful in preparing a strategic plan that provided a set of priorities to guide project development, the process was less comprehensive than expected, with boards tending to focus on the outcome of strategic planning rather than the process of community consultation. This was due, in part, to their perception of the pressure to create jobs quickly within the allocated 24-month timeline. Nonetheless, local representatives were accurate in reflecting many of the priorities of their community, as subsequently revealed in the community survey.

Community boards were successful in raising awareness of CEIP among about a third of residents, and over 90 per cent supported the program.

About a third of residents in New Waterford, Whitney Pier, Sydney Mines, and North Sydney had heard of CEIP in the project's first two years. Although this rate was slightly lower in Dominion and Glace Bay, at about a quarter, it was still significantly higher than the level of awareness observed in comparison sites, at about one-fifth). These rates were steady for the remainder of the study, even though they climbed to about 40 per cent in Sydney Mines and North Sydney. By the end of the follow-up, in 2006, awareness of CEIP in all program communities remained above that in comparison sites.

Among residents who were aware of the project, over 90 per cent supported the program in all communities, a steady rate throughout the project. The intensity of support varied, however, with the highest levels occurring in New Waterford and Sydney Mines where 60 per cent indicated that they "strongly supported" CEIP, compared to less than half in other communities. Support and opinions of the effectiveness of community boards also varied. Most notably, the percentage of those who were aware of their local board and rated their responsiveness to their communities as "good" or "very good" varied between two-thirds in New Waterford, Sydney Mines, and North Sydney, and about half in Glace Bay and Whitney Pier.

Five of the six participating communities successfully mobilized over 250 organizations, largely in the voluntary sector, to develop projects that employed CEIP workers.

Although there was some initial resistance from existing organizations to participate and help facilitate the formation of community boards, there were no such difficulties in mobilizing organizations for project sponsorship in most communities. Over 250 organizations were mobilized by program communities throughout the study to develop CEIP projects that would employ participants. Evidence suggests that with limited capital support and the relatively short timelines for project development inherent in CEIP's program model, program communities largely relied on existing organizations in the non-profit and voluntary sectors to develop projects. Although some new partnerships were

formed, most projects were simply extensions of existing operations of non-profit organizations.

Dominion, the smallest community, was unable to carry its early momentum forward, and did not mobilize any local organizations to develop projects. Evidence suggests that the small size of the community may not have provided the critical mass needed for successful, sustained involvement and mobilization — at least, within the 24-month timeline.

The Product: CEIP Project Development and Job Creation

Communities successfully implemented nearly 300 projects, serving a variety of sectors while providing over 1,300 positions for participants in a range of occupations.

Throughout the study, program communities created 295 projects that served a wide range of community needs. CEIP projects were also successful in providing meaningful employment for participants in terms of the skill level of jobs offered and the varied nature of work provided. The 1,300 positions that were generated through CEIP projects spanned all 10 categories of the National Occupational Classification (NOC) and filled over 2,100 unique work placements. These positions provided significant support to the CEIP sponsoring organizations, which served a wide range of community sectors and groups in need. Figure 2.1 illustrates the number of full-time CEIP participant work years that were assigned to projects by the community sector served.

The largest group of projects included those related to the environment, community beautification, and health and safety, which received about 280 full-time worker years throughout the study. These projects were aimed at enhancing or expanding efforts of community organizations to protect and support the health and safety of both residents and the local environment. Sponsors under this category included volunteer fire departments, community policing offices, health boards, support and special interest groups, and environmental action groups. Positions offered under this category included field researchers and workers, home energy and water auditors, administration, maintenance, community outreach and fundraising. Community beautification projects sought to improve the visual appeal of local buildings and community spaces. Project sponsors included churches, church auxiliaries, cemeteries, and community groups which provided positions for maintenance workers, carpenters and groundskeepers.

Figure 2.1 Full Time Participant Work Years Assigned, by Project Type

Project Type, Sector Served
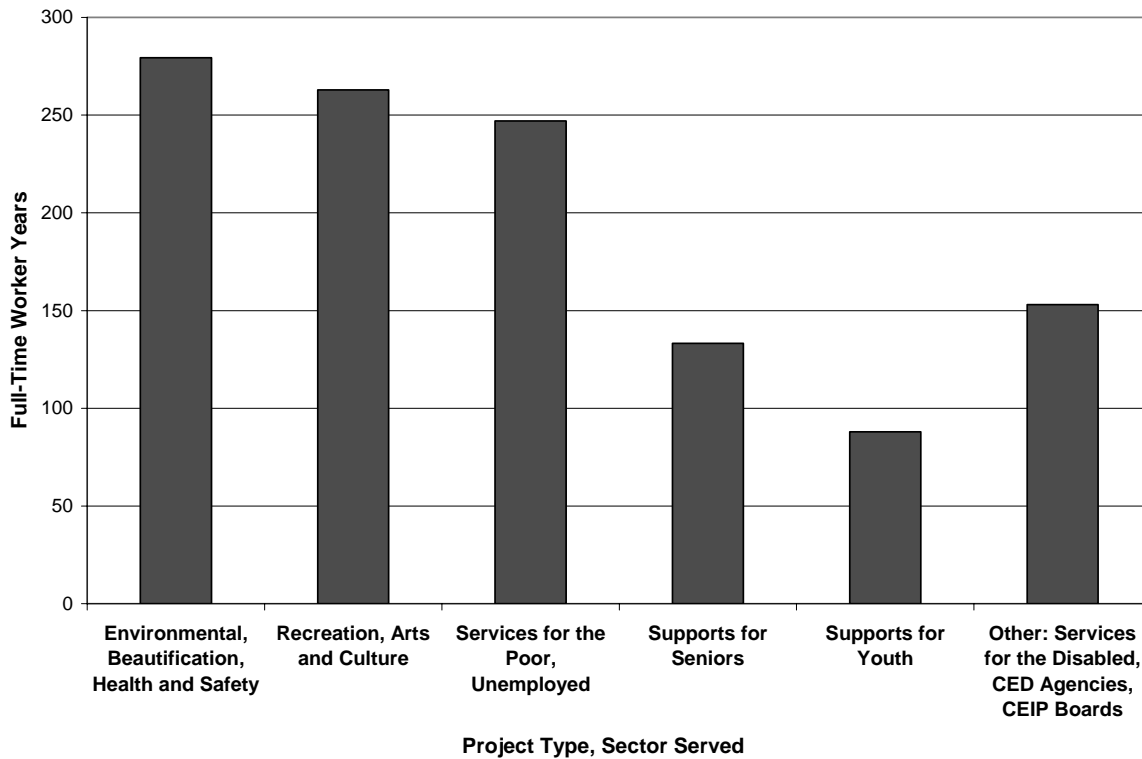
Source: Calculations from the CEIP Program Management Information System (PMIS)

Projects for recreation, the arts, and cultural initiatives were also a large priority, representing over 260 full-time worker years. These projects expanded or enhanced sports, hobbies and active lifestyle services offered by local venues and associations. Project sponsors under this category included venues (arenas, rinks, pools, sports fields and complexes, community centers), sports clubs and special events. Positions offered included maintenance, coordination, fundraising, instructors and guides. Arts and culture initiatives aimed to enhance local arts and culture or to preserve local history and tradition with project sponsors including theatres, galleries, artist associations, schools, heritage and historical societies as well as community events committees. Positions offered under this category included costume makers, tour guides, administrative assistants, fundraisers, and event manager/planners.

Communities also developed projects aimed at particular community subgroups, including those with low incomes, seniors and the youth. The third largest category of projects involved services to the poor and the unemployed with 175 full-time worker years assigned. CEIP projects offering services to the poor enhanced or expanded on the capacity of organizations providing supports and emergency intervention to low-income residents or persons in crisis. Project sponsors under this category included food banks, shelters, a housing association, a residential treatment center, and various charitable organizations. Positions offered under this category included client support workers, fundraisers, collection workers, maintenance staff, administrators, receptionists and fundraisers. CEIP projects

providing supports to the unemployed expanded or enhanced existing employability and job search services, including child care, employment counselling, computer access, literacy, employability and literacy training. Project sponsors under this category include an employment outreach centre, public internet access sites, re-employment, skills enhancement or retraining programs, a small business program and daycares. Positions offered under this category included office administrators, receptionists, instructors, child care workers, and maintenance and facility staff.

Projects that provided services to seniors received over 130 full-time worker years, typically enhancing or expanding the capacity of organizations offering services, health care, recreation and advocacy for local seniors. Project sponsors included facilities that provide assisted and independent living, Canadian Legions, seniors and pensioners clubs, policing services and a community development agency. Positions offered under this category included maintenance and facility staff, social/activity facilitators, researchers, cleaners and contact workers.

The youth sector also received significant resources at nearly 100 full-time worker years to enhance or expand the capacity of community organizations which provide social, recreational and educational services or facilities to local youth. Project sponsors under this category included educational institutions, recreational and athletic associations, youth centres, religious organizations and special events. Positions offered under this category included receptionists, administrators, activity coordinators, maintenance workers, facilitators, coaches, researchers and outreach workers.

Over 150 full-time worker years were dedicated to a variety of other projects that provided services to persons with disabilities, support for local community economic development associations and private-sector initiatives, as well as support to the work of the CEIP community boards themselves. Projects that supported persons with disabilities enhanced or expanded the capacity of organizations offering services and advocacy for youth and adults affected by acquired and congenital physical or intellectual disabilities or mental health issues, both within individual communities and across the CBRM. Services included behavioural coaching, personal care, recreational and social activities, employment counselling and job training, as well as advocacy and housing supports. Positions offered under this category included client support workers, office administrators, researchers, volunteers, special event coordinators and fundraisers.

Recruiting Participants

Parallel with the process of community engagement, organization, and mobilization, was the recruitment of participants. This section describes the process of sample selection, enrolment, random assignment, and orientation, leading up to their participation in CEIP. A final section provides demographic characteristics of the sample that volunteered, distinguishing them from the target population.

Sample Selection and Enrolment

Participants were selected from among beneficiaries of Employment Insurance (EI) and Income Assistance (IA) recipients residing in the Cape Breton Regional Municipality (CBRM). Separate selection criteria and processes were implemented for EI beneficiaries and IA recipients, which reflected the rules and regulations that govern each transfer program.

The sample selection process for EI and IA sample members was undertaken by Statistics Canada.[1] EI beneficiaries were selected and enrolled from July 2000 to June 2002, while the IA selection process was from June 2001 to June 2002. EI beneficiaries were randomly selected from a monthly derivative of the Human Resources Development Canada Benefits and Overpayments file (HRDC–BNOP), which is used for administering EI claims and payments. Eligible IA recipients were selected from among IA recipients who expressed an interest in participating in CEIP after being notified by the Nova Scotia Department of Community Service (NS-DCS) about CEIP and their eligibility to participate in the program.

Once selected, individuals were invited to attend an information session to learn about CEIP and its benefits. Attendees interested in participating in the study were required to complete an enrolment form consisting of an informed consent and questions that captured baseline measures on individual and socio-economic characteristics. During the enrolment phase, 5,980 eligible EI beneficiaries and 804 eligible IA recipients were randomly selected and mailed letters of invitation to an information session. The show-up rate to information sessions was 27 per cent among EI beneficiaries and 69 per cent among IA recipients.

The vast majority of those who showed up at an information session volunteered for CEIP by signing the enrolment form. Of the 1,620 EI beneficiaries that showed up, 1,006 signed the enrolment form, while 516 of the 557 attendees from the IA sample did so. Those who did not take up the offer did so for various reasons.[2] The reasons most often mentioned by EI non-volunteers were the low CEIP wage, or that they were expecting to return to a previous employer or already found a job. IA non-volunteers most often cited personal, family and health reasons for not joining CEIP.

While the EI and IA samples represented disadvantaged populations and were similar in many respects, they differed in a few key areas:

- The EI sample is more likely to be male, at 58 per cent, while 62 per cent of the IA sample is female.

- The EI sample is typically older, with an average age of 40, while the IA sample age was 35 at baseline.

- The EI sample had a higher educational attainment, with 69 per cent holding a high school diploma compared to 60 per cent of the IA sample.

---

[1] A detailed description of the selection process for EI beneficiaries and IA recipients is provided in Chapter 5 of Greenwood *et* al. (2003).
[2] A non-volunteer survey was administered to a random sample of those who did not take up the offer. The target sample was 1,092 eligible EI beneficiaries and 173 eligible IA recipients who received an invitation to join CEIP, but did not take up the offer. In total, 893 persons — 780 EI and 113 IA — responded to the survey. For more detail on non-volunteers, see Chapter 2 of Gyarmati, de Raaf, Nicholson, Kyte, and MacInnis (2006).

- While both samples typically lived in households composed of two or more persons at baseline, EI sample members were more likely to live in households where two adults contributed to the household income. The household income for most EI sample members was under $30,000 during the 12 months before enrolment, while the household income of most IA enrolees was less than $20,000 with over half of the sample reporting income of less than $10,000.

- The EI sample had a longer work history than IA sample members at baseline. They were, however, also more likely to be unemployed due to a layoff, contract termination, or because their employer moved or closed down.

- Both samples were likely to have lived in Cape Breton for all their life.

- Both samples were most likely to have small, dense, and homogeneous social networks.

- While the vast majority of both samples reported being in good health at baseline, IA sample members were slightly less likely to report being in good health.

Table 2.1 illustrates how representative the final EI research sample was of the broader target population, by comparing the characteristics of volunteers with those of the eligible EI population that was issued an invitation to participate in CEIP.

This table illustrates that the enrolled EI sample was similar in many respects to the broader EI population, with both having a higher proportion of men who, on average, were in their early forties. Female EI beneficiaries, however, were more likely to volunteer for CEIP than their male counterparts, and CEIP volunteers were more likely to be employed in sales and less likely to be employed in trades and transportation positions. As well, the average basic EI benefit rate and the last payment received was lower among CEIP volunteers, suggesting that CEIP's offer was more attractive to recipients with lower benefit rates.

Table 2.1   Comparison of Characteristics of EI Sample Members with Eligible EI Population

	Eligible EI Population	EI Research Sample
Gender (%)		
Male	67.4	58.5
Female	32.6	41.5
Age (%)		
Under 20	0	0.6
20–24	6.4	8.9
25–34	23	21.8
35–44	29.5	28.5
45–54	26.8	32.8
55 and older	14.3	7.3
Average age (years)	**42.2**	**40.8**
Occupation (%)		
Skilled administrative and business	2.8	3
Clerical	6.3	8.8
Natural and applied sciences	2.3	1.7
Education, government, and religion	2.8	2.2
Sales and services	21.2	30
Trades and transportation	40	26.8
Primary industries	5.2	5.3
Manufacturing, processing, and utilities	9	11.4
Other	10.6	10.7
Average basic benefit rate ($)	286.54	226.98
Average rate for last payment received ($)	277.66	227.38

Sources: Statistics Canada calculations using information from EI sample selection files and CEIP enrolment forms.

Table 2.2 compares the characteristics of the IA target population who were mailed invitation cards to participate in CEIP with those who ultimately enrolled in CEIP.

On average, both were approximately the same age and included mostly single women. The data also shows that male IA recipients were slightly more likely to volunteer, and that volunteers for CEIP were slightly older than the broader target population. On average, both received similar amounts of basic benefits in the 12 months before being selected for CEIP, even though CEIP volunteers received more per month in other types of assistance.

Table 2.2   Selected Characteristics of IA Sample Members at the Time of Sample Selection

	IA Mail-Out Sample	IA Enrollees
Gender (%)		
Male	33.2	38.2
Female	66.8	61.8
Marital Status (%)		
Married or living common law	18.1	18.6
Single, never married	55.6	52.2
Separated, divorced, or widowed	26.3	29.4
Age (%)		
Under 20	3.3	1.7
20–24	16.1	14.3
25–34	30.6	29.3
35–44	29.6	33.9
45–54	15.5	17.6
55 and older	4.9	3.1
Average age (years)	**35.6**	**35.7**
Average monthly payments received in the 12 months prior to selection for CEIP ($)		
Basic	501.11	507.53
Other	46.58	65.98

Sources: Estimates for enrolees are based on SRDC calculations using information provided on CEIP enrolment forms and data from IA administrative files. Estimates for the mail-out sample are based on SRDC calculations using aggregate statistics provided by NS-DCS.

Random Assignment

Once the enrolment form was completed, the next stage in the recruitment process was to determine who would receive the offer of community-based work. The random assignment process, which is performed on SRDC's random assignment software application, is fully automated, and is executed using anonymous files. The software application randomly assigned each individual to one of the two research groups — program or control — and generated a list of the assignments. During the two-year enrolment period, 1,006 eligible EI beneficiaries and 516 IA recipients were enrolled in CEIP.[3] Half of the enrolees from the EI and IA samples were randomly assigned to the program group, or offered community-based work, and the other half to the control group.

If random assignment is implemented successfully, the characteristics of program and control groups should be similar at baseline, even though statistically significant differences

---

[3] While 1,006 persons selected from the EI caseload completed an enrolment form, eight individuals were dropped from the research analysis. Seven of these were individuals who resided on the Eskasoni reserve, and a decision was made to remove them from the research sample because the nature of the transfer payments and support for which they otherwise qualified were significantly different from those available to other sample members. The other individual was removed due to a selection error. See Greenwood et al, 2003.

may occur by chance. While minor differences were observed for a few characteristics in the EI and IA samples, there were no indications of systematic differences between the program and control groups for both samples, indicating that random assignment was successfully implemented for CEIP.[4]

Orientation

Once random assignment was completed, each enrolee was notified, by mail, of his or her random assignment result. In order to complete the CEIP enrolment process and be eligible for community-based work, program group members were required to attend an orientation session and sign a project participation agreement (PPA) within five weeks of receiving the letter. Of the 757 persons assigned to the program group (499 EI beneficiaries and 258 IA recipients) 684 attended an orientation session, while 668 signed a PPA.

Participating in CEIP

The vast majority of program group members who enrolled in the project went on to participate in the CEIP activities during their three-year eligibility period. Figure 2.2 illustrates the participation of program group members from the two samples in CEIP employment relative to the month in which they were randomly assigned. While, for the most part, participation in CEIP usually involved working on community-based jobs, it could also include other approved activities, such as orientation and skills-readiness training. At any time, participants were permitted to leave the project for another job or training, and then return to CEIP. As well, some program group members may not have participated in CEIP after signing their PPA for a variety of reasons, such as having found other work, or having moved away.

---

[4] See Greenwood et al. (2003) for full test results.

Figure 2.2 Percentage of Program Group Members Actively Participating in CEIP, by Months from Enrolment
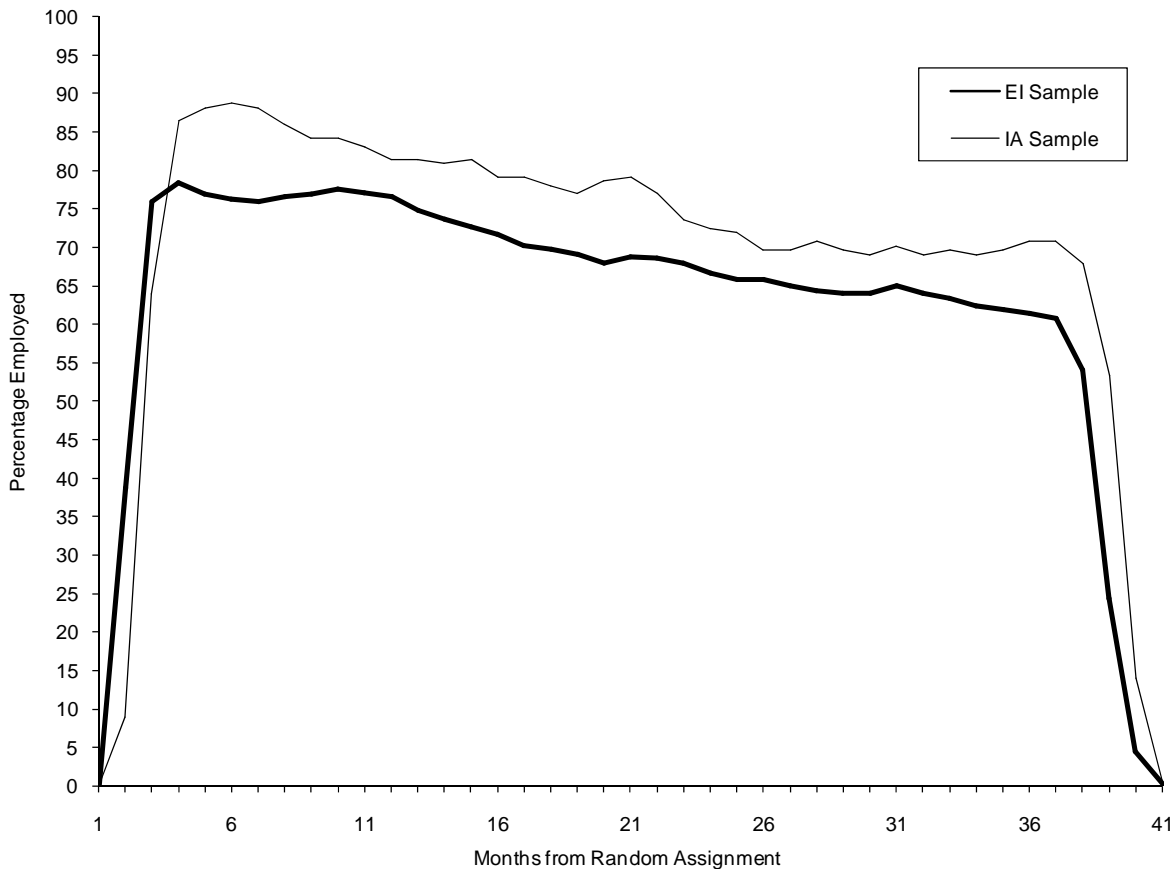
This figure shows that, among the EI program group members, over three-quarters were participating in CEIP jobs within four months from random assignment. Their participation rate gradually declined over the three years until it reached 60 per cent in month 37; all participants had left the project by month 41. Program group members in the IA sample achieved even higher participation rates, peaking at nearly 90 per cent early on in the eligibility period, and then declining to 70 per cent at the end of eligibility. The two months immediately following enrolment for both samples are marked by very low participation rates, due to the fact that there was a delay between participants signing the enrolment form, being randomly assigned, attending an orientation session, signing the PPA, and beginning their participation in the project. Due to these delays, some participants did not complete their three years of eligibility until three-and-a-half years after random assignment.

Summary

Implementing CEIP involved a parallel process of engaging communities and recruiting participants. While six communities in Cape Breton responded to CEIP's offer, five were able to effectively engage, organize, and mobilize their resources to develop nearly 300 projects that served a variety of sectors, and that provided over 1,300 positions for participants in a range of occupations.

Alongside the community engagement process, CEIP recruited over 1,500 individuals from the EI and IA caseloads, with half of the enrolees randomly assigned to a program group that was eligible for community-based work, and the other half to the control or comparison group. Nearly all program group members participated in CEIP activities at some point during their three-year eligibility period, leading to very high participation rates among the EI and IA samples throughout CEIP's operations.

Chapter 3

Impacts on Employment, Earnings, and Income

While previous reports on the Community Employment Innovation Project (CEIP) illustrated the effects on participants during the operational phase of the project, this chapter will extend the analysis to include an approximately 12-month period following the end of their three-year eligibility for CEIP employment. This analysis will provide important insights into what happened to the employment and earnings of program group members once they left the program as well as the cumulative effects that CEIP had on those same measures over the entire observation period leading up to the 54-month interview. Along with employment, it will also examine Employment Insurance (EI) and Income Assistance (IA) receipt in the months following CEIP eligibility, as these were two important sources of income for CEIP volunteers when they enrolled in the project. Of particular interest will be CEIP's impacts on EI receipt in the post-CEIP period, as participants were eligible to receive benefits once they completed their CEIP participation.

The chapter will conclude with an analysis of CEIP's effects on personal and household income of program group members in the year following CEIP's operations. The analysis will examine how the loss of CEIP earnings affected both the individual and household income of participants, in terms of both absolute income levels, as well as household income in relation to Statistics Canada's Low-Income Cut-Off (LICO). If participants are not able to find employment immediately following CEIP, the loss of CEIP earnings could lead to financial hardship for their families, particularly if other relatives are also unable to secure additional work or qualify for other benefits to make up for the loss in income.

Impacts on Full-Time Employment and Earnings

Employment

While the offer of CEIP was attractive enough to keep participants overwhelmingly employed over the entire eligibility period, the program's positive impacts on full-time employment were not sustainable following program eligibility. Program group members in the EI and IA samples maintained high full-time employment rates until the end of the project's three-year project operations. As shown in Figures 3.1 and 3.2, the employment impacts, i.e. the difference in employment rates between the program and control groups, disappeared quickly in both the EI and IA samples as participants left the program and began to search for other market-based employment. While a significant proportion of participants were able to gain immediate employment following CEIP, many required a longer job search period, most likely due to the generally poor conditions in the Cape Breton job market that forced many participants to rely on EI benefits in the interim, which will be further discussed in a later section in this chapter. These figures show that the negative post-program effects on employment were short-lived, however, as the full-time employment rate of program group

members quickly caught up to their control group counterparts, roughly approximating control group levels by the 54-month interview.

Figure 3.1 illustrates the full-time employment rates for the EI sample in each relative month from the individual's date of enrolment into the CEIP project until month 53.[1] It shows that during the three-year period of CEIP eligibility, nearly 90 per cent of the program group was employed full-time leading to large and sustained impacts on employment. As Gyarmati et al. (2007) reported, impact in the EI sample peaked at nearly 55 percentage points in month 3, and was 36 percentage points in month 36 when CEIP eligibility began to come to an end for participants.[2] Most of the decline in impact is due to an increase in employment among the control group, which reaches nearly 60 per cent at the end of the follow-up period. The employment rate of the control group represents the employment prospects that participants would have faced in the absence of CEIP and illustrates that at any point during the eligibility period, at least one-third of the program group would not otherwise be employed full-time if they did not participate in CEIP.

Figure 3.1 Full-Time Employment Rates, by Months from Random Assignment (EI Sample)
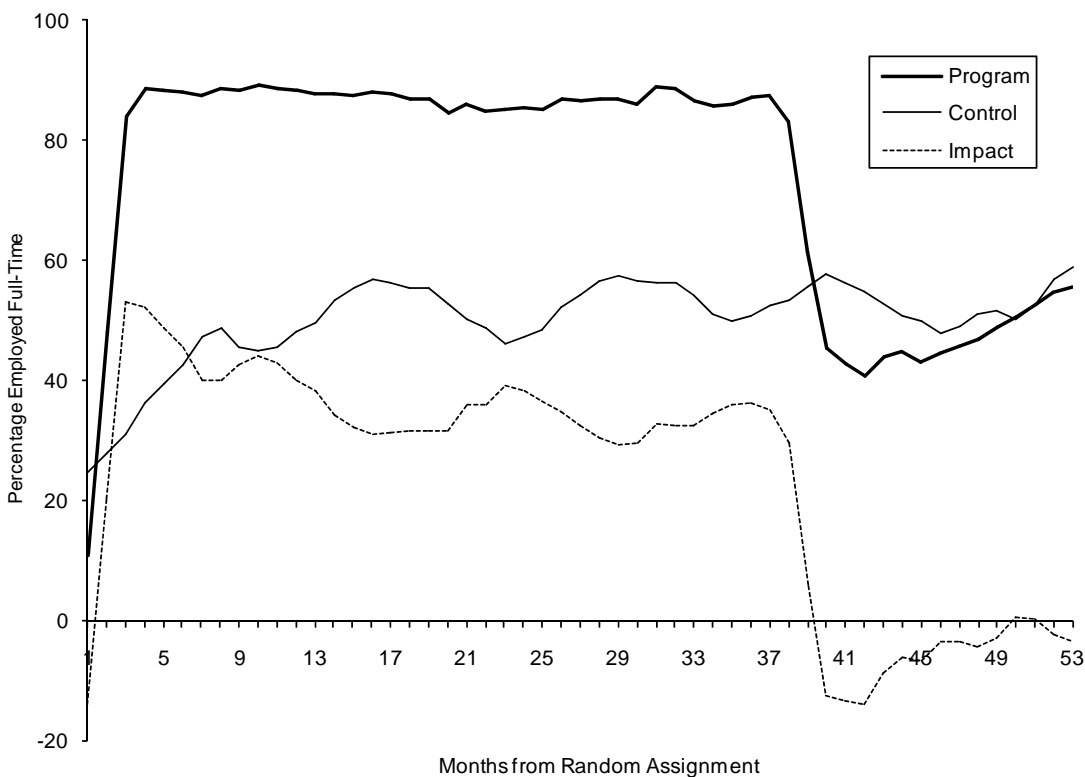
Sources: Calculations from the 54-month follow-up survey and administrative data.

---

[1] Only relative month data for months 1 to 53 are shown due to the fact that a significant proportion of survey respondents responded to the survey as early as month 53, and thus have no employment data available for month 54.

[2] Exact estimates reported in this chapter are slightly different from those reported in Gyarmati et al. (2007) as the analysis sample is restricted to individuals who responded to the 54-month survey.

Immediately after CEIP, only a minority (41 per cent in month 42) of EI program group members were employed full-time, leading to negative full-time employment impacts of nearly 15 percentage points in the months immediately following CEIP. Full-time employment rates recovered over the following 12 months such that employment of program group members in both samples approximated the employment of the control group by the 54-month interview. By month 53, over half (55 per cent of the program group was employed full-time, compared to 57 per cent of the control group, with no significant difference in employment rates between the program and control groups (at the 10 per cent significance level).

Figure 3.2 illustrates the employment rates of the IA sample, and it shows that IA program group members achieved similarly high full-time employment rates as the EI sample, peaking at 93 per cent in months 6 and 7. After the peak, however, the IA program group experienced a larger decline in full-time employment, with the rate declining to 80 per cent by month 36. Meanwhile, the IA control group experienced lower employment rates than the control group in the EI sample due to their lower skills and work experience at the time of enrolment, only achieving a full-time employment rate of 31 per cent by month 35. The lower employment rate of the control group, combined with high employment in the program group, led to much larger impacts among the IA sample during the course of the project, peaking at 78 percentage points in month 5 and then declining to 51 percentage points in month 36.

Figure 3.2 Full-Time Employment Rates, by Months from Random Assignment (IA Sample)
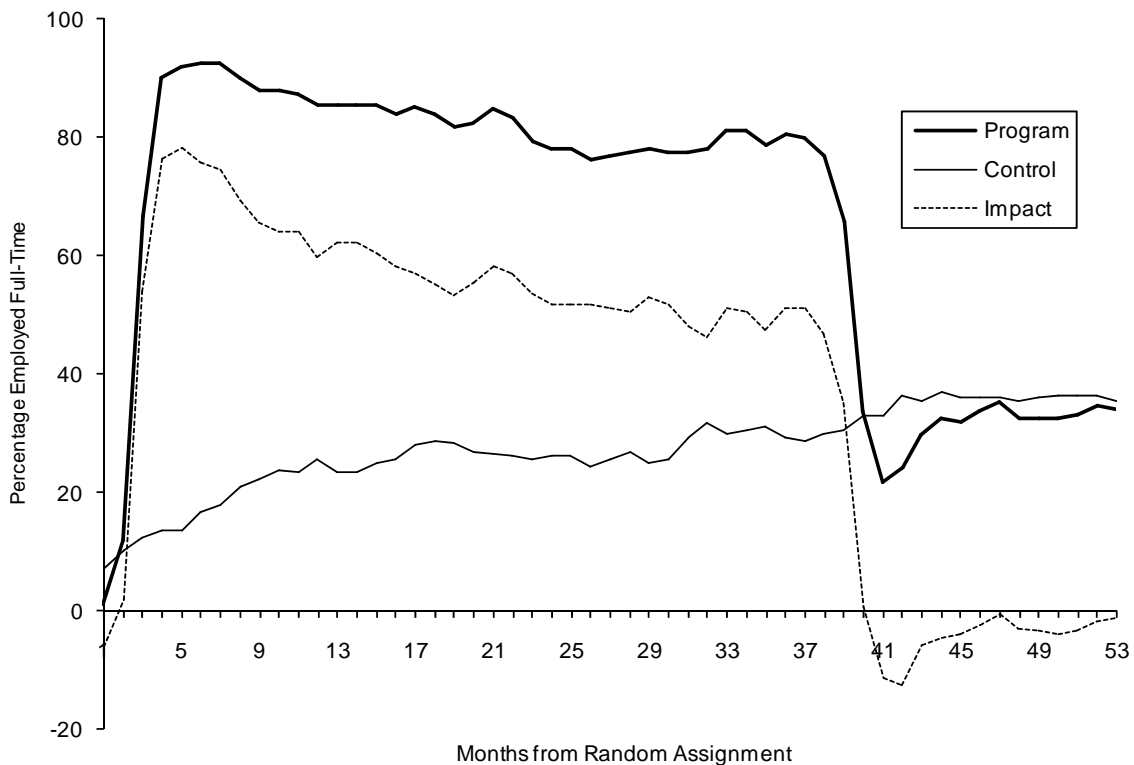
Sources: Calculations from the 54-month follow-up survey and administrative data.

After the end of CEIP, the IA program group experienced a similar drop in employment to the EI sample, with only 22 per cent of program group members in IA sample working full-time in month 41, representing a 60-percentage-point decrease in full-time employment immediately following CEIP. Similar to the EI sample, the full-time employment rates of IA program group members recovered over the following 12 months and by month 43, the negative impacts on full-time employment are no longer significant. Although the employment rate of the IA sample was only slightly lower than that of the EI program group during the period of CEIP eligibility, the difference between the two groups was much more pronounced during the post-CEIP period, with only one-third employed full-time by the 54-month interview, compared to over half of EI program group members.

The considerable decline in employment among the program group in the EI and IA samples was expected, given that all participants finished their CEIP eligibility at approximately the same time. Control group members, on the other hand, may be moving into and out of employment at different points over the follow-up period, depending on such factors as the conditions of the local labour market and the seasonal nature of their jobs.

Earnings

Not surprisingly, the negative impacts on employment immediately after the end of CEIP translated into an overall decline in program group earnings as well. EI and IA program group members experienced a dip in monthly earnings after the end of the project, which led to significant, negative impacts in the first six months after CEIP, after which point the earnings of program group members were not significantly different from the control group. Of particular note is the effect of the loss of CEIP employment on IA program group members' earnings, as CEIP had a much greater impact on their earnings than on earnings of the EI sample during program eligibility. By the 54-month interview, the earnings of IA program group members were roughly half the peak earnings they received during CEIP's operations — averaging $605 per month in the last quarter of the follow-up period, compared to $1,168 per month in the last quarter of CEIP eligibility.

Gyarmati et al. (2007) reported that, over the three-year program eligibility, CEIP provided program group members with an additional $14,979 in earnings from 10.2 additional months with employment for EI sample members, and $25,115 in earnings from 16.9 additional months with employment for IA sample members. This represents not only a substantial gain in financial resources, but also considerable work experience that is expected to translate into longer-term improvements in employment outcomes.

The employment and earnings impacts reported above demonstrate that while most participants were not able to secure employment immediately after their eligibility for CEIP ended, the negative impacts on employment are short-lived. Similar to their respective control groups, approximately 80 per cent of EI program group members and 70 per cent of IA program group members were able to secure market-based employment at some point during the post CEIP-eligibility period. While CEIP's longer-term impacts on participants' skills and employability will be explored further in Chapter 4, the following section details the impacts of participation on one important post-program outcome, the wages that participants received in their post-CEIP jobs.

Impacts on Wages and Hours Worked

An important question that CEIP is trying to answer is whether three years of employment experience can help develop skills and social networks that will translate into better post-program employment that pays better wages. CEIP paid participants a fixed wage regardless of their skill level or work experience. Gyarmati et al. (2007) reported that while there was some decrease in wages and hours worked among workers in the highest wage and hours-worked categories, particularly in the EI sample, CEIP overwhelmingly had a positive effect on participants' wages and work hours during program eligibility, with program group members making slight wage gains in the latter half of the project.

Table 3.1 shows the distribution of wages received and hours worked in month 50 — a typical month in the post-CEIP period. The program group's strong wage gains evidenced during the course of the project disappeared as program group members began to take up market employment, with CEIP having little long-term impact on the distribution of program group members' post-program wages and work hours.

Table 3.1   Impacts on Distribution of Wages and Hours at Month 50

	EI Sample				IA Sample			
	Program	**Control**	**Impact**	**Standard Error**	**Program**	**Control**	**Impact**	**Standard Error**
Hourly wage rate								
(% in each category)								
Not working	37.1	39.7	-2.6	(3.5)	52.3	49.1	3.1	(5.3)
Wage unreported	3.8	2.7	1.2	(1.3)	4.5	2.3	2.2	(1.9)
Less than minimum wage	0.7	0.8	-0.1	(0.6)	2.3	5.7	-3.5 *	(2.1)
Up to $0.99 above minimum wage	5.2	4.0	1.3	(1.5)	9.0	9.1	-0.2	(3.1)
$1.00 to $2.00 above minimum wage	6.4	6.1	0.3	(1.7)	8.4	6.9	1.6	(2.8)
$2.00 to $3.00 above minimum wage	6.9	8.5	-1.6	(1.9)	7.9	9.7	-1.9	(3.0)
$3.00 to $5.99 above minimum wage	17.8	15.1	2.7	(2.6)	10.7	10.3	0.4	(3.3)
$6.00 or more above minimum wage	22.1	23.0	-0.9	(3.0)	5.1	6.9	-1.8	(2.5)
Hours worked per week								
(% in each category)								
Not working	37.1	39.7	-2.6	(3.5)	52.3	49.1	3.1	(5.3)
Hours per week unreported	1.2	1.3	-0.1	(0.8)	2.8	2.3	0.5	(1.7)
Fewer than 30	14.0	9.3	4.8 **	(2.3)	15.7	13.7	2.0	(3.8)
30	1.7	2.4	-0.7	(1.0)	1.7	4.0	-2.3	(1.8)
31–34	2.6	2.7	0.0	(1.1)	1.7	1.1	0.5	(1.3)
35	5.2	3.4	1.8	(1.5)	4.5	4.0	0.5	(2.2)
36–39	4.8	5.3	-0.5	(1.6)	1.7	4.6	-2.9	(1.9)
40–44	22.8	24.1	-1.3	(3.0)	14.6	17.7	-3.1	(3.9)
45 or more	10.7	11.6	-1.0	(2.2)	4.5	3.4	1.1	(2.1)
Sample size	**421**	**378**			**178**	**175**		

Sources: Calculations from the 54-month follow-up survey and administrative data.

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

All analyses were only for those who responded to the 54-month survey.

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

Rounding may cause slight discrepancies in sums and differences.

Of note for the EI sample, program group members are nearly 5 percentage points more likely to be working in part-time employment (fewer than 30 hours per week) in month 50. This finding suggests that nearly one-year after their eligibility ended, participants continued to struggle to find permanent employment. It may also explain why participants are not receiving higher wages after CEIP, as many may be working in temporary or "gap-filler" jobs until they find permanent employment.

Impacts on Transfer Receipt

CEIP participants were eligible to receive EI benefits at the end of their three-year participation in the program. Given the significant decline in full-time employment at the end of the project, there is a strong expectation that many participants would establish a claim for EI benefits to support them as they searched for other employment. The month-by-month EI receipt of the EI and IA samples is shown in figures 3.3 and 3.4, respectively, covering a period of 70 months after baseline enrolment for which EI administrative was available for all 54-month survey respondents.

Figure 3.3 illustrates that while CEIP significantly reduced reliance on EI and IA throughout the course of the project, over half of EI program group members initiated an EI claim after CEIP eligibility. By month 41, 56 per cent of the program group in the EI sample was in receipt of regular EI benefits, compared to only 25 per cent of the control group. EI receipt then declined as program group members either found employment or exhausted their claims, and, by month 54, 21 per cent were receiving benefits, compared to 2 per cent of control group members. Program group members continued to be 5–10 percentage points less likely to rely on EI benefits until month 63, after which CEIP had no impact on EI receipt.

Figure 3.3 Percentage Receiving Regular EI Benefits (EI Sample)
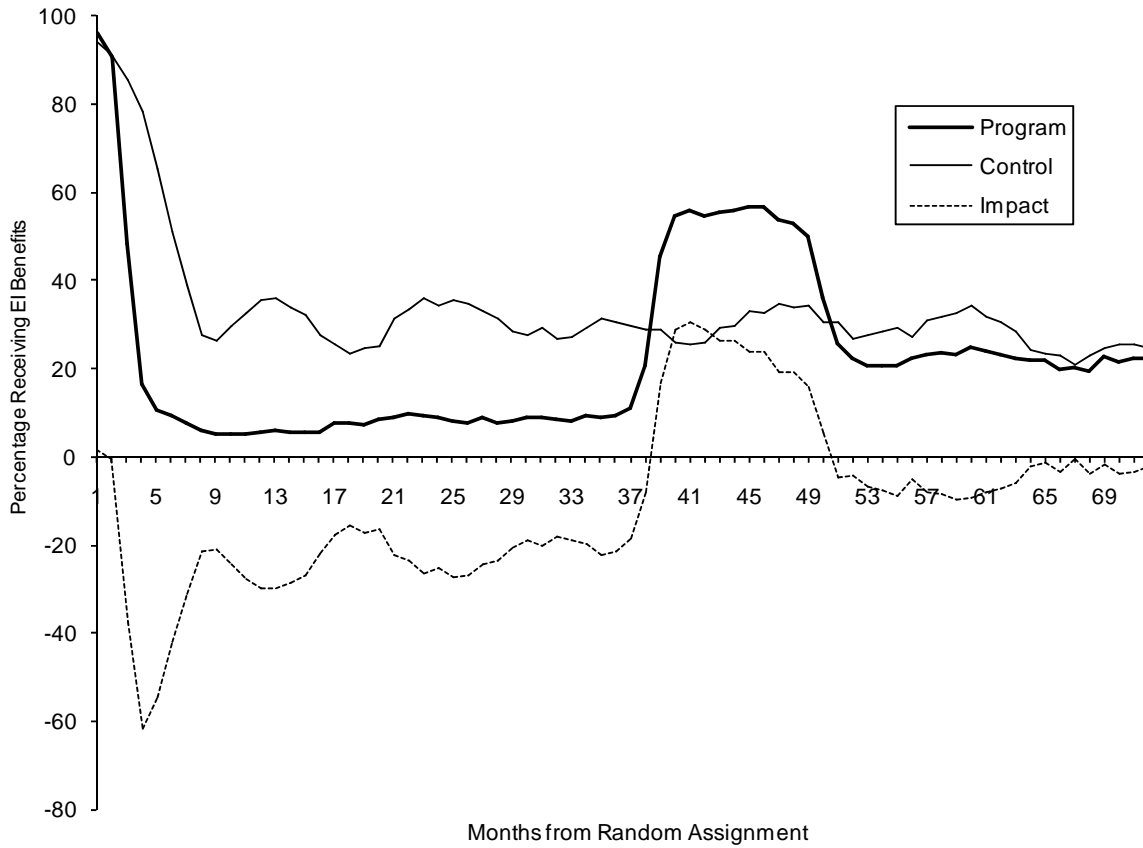
Figure 3.4 provides month-by-month EI receipt for the IA sample. Given their lower levels of employability, it is not surprising that high proportion of program group members in the IA sample turned to EI benefits at the end of their eligibility. By month 41, 60 per cent were receiving benefits, declining to 19 per cent in month 53, when most participants who gained eligibility through their CEIP employment had exhausted their initial claims. IA program group members were more likely to continue to be in EI receipt in subsequent months, with approximately 20 per cent receiving benefits in each month for the remainder of the follow-up period, compared to less than 15 per cent of their control group counterparts.

Figure 3.4 Percentage Receiving Regular EI Benefits (IA Sample)
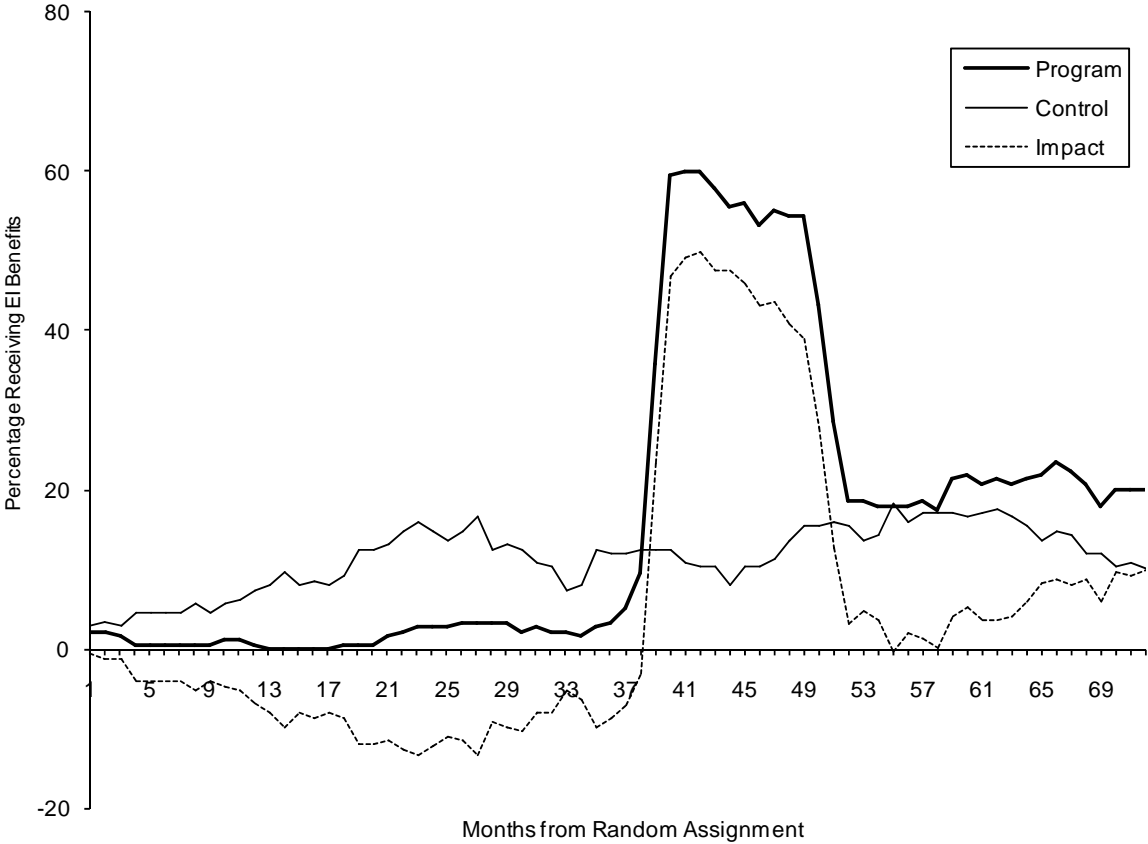
Source: Calculations from the Employment Insurance administrative data.

An important source of financial support for the IA sample at enrolment was their IA benefit receipt. Figure 3.5 illustrates CEIP's impacts on the percentage of IA program group members receiving IA benefits through 72 months, and it shows that CEIP had a long-term effect on reducing the rate of IA benefit receipt three years after CEIP came to an end.

Figure 3.5 Percentage Receiving IA Benefits (IA Sample)
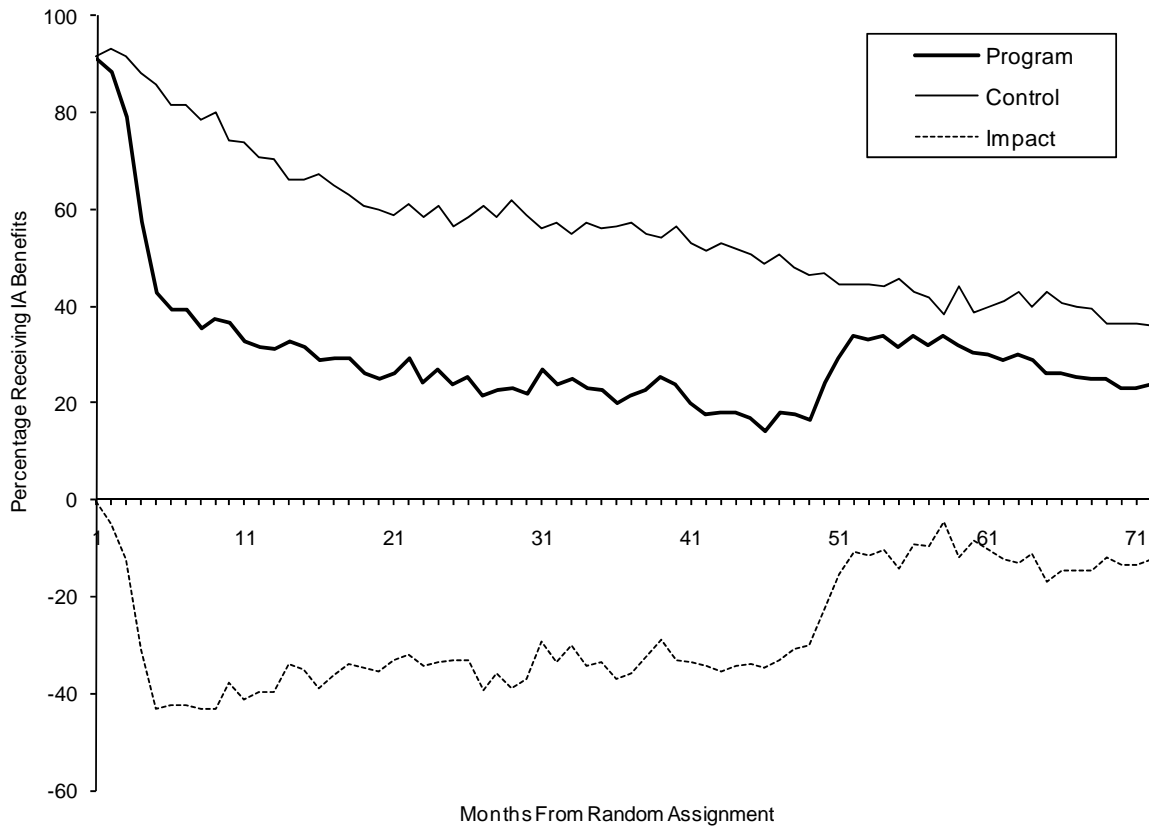
While there was an increase in IA benefit receipt around month 50, CEIP continued to have an impact on IA receipt as of month 72, reducing IA receipt by 12 percentage points by that month, a result that is statistically significant at the 5-per-cent level. Beginning in month 49, the program group's gradually declining rates of IA receipt reversed, and by month 52, approximately a third were in receipt of benefits before declining again. The timing of this reversal can most likely be attributed to the exhaustion of CEIP participants' post-program EI claims, where those having exhausted EI are unable to find employment and consequently had to return to IA. Despite this increase, the program group continued to have significantly lower rates of IA benefit receipt up to three years after their CEIP eligibility came to an end. Among the EI sample, only a small fraction of program group members resorted to IA benefits following the exhaustion of their post-CEIP EI claim, with CEIP having no long term impact on their benefit receipt patterns. Indeed, by month 72, approximately 3.1 per cent of EI program group members received IA benefits – the same rate as the control group (not shown).

Longer-term benefit receipt provides important insights into the employment situation of CEIP participants well after the project ended. With no direct observation of their

employment status beyond month 54 available, the extent to which program group members claimed EI benefits suggests that CEIP did not have an overall effect on long-term employment rates among EI program group members. Among this sample, the program's largest impacts will be seen among subgroups of participants who were able to increase their skills and/or social capital because of participating in the project, which will be discussed further in chapters 4 and 5.

CEIP's longer-term impacts on benefit receipt among the IA sample, on the other hand, suggest that the project was effective in improving the employability of a significant proportion of the IA program group. Decreases in long-term IA receipt and corresponding increases in long-term EI receipt are suggestive of a large number of IA program group members being able to find post-CEIP employment that qualified them for further benefits beyond their initial, post-CEIP claim. This allowed them to remain in a more employment-oriented program than IA. For these project participants, their increased receipt of EI benefits is indicative of having a much stronger link to the labour market than when they first enrolled in the CEIP project.

Household Income and Hardship

Since CEIP provided a stable three-year period of employment and earnings for participants, an important question is what will happen to participants' household income as their eligibility for CEIP employment ends and they transition to other market-based employment. One expectation is that any reductions in income due to a loss of CEIP earnings will be partly offset by increased income from EI benefits. As well, other household members of participants may seek employment in anticipation of lost CEIP earnings, as participants and their families were well aware of the three-year eligibility limit of the program. Among IA sample members in particular, IA benefit receipt may further offset other losses in income. Finally, many participants had found other employment one year after the end of the program.

Personal and Household Income

While CEIP led to large gains in employment and earnings during the course of the project, it had a differing effect on EI and IA sample members' household income. At month 40, Gyarmati et al. (2007) reported that both EI and IA program group members had experienced large, significant gains in personal income. Increases in EI sample members' income, however, were offset by decreases in the income of other household members, leading to virtually no increase in total household income. Among the IA sample, the personal income of program group members was augmented by increased income of other household members, contributing to large, positive impacts on their total household income.

Table 3.2 highlights CEIP's impacts on household income, marital status, and spousal employment status in the one-year period leading up to the 54-month interview. This table shows that, following program eligibility, CEIP had no overall statistically significant effect on the household income of program group members. It did, however, continue to have a significant, positive impact on individual income for EI sample members, who experienced a

$2,300 impact on their own income. Similar to what was observed during the CEIP eligibility period, the increase in personal income of the EI sample was offset by a reduction in other household members' income, negating CEIP's impacts on total household income.

Looking at the sources of household income, CEIP decreased the extent to which households in the program group received benefits from the Nova Scotia Workers' Compensation program, IA and other sources of income. The decrease in receipt of benefits other than EI benefits may be due, in part, to a reduction in eligibility stemming from participants' increased earnings from CEIP in the previous year.

While the actual earnings received by other household members are not captured in the survey, respondents do report the work efforts of their spouses over the past 12 months. CEIP appears to have had a small but significant effect on the employment situation of EI program group members' spouses, decreasing the proportion with a spouse that worked full-time by 6.2 percentage points.

Table 3.2   Impacts on Personal and Household Income Prior to the 54-Month Interview

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Personal and household Income ($)								
Individual income	22,509	20,203	2,306 **	(995.1)	14,228	13,515	713	(819.9)
Other household income	15,875	18,242	-2,367	(1525.6)	5,322	4,742	580	(1229.3)
Total	*38,167*	*38,286*	*-120*	*(1789.4)*	*19,476*	*17,348*	*2,129*	*(1550.3)*
Sources of household income (%)								
CPP/Old age pension/GIS	24.9	26.0	-1.1 *	(3.1)	18.3	18.2	0.1	(4.2)
Workers' Compensation or disability insurance	10.9	15.0	-4.1 *	(3.1)	4.6	4.7	-0.1	(2.3)
Investment income (interest, RRSP)	20.6	16.4	4.2 *	(2.8)	2.9	2.9	-0.1	(1.8)
IA	6.8	10.2	-3.4 *	(2.8)	42.9	55.3	-12.4 **	(1.8)
EI	58.4	55.8	2.6 *	(3.5)	64.0	30.6	33.4 ***	(5.1)
Tax credits (HST, child tax)	64.4	66.0	-1.5	(3.4)	78.9	81.2	-2.3 ***	(4.3)
Other sources	6.8	10.5	-3.7 *	(3.4)	14.3	20.6	-6.3	(4.1)
No income from above sources	8.0	7.0	1.0 *	(1.9)	3.4	2.4	1.1	(1.8)
Marital status at the 54-month follow-up interview (%)								
Married or living common law	66.5	66.7	-0.2	(3.4)	27.0	24.6	2.4	(4.7)
Employment of spouse in past 12 months								
Spouse worked (%)	44.7	50.3	-5.6	(3.5)	18.5	12.6	6.0	(3.9)
Full-time (%)	37.8	43.9	-6.2 *	(3.5)	16.9	10.3	6.6 *	(3.6)
Part-time (%)	6.7	5.6	1.1	(1.7)	1.1	1.7	-0.6	(1.3)
Number of months spouse worked	4.7	5.1	-0.5	(0.4)	1.6	1.1	0.5	(0.4)
Sample size	**421**	**378**			**178**	**175**		

Source: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month survey.

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

Rounding may cause slight discrepancies in sums and differences.

[a] Household income is measured as the sum of the sample member's income and the income of all other members in that person's household.

Among the IA sample, CEIP continued to have a positive impact on both personal and household income levels, however, neither impact is statistically significant at the 10-per-cent level. Examining the sources of income for IA sample members, CEIP continued to reduce IA receipt in the 12 months before the 54-month interview. Program group members, however, were much more likely over this period to rely on EI benefits, nearly doubling the extent to which they reported income from EI benefits in the past year. Following CEIP eligibility, IA program group members were more likely to report that they had a spouse who worked full-time during the period. Positive impacts on the incidence of spouses working may have contributed to the observed decrease in IA receipt, since IA eligibility is based, in part, on household income.

Incidence and Severity of Low Incomes

At the 40-month interview, CEIP increased household income of IA program group members, contributing to a nearly 10-percentage-point decrease in the proportion whose household income fell below Statistics Canada's Low Income Cut-Offs (LICO). In the year following CEIP, however, the project no longer had significant impacts on the household income of either EI or IA samples. Nonetheless, effects on poverty were observed at the lowest extreme of the LICO distribution, where CEIP produced a sustained reduction in the proportion of households with incomes below 75 per cent of LICO by 15 percentage points (see Table B.6 in Appendix B).

Subgroup analysis reveals that CEIP reduced the severity of poverty (less than 75 per cent of LICO) among several IA program subgroups, including males, individuals with no children in the household, and those with very dense social networks at baseline. Interestingly, one notable group also experienced a sustained reduction in the incidence of low-income (less than 100 per cent of LICO) — lone parent households (see Appendix D, tables D.5 and D.6, for subgroup results).

Hardship and Wellbeing

Since CEIP had differing effects on EI and IA sample members' household income, it is also expected to have a divergent effect on hardship at month 54. Table 3.3 shows the extent to which CEIP played a role in any hardship experienced by program group members after CEIP eligibility. This table shows that 86 per cent of EI program group members reported that their families did not face financial hardship in terms of being unable to meet their daily household expenses. On the other hand, while almost two-thirds of IA sample members reported that their income met nearly all of their household expenses and financial needs, there is some indication that a small subset faced increased hardship following the end of CEIP.

Table 3.3   Impacts on Hardship at the 54-Month Interview

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
In the past six months, respondent's household income								
Met all or most expenses and financial need	86.1	87.8	-1.8	(2.4)	68.6	66.3	2.3	(5.0)
Met some	8.4	8.1	0.3	(2.0)	14.9	23.8	-9.0 **	(4.2)
Met very little or none of the expenses	5.5	4.1	1.5	(1.5)	16.6	9.9	6.7 *	(3.6)
Experienced difficulty paying for								
Electricity	22.5	19.9	2.6	(3.0)	27.6	34.4	-6.8	(5.1)
Heat	24.5	21.6	2.9	(3.0)	28.2	31.3	-3.0	(5.1)
Telephone	16.2	16.9	-0.7	(2.7)	33.1	27.5	5.6	(5.1)
Rent	8.6	8.0	0.5	(2.0)	17.8	17.5	0.3	(4.3)
Mortgage	6.4	4.7	1.7	(1.7)	3.1	0.6	2.4	(1.5)
Municipal taxes	8.1	9.4	-1.3	(2.0)	6.1	3.8	2.4	(2.4)
Day-to-day expenses	18.4	15.0	3.4	(2.7)	33.7	38.8	-5.0	(5.4)
Have things not working at home	7.7	12.0	-4.4 **	(2.1)	16.6	14.5	2.0	(3.9)
Too costly to fix	5.0	8.5	-3.5 **	(1.8)	10.1	6.3	3.8	(2.9)
No time to fix	0.7	1.6	-0.9	(0.7)	0.6	0.6	0.0	(0.8)
Landlord won't fix	0.7	0.5	0.2	(0.6)	2.2	3.4	-1.2	(1.8)
Other reason	1.0	1.3	-0.4	(0.7)	3.4	4.0	-0.6	(2.0)
Unable to get groceries or food	10.6	12.6	-2.0	(2.3)	33.1	36.0	-2.9	(5.1)
Almost every month	2.6	5.0	-2.4 *	(1.3)	10.7	7.4	3.2	(3.1)
Some months, but not every	3.3	3.2	0.2	(1.3)	13.5	14.9	-1.4	(3.7)
Only once or twice	4.3	4.0	0.3	(1.4)	8.4	13.1	-4.7	(3.3)
Have used food banks in last six months	1.9	2.1	-0.2	(1.0)	12.1	11.0	1.0	(3.4)
Sample size	**404**	**364**			**175**	**169**		

Source: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month survey.

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

Rounding may cause slight discrepancies in sums and differences.

IA program group members were more likely to report having experienced hardship in the six months leading up to the 54-month survey, with 16.6 per cent reporting that their household income met little to none of their needs, 6.7 percentage points higher than that of the control group. Given the earlier finding that CEIP had no overall impact on household income, the extent to which IA program group members reported having increased hardship at the end of the program may be due, in part, to IA program group members experiencing a larger, *relative* reduction in earnings after the end of the project. While they were not observed to be less likely to meet their necessary financial obligations, such as groceries, housing, and day-to-day expenses, some IA program group members may have extended other financial obligations, such as consumer credit, while they were working in CEIP. They may have found themselves unable to meet those commitments once they were no longer receiving CEIP earnings. However, the program's effects on personal finances at 54 months do not indicate that CEIP led to any substantial differences in the extent to which program

group members reduced their savings or increased their debt obligations after they left the program, among either the EI or IA samples (see Appendix B, Table B.10 for full results).

Results that indicate little hardship following the end of the program are consistent with CEIP's longer term effect on subjective well-being. In particular, EI program group members were 6 percentage points more likely to report that they were "extremely satisfied" with life. On the other hand, a similar proportion of IA sample members were *less* likely to report being extremely satisfied at 54 months; however, the impact does not reach statistical significance. These results suggest that for the EI sample in particular, the program had a modest yet persistent positive effect on their life satisfaction over a year after their participation came to an end (see Appendix B, Table B.11 for full results).

Summary

CEIP's large and positive effects on full-time employment rates throughout the program's eligibility period were not sustained once the program ended. Members of both EI and IA program groups experienced dramatic decreases in employment immediately after CEIP, leading to negative impacts on employment early in the post-CEIP follow-up period. The negative impacts were not sustained, however, as the employment rates of program group members quickly caught up to control group members, leading to no significant differences in full-time employment by the time of the 54-month survey.

While there was an expectation that the observed negative effects on employment immediately after CEIP would lead to substantial losses in income and increased hardship, program group members in the EI and IA samples reported similar household income levels to their respective control groups at the 54-month mark. Along with the recovery of employment earnings by the 54-month survey, an important source of post-CEIP income for many participants was EI benefits, with a majority of program group members establishing an EI claim immediately after they left CEIP. With no significant effects on household income at the 54-month interview, the three-year time limit of CEIP participation did not lead to any discernible effects on poverty or hardship among the EI sample. It did have, however, a small effect on the inability of some households in the IA sample to meet their needs approximately one year after the program ended.

While no data is available on participants' employment situation past the 54-month survey, EI administrative data provides some insight into the labour market behaviour of program group members up to three years after the end of the project. The lack of any impacts on long-term EI receipt suggests that EI program group members maintained employment levels that were similar to their control group counterparts beyond month 54. Among the IA sample, reduced reliance on IA benefits along with a corresponding increase in EI benefit receipt — up to three years after the program had ended — indicates that CEIP likely had a small but persistent positive effect on longer-run employability.

Chapter 4

Gains from Work Experience — Impacts on Job Quality, Skills, and Attitudes Towards Work

Although the Community Employment Innovation Project (CEIP) is not a training program to develop human capital, participants' job placements provided them with three years of valuable work experience in a variety of positions that was expected to enhance their skills and social capital, which would lead to improvements in their employability. At the same time, working in a variety of positions in the voluntary service sector gave participants the opportunity to develop transferable generic or soft skills, which potentially have made them more effective workers. These skills, such as flexibility, adaptability, teamwork, and problem solving, are difficult to teach but are of great value to prospective employers, and can improve participants' success in finding and retaining employment after CEIP.

One method to measure the effect of CEIP participation on future employability is to estimate the occupation and skill level of participants' post-CEIP employment to determine how participation affected the quality of jobs that participants were able to find after their eligibility for the project ended. To this end, the primary focus of this chapter will be jobs held during the 14-month period in between the 40- and 54-month follow-up surveys during which time CEIP participants had left the program and were transitioning to market-based employment. After estimating CEIP's impacts on the occupation and skill level of post-CEIP jobs, the chapter will also examine any long-term effects on soft skills as measured in the 54-month survey, determining whether program group members were able to maintain or experience improvements in these skill measures over one year after project eligibility. A related measure is respondents' attitudes towards work and transfer payments, and the chapter will ascertain whether having left the project has had a discernible effect on their employment perspectives. The chapter will conclude by examining whether CEIP contributed to any change in program group members' participation in education or training programs or their likelihood in moving elsewhere to find employment after CEIP ended.

Impacts on Post-CEIP Job Skill Levels

Gyarmati et al. (2007) reported that CEIP had an effect on the types of occupations in which program group members worked while they were eligible for the project. More importantly, it had a positive impact on the skill level of their positions during the course of the project, increasing the proportion of program group members working in high-skilled positions by approximately 10 percentage points for the EI and IA samples. The authors noted that, while these results represent an overall positive impact, CEIP did have negative impacts on medium-skilled position holders, which may reflect that, to some degree, workers are being employed in lower-skilled CEIP jobs than they would have otherwise been. This

finding was confirmed by a small reduction in the percentage of EI sample members receiving higher wages as a result of their participation in CEIP.

With CEIP providing participants with up to three years of stable employment in higher-skilled positions, the project is expected to have a positive impact on the types of jobs participants hold after the project. Chapter 3 detailed the employment rates of program group members and showed that CEIP had a negative impact on employment in the months immediately following the conclusion of the project. The employment rate of the program group, however, had improved by the 54-month interview such that the negative impacts on employment had virtually disappeared approximately one-year after the end of CEIP. As for the types of jobs participants will likely hold following CEIP, the effects are expected to be mixed. While the poor conditions of the labour market in Cape Breton may lead participants to seek any available employment in the job market, which leads to a lower skill level of any jobs they do accept, their eligibility for EI benefits may give them greater flexibility to accept job offers suitable to their increased levels of skills and experience because of their participation in CEIP.

Occupations

First turning to the types of occupations in which participants worked, Gyarmati et al. (2007) reported that, while program group members worked in a similar range of occupations as the control group did throughout project operations, CEIP-induced increases in program group employment in the EI sample occurred in the areas of the social sciences, education, government services, and religion as well as the arts, culture, recreation, and sport. EI sample members also experienced a small shift away from jobs in the fields of primary industry, processing, manufacturing, and utilities over the course of the project. Among the IA group, observed shifts in occupation types reflected a shift from unemployment into occupations in the social sciences, education, government services and religion, as well as primary industries, trades, transport and equipment operations.

Table 4.1 illustrates the occupations in which 54-month respondents worked during the 41–54-month period. It shows that by the end of the follow-up period, a similar share of program group members to control group members reported holding at least one job over the period. It also shows that program group members found jobs in similar industries to control group members, with only a few significant differences between the two occupational distributions. Among EI sample members, CEIP increased the proportion working in the social sciences, education, government services and religion by 4.2 percentage points, while decreasing the proportion of main jobs in the health sector by 3.3 percentage points. Among IA sample members, CEIP increased the proportion whose main job was in the health sector by 3.9 percentage points.

Job Skill-Levels

Table 4.2 details CEIP's impacts on the occupational skill-level of employment in the period immediately following CEIP using the second digit of the NOC code for each

occupation. Categories have been grouped according to high-skilled and management (management, professional and positions requiring college[1]), medium-skilled (intermediate position requiring high school), and low-skilled occupations (elemental position requiring less than high school).

Table 4.1   Impacts on Occupation Type of Main Job During Months 41 to 54

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Ever Employed	81.9	82.5	-0.6	(2.7)	69.1	64.0	5.1	(5.0)
Occupation Type								
Business, Finance, and Administration	13.8	12.7	1.1	(2.4)	12.9	12.0	0.9	(3.5)
Natural and Applied Sciences	3.1	1.6	1.5	(1.1)	2.2	2.3	0.0	(1.6)
Health	3.8	7.1	-3.3 **	(1.6)	6.2	2.3	3.9 *	(2.1)
Social Science, Education, Government Service, and Religion	7.4	3.2	4.2 ***	(1.6)	5.1	2.3	2.8	(2.0)
Art, Culture, Recreation, and Sport	2.1	1.3	0.8	(0.9)	2.8	1.1	1.7	(1.5)
Sales and Service	26.8	29.9	-3.1	(3.2)	25.8	32.0	-6.2	(4.8)
Trades, Transport, and Equipment Operators	15.4	16.7	-1.2	(2.6)	6.2	5.1	1.0	(2.5)
Primary Industry	2.6	3.4	-0.8	(1.2)	2.2	0.6	1.7	(1.3)
Processing, Manufacturing, and Utilities	5.7	6.1	-0.4	(1.7)	5.6	5.1	0.5	(2.4)
Sample size	**421**	**378**			**178**	**175**		

Source: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month survey.

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

Rounding may cause slight discrepancies in sums and differences.

Table 4.2   Impacts on Skill Level of Main Job During Months 41 to 54

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Skill Level								
High Skilled Managament, Professional, College	27.6	21.4	6.1 **	(3.1)	23.6	14.3	9.3 **	(4.2)
Medium Skilled High School Required	33.5	38.4	-4.9	(3.4)	30.3	29.7	0.6	(4.9)
Low Skilled	19.7	22.2	-2.5	(2.9)	15.2	18.9	-3.7	(4.0)
Did Not Work	18.1	17.5	0.6	(2.7)	30.9	36.0	-5.1	(5.0)
Sample size	**421**	**378**			**178**	**175**		

Source: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month survey.

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

Rounding may cause slight discrepancies in sums and differences.

---

[1] NOC assigns management occupation to a unique skill level that is not comparable to other skill levels. Management occupations, however, are combined with higher-skill occupations in this analysis due to small sample sizes.

This table illustrates that over the 14-month post-program period, CEIP increased the percentage of program group members who worked in high-skilled positions. Among the EI sample, it increased high-skilled workers by 6.1 percentage points, while among the IA sample high-skilled workers increased by 9.3 percentage points. These results provide strong evidence that CEIP leads to longer-term improvements in the skill-level of participants' jobs over one year after they completed their participation in the program. Importantly, differences in the impacts on job skill levels were observed across key subgroups in the IA sample. In particular, lone parents were 17 percentage points more likely to be working in high-skilled jobs than their control group counterparts in the post-CEIP period. Impacts also appear larger for women, those with fewer employment barriers, and those with a longer work history, even though these differences fail to reach statistical significance (see Appendix D, Table D. 16 for full subgroup results).

Examining which occupations contributed to higher skilled positions following CEIP, Figure 4.1 shows the percentage-point change in high-skill jobs by type of occupation. Only EI sample data is shown as no discernible effects were observed among the IA sample, indicating that the observed increase in skill level was not restricted to any particular type of occupations for IA program group members.

Figure 4.1 Impacts on the Change in High-Skill Positions, by Type of Occupation (EI Sample)
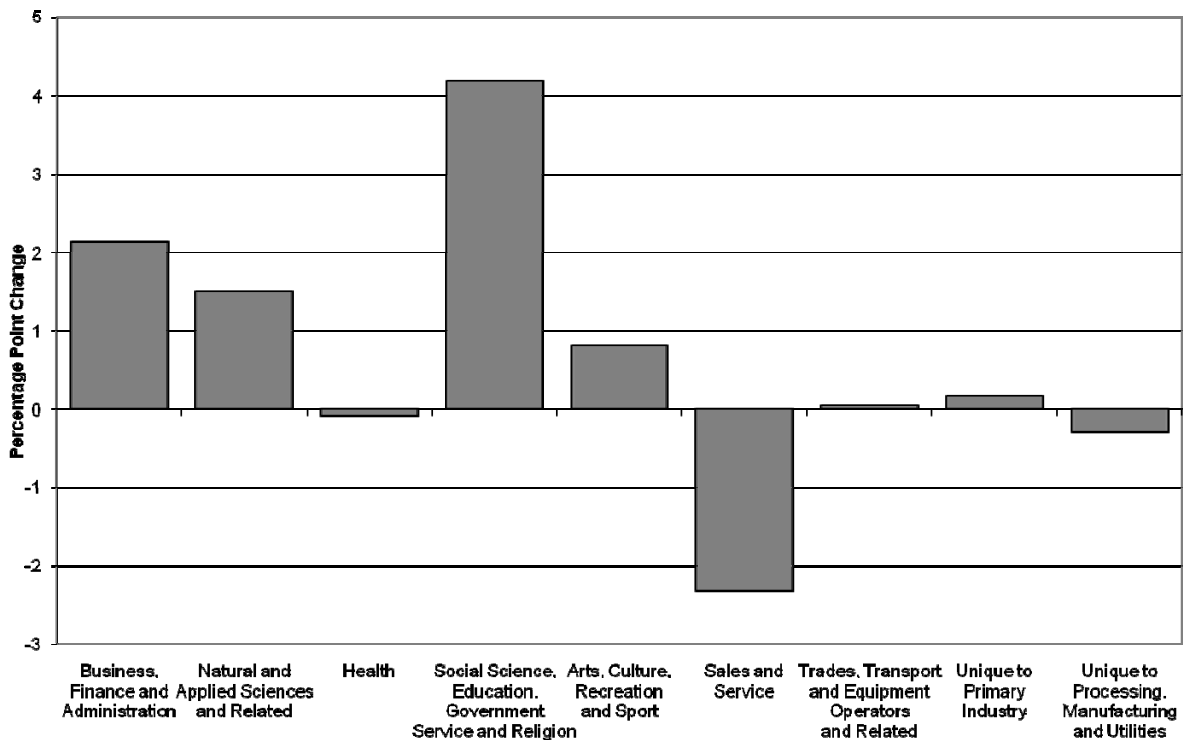
Source: Calculations from the Project Management Information System and the 40- and 54-month follow-up survey data.

Notes: For clarity, this figure presents only the percentage point difference between program and control groups rather than the levels for each group. All analyses were only for those who responded to the 54-month survey. Two-tailed t-tests were applied to differences in outcomes between the program and control groups.

The figure illustrates that among the EI sample, program group members experienced a decline in high-skilled sales and service positions and an increase in high-skilled positions in occupations in the social sciences, education, government services, and religion. Gyarmati et al. (2007) reported similar shifts among program group members during CEIP eligibility towards employment in the social sciences, education, government services, and religion. With EI program group members being more likely to have post-CEIP jobs that are similar to their CEIP employment – possibly even with their same CEIP employer – this suggests that they were able to develop skills and/or work-related contacts *within an industry or particular class of occupations through CEIP*. In contrast, higher-skilled post-CEIP jobs among IA program group members are not necessarily directly linked to their CEIP occupations but rather arise from gains in employability from a more *generalized set of experiences that are not specific to any particular occupation or industry.*

Although, for the most part, program group members found jobs in similar occupations to their control group counterparts, CEIP's impacts on increased job skill levels and changes in occupation are indicative of sample members altering their employment situation as a consequence of participating in the project. For these participants, the change in occupation may have been due to the CEIP job itself, the job-related contacts they gained, or possibly their overall experience working in a stable, full-time job in the voluntary-service sector. Regardless, they have found employment that is of higher quality and potentially more financially rewarding in the future than what they would otherwise have found in the absence of CEIP. Subgroup analysis does not reveal a clear picture of which individuals were able to find better employment after CEIP. Only EI sample individuals who were in their 30s at baseline were significantly more likely to be working in high-skilled, post-CEIP jobs, as were lone parents in the IA sample (see Appendix D for full subgroup analysis).

To investigate CEIP's effects on employability further, the following sections examine impacts on other employability measures, including working skills, attitudes towards work, and mobility.

Impacts on Transferable Working Skills

While it was anticipated that the additional work-related skills and experience that CEIP would provide participants would improve their employability over the longer-term, it was not clear that community-based employment would be an effective conduit to acquiring or strengthening more generic, working skills that are in demand by employers. These working skills, also known as generic or soft skills, are fundamental to performing a wide range of tasks in a wide range of occupations and include communication skills, motivation, persistence, ability to work in teams, positive attitudes towards work, and problem solving. Previous literature has linked positive effects on working skills to successful labour market outcomes (Bowles, Gintis, and Osborne, 2000; McLaughlin, 1992; Oates, 1992).

CEIP measures working skills using a subset of nine questions from Miles and Grummon (1996),[2] which assesses proficiency in nine workplace competencies — responsibility, teamwork, persistence, sense of quality, lifelong learning, adapting to change, problem solving, information processing, and system thinking. These nine competencies have some overlap with the nine Essential Skills identified by Human Resources and Skills Development Canada (HRSDC), particularly in the areas of lifelong learning and teamwork, and provide insight into how respondents feel they are utilizing their skills on the job. Any differences between the skill level of the program and control groups, as well as any differences in the changes across the three waves of the survey can be attributed to CEIP's effects on program group members' working skill profiles. Each of the skill competencies is described in Text Box 4.1.

Previous CEIP reports have shown that the project encouraged the development of a wide range of jobs in a variety of service-oriented, third-sector organizations through which participants could conceivably acquire or continue to develop generic skills. The project's effects on working skills, however, were mixed. Among EI sample members, CEIP had favourable results on lifelong learning and adapting to change at months 18 and 40, and on persistence and system thinking at month 40. There was some evidence of negative effects on responsibility at month 18, even though these impacts were not sustained by the end of the project. The IA sample had mixed results. Program group members experienced positive impacts on lifelong learning and adaptability at months 18 and 40, and on lifelong learning at month 40. They experienced, however, negative impacts on problem solving at months 18 and 40, on system thinking at month 18, and on their sense of quality at month 40.

Table 4.3 presents the effects of CEIP on working skill outcomes at month 54. Among the EI sample, CEIP appears to continue to have longer-term, positive impacts on persistence and systems thinking, as well as on information processing over a year after the end of the project. These results are consistent with those impacts observed during CEIP eligibility, suggesting that participants have maintained skills they developed throughout the program. One new impact was observed at month 54, which involved EI program group members' improved ability to process information.

Among IA sample members, CEIP continued to have mixed effects on program group members' working skills. Large and sustained positive impacts were observed on IA program group members' proclivity towards lifelong learning and adaptability. At the same time, IA program group members continued to experience negative impacts on problem solving at month 54.[3]

---

[2] Miles and Grummon (1996) presents a 50-item questionnaire that measures the presence of nine competencies — responsibility, teamwork, persistence, sense of quality, lifelong learning, adapting to change, problem solving, information processing, and systems thinking. The authors report that it is a statistically valid and reliable diagnostic instrument. Program group members completed the 50 questions during assessment week. The Social Research and Demonstration Corporation (SRDC) performed exploratory factor analysis on a sub-sample of the data collected during assessment week to confirm the nine dimensions and identify one item that best captures each of them. These nine questions were used in subsequent CEIP telephone surveys. This shortened version of the questionnaire was necessary to reduce time constraints on survey respondents, and yet capture the nine dimensions in the long version of the questionnaire.

[3] Given CEIP's impacts on longer-term job skill levels, CEIP's impacts on working and job skills were interacted to determine if there is any relationship between enhancements in working skills and the increased proportion of program

Text Box 4.1: Measures of Working Skills

Each of the nine competencies used to measure working skills is scored on a scale of 1 (almost always like me) to 5 (almost never like me).

Responsibility is measured using the statement "it really bugs me to see a problem that no one is trying to solve." Persons with a sense of responsibility are able to take ownership of the tasks, identify its components, and set priorities and targets to get it done satisfactorily.

Teamwork is measured using the statement "I prefer to learn with other people." This statement measures the respondent's comfort level at working with other people.

Persistence is measured with the statement "I follow through on things no matter what it takes." This statement measures the respondent's desire to satisfactorily finish a task they start, but, at the same time, being able to recognize when an adequate amount has been done.

Sense of quality relates to going beyond the mere minimum required to get the job done. It is putting the extra effort and time to produce work that can be looked upon with pride. It is measured in the survey with the statement "I can't quit thinking about something until I'm sure I've done it well."

Lifelong learning encompasses the desire and motivation to continue learning in order to keep up the ever changing demands of the work place. It is measured in the survey with the statement "I prefer to know what's in it for me before I spend a lot of effort learning something."

Adaptability to change is measured in the survey with the statement "I usually do something I've enjoyed rather than try something different." Adapting to change requires flexibility and the ability to adjust easily to varied experiences and changes in the work place.

Problem-solving entails being able to first recognize a problem, the ability to decompose it, and develop solutions for its resolution. This measure is captured with the statement "I make a detailed plan before I tackle a complex problem."

Information processing is being able to amass and synthesize information from various sources and experiences. It is measured in the survey with the statement "I understand new things by seeing how they fit with what I already know."

Systems thinking looks at inter-relationships and culture within an organization. It is measured in the survey with the statement "I know how to get things done in a system or an organization."

The overall positive effects of CEIP on key working skills is indicative that a community-based employment program can lead to improvements in participants' employability, even if many of the community jobs are lower skilled. Although CEIP did not include any formal mechanisms to encourage working skill development among participants, they were enhanced through its provision of basic job readiness training combined with varied work

---

group members who found higher-skilled employment following CEIP. For comparison purposes, the job skill levels during the CEIP eligibility period were also compared to post-CEIP working skill outcomes to determine whether the types of CEIP jobs held by participants may be related to any longer-term enhancements in working skills. In both cases, the analysis revealed no consistent relationship between pre- and post-CEIP working skills and job-skill levels, suggesting that positive, longer-term employment outcomes were not restricted only to participants who had also experienced enhanced working skill outcomes.

experiences in long-term, stable employment. While overall participation in CEIP appeared to enhance working skills, some of the negative impacts — particularly those observed among the IA sample — are an important caveat to the project's success in placing participants in appropriate job placements. This speaks to the need for more rigorous skill assessment and job-matching efforts to be included in the design of a similar community-based employment project.

Table 4.3   Impacts on Working Skills at the 54-Month Interview

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
It really bugs me to see a problem that nobody is trying to solve								
Almost always/quite a bit like me	83.3	83.5	-0.2	(2.7)	77.1	79.8	-2.6	(4.4)
Moderately like me	12.2	10.8	1.4	(2.3)	14.3	9.2	5.0	(3.5)
Occasionally/almost never like me	4.5	5.7	-1.1	(1.6)	8.6	11.0	-2.4	(3.2)
I prefer to learn with other people								
Almost always/quite a bit like me	72.6	70.5	2.0	(3.2)	72.0	70.5	1.5	(4.9)
Moderately like me	16.9	19.7	-2.8	(2.8)	18.9	18.5	0.4	(4.2)
Occasionally/almost never like me	10.5	9.7	0.8	(2.2)	9.1	11.0	-1.8	(3.2)
I follow through on things no matter what it takes								
Almost always/quite a bit like me	92.6	88.1	4.5 **	(2.1)	91.5	91.3	0.1	(3.0)
Moderately like me	6.2	8.6	-2.4	(1.9)	5.7	5.8	-0.1	(2.5)
Occasionally/almost never like me	1.2	3.2	-2.0 **	(1.0)	2.8	2.9	0.0	(1.8)
I can't quit thinking about something until I am sure that I have done it very well								
Almost always/quite a bit like me	89.3	86.4	2.8	(2.3)	90.9	89.0	1.9	(3.2)
Moderately like me	7.9	9.8	-1.9	(2.0)	6.8	6.4	0.5	(2.7)
Occasionally/almost never like me	2.9	3.8	-0.9	(1.3)	2.3	4.6	-2.4	(2.0)
I prefer to know what's in it for me before I spend a lot of effort learning something								
Almost always/quite a bit like me	39.6	43.1	-3.5	(3.5)	29.0	41.0	-12.1 **	(5.1)
Moderately like me	22.1	23.6	-1.5	(3.0)	17.0	24.9	-7.8 *	(4.3)
Occasionally/almost never like me	38.4	33.3	5.0	(3.4)	54.0	34.1	19.9 ***	(5.2)
I usually do something I enjoy rather than try something different								
Almost always/quite a bit like me	39.8	39.9	-0.1	(3.5)	31.0	40.5	-9.4 *	(5.1)
Moderately like me	28.8	32.1	-3.3	(3.3)	29.9	28.3	1.6	(4.9)
Occasionally/almost never like me	31.4	28.0	3.4	(3.3)	39.1	31.2	7.9	(5.1)
I make a detailed plan before I tackle a complex problem								
Almost always/quite a bit like me	66.2	64.1	2.1	(3.4)	55.1	64.7	-9.6 *	(5.2)
Moderately like me	21.0	20.5	0.4	(2.9)	20.5	15.6	4.8	(4.1)
Occasionally/almost never like me	12.9	15.4	-2.5	(2.5)	24.4	19.7	4.8	(4.4)
I understand new things by seeing how they fit with what I already know								
Almost always/quite a bit like me	84.7	81.3	3.4	(2.7)	81.3	80.8	0.4	(4.2)
Moderately like me	12.0	11.7	0.3	(2.3)	13.1	15.1	-2.0	(3.7)
Occasionally/almost never like me	3.3	7.0	-3.7 **	(1.6)	5.7	4.1	1.6	(2.3)
I know how to get things done in a system or an organization								
Almost always/quite a bit like me	89.2	84.8	4.4 *	(2.4)	83.4	83.1	0.3	(4.0)
Moderately like me	7.7	11.4	-3.7 *	(2.1)	11.4	11.6	-0.2	(3.4)
Occasionally/almost never like me	3.1	3.8	-0.7	(1.3)	5.1	5.2	-0.1	(2.4)
Sample size	**419**	**370**			**175**	**173**		

Source: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month survey.

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

Rounding may cause slight discrepancies in sums and differences.

Attitudes Towards Work and Transfer Payments

By offering participants up to three years of employment in exchange for their EI or IA benefit receipt, CEIP was expected to lead to changes in not only participants' skills, but also their attitudes towards work. IA sample members typically did not have a strong attachment to the labour market when they volunteered for CEIP, while EI sample members had been out of work for at least 10 to 13 weeks, with many typically following a seasonal pattern of employment and EI benefit receipt.

For both samples, CEIP's offer marked a dramatic change in their employment situation, and this change was reflected in the program's effects on their attitudes towards work and transfer payments. At the end of project eligibility, Gyarmati et al. (2007) reported that CEIP had a positive effect on both EI and IA sample members' attachment to work. Both were significantly more likely to agree strongly with the statement "I like going to work," while IA sample members were also more likely to report that they are happier when they have a job, and that their families support them taking a job.

The 54-month survey records respondents' beliefs and attitudes towards work and transfer payments, roughly one-year after the CEIP project ended. The survey relied on three measures of attitudes towards work and two measures of attitudes towards the receipt of transfer payments. Table 4.4 shows that the overwhelming majority of respondents — both program and control group members alike — continued to be more likely to enjoy going to work, be happier when they are working, have families that support them taking a job and have negative feelings towards relying on transfer payments.

While the earlier follow-up surveys found that CEIP had contributed to program group members — particularly among the IA sample — having more positive attitudes towards work than their control group counterparts did, the impacts at month 54 have faded on some measures. Overall, however, program group members in both samples demonstrate stronger positive attitudes towards work over a year after CEIP eligibility. Among the EI sample, program group members were 6 percentage points more likely than control group members to say they were happier when working, while program group members in the IA sample were nearly 10 percentage points more likely to say they agreed strongly that they like going to work.

While no strong differences in attitudes towards transfer receipt appeared in the earlier two surveys, EI program group members appear to have become more positively inclined than the control group towards transfer receipt in the 54-month survey. Program group members were over 4 percentage points more likely to disagree with the statement "It's wrong to stay on welfare if you are offered a job, even one you don't like," and were nearly 8 percentage points more likely to disagree with the statement "It's wrong to take Employment Insurance if you are offered a job, even one you don't like." This change in attitude may reflect the experience of many participants in the period leading up to the 54-month survey, where many had to rely on EI benefits during their search for market-based employment after their eligibility for CEIP ended.

Table 4.4   Impacts on Attitudes Towards Work and Transfer Payments at the 54-Month Interview

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
I like going to work								
Agree strongly	37.6	33.3	4.2	(3.4)	35.1	25.1	9.9 **	(4.9)
Agree	58.9	61.2	-2.4	(3.5)	63.2	71.3	-8.1	(5.0)
Disagree	3.1	3.8	-0.7	(1.3)	1.1	3.5	-2.4	(1.6)
Disagree strongly	0.5	1.6	-1.1	(0.7)	0.6	0.0	0.6	(0.6)
When I have a job,								
I am a happier person								
Agree strongly	43.9	37.8	6.0 *	(3.5)	40.8	32.9	7.9	(5.2)
Agree	53.0	58.6	-5.6	(3.6)	57.5	64.1	-6.6	(5.3)
Disagree	3.1	2.4	0.7	(1.2)	1.7	2.4	-0.6	(1.5)
Disagree strongly	0.0	1.1	-1.1 **	(0.5)	0.0	0.6	-0.6	(0.6)
My family supports								
me taking a job								
Agree strongly	44.6	39.3	5.3	(3.5)	38.0	37.3	0.7	(5.3)
Agree	53.3	56.9	-3.7	(3.6)	57.3	59.8	-2.5	(5.4)
Disagree	1.7	2.4	-0.8	(1.0)	4.1	1.8	2.3	(1.8)
Disagree strongly	0.5	1.4	-0.9	(0.7)	0.6	1.2	-0.6	(1.0)
It's wrong to stay on welfare								
if you are offered a job,								
even one you don't like								
Agree strongly	47.5	44.9	2.5	(3.6)	41.0	41.8	-0.7	(5.3)
Agree	40.7	47.4	-6.7 *	(3.6)	48.0	43.5	4.4	(5.4)
Disagree	9.4	5.8	3.6 *	(1.9)	8.7	12.4	-3.7	(3.3)
Disagree strongly	2.4	1.9	0.5	(1.0)	2.3	2.4	0.0	(1.6)
It's wrong to take								
Employment Insurance								
if you are offered a job,								
even one you don't like								
Agree strongly	31.5	32.4	-0.9	(3.4)	26.6	32.9	-6.3	(5.0)
Agree	48.2	55.1	-6.9 *	(3.6)	57.8	50.9	6.9	(5.4)
Disagree	18.4	11.1	7.3 ***	(2.6)	13.3	13.8	-0.5	(3.7)
Disagree strongly	1.9	1.4	0.6	(0.9)	2.3	2.4	-0.1	(1.6)
Sample size	**418**	**369**			**174**	**171**		

Source: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month survey.

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

Rounding may cause slight discrepancies in sums and differences.

Education

While CEIP was not an education or training program, it did provide a limited amount of ancillary activities to program group members, including basic job-readiness training, Occupational Health and Safety (OHS) and Cardiopulmonary Resuscitation (CPR) courses, and computer literacy classes. While employed in CEIP, participants who wished to pursue other training options were allowed to do so on their own time, with CEIP rules permitting unpaid leave of absences for education and training purposes without any loss of CEIP

eligibility. The rules, however, did not allow much flexibility to pursue any time-intensive training, while being actively engaged in CEIP employment. It was therefore not surprising that previous reports found that program group members experienced a limited, decreased enrolment in non-CEIP training during the course of the project. By month 54, however, program group members were equally likely to be enrolled in any form of training or education courses as the control group (full tables shown in Appendix B). Therefore, any decrease in training because of CEIP participation dissipated soon after the project finished. As well, participation in CEIP has not appeared to stimulate demand for further skills development through formal educational and training pursuits.

Mobility

Given the concern about out-migration in Cape Breton in recent years, there was some concern about the long-term effects that a limited-duration employment project may have on participants' propensity to move elsewhere. Since CEIP was not expected to generate long-term job opportunities beyond the scope of the project, it was believed that after the project ended, participants would look outside of Cape Breton for employment that provided wages commensurate with their increased skills and experience. Findings from the 18- and 40-month surveys confirmed that the stability of a three-year CEIP job provided an incentive for program group members to remain in Cape Breton during the project's operations. At month 54, however, there was an expectation that out-migration may rise in the program group.

Table 4.5 presents analysis of any moves made by survey respondents at month 54. The results show that, overall, CEIP continues to have no effect on program group members moving outside of Cape Breton.[4] There was, however, a small impact on the proportion of IA sample members who moved to another community within Cape Breton. Examining differences in within-Cape Breton mobility, groups that were more likely to move elsewhere in the region, included respondents with less than a high school education as well as respondents reporting $10,000 or more in income at enrolment. While CEIP may have contributed to some participant mobility within Cape Breton, preliminary results do not suggest that CEIP had any significant impact on out-migration after eligibility for the project ended.[5]

---

[4] A caveat to the migration analysis is that it captures only survey respondents. It is, however, possible that some non-respondents may have moved away from Cape Breton, and were untraceable by Statistics Canada.
[5] Some extent of mobility may not be captured in the survey results, particularly in cases where Statistics Canada was unable to trace respondents who moved away from Cape Breton.

Table 4.5   Impacts on Mobility at the 54-Month Interview

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Percentage of respondents								
that moved	14.5	13.5	1.0	(2.5)	24.2	23.4	0.7	(4.5)
Within community	4.8	3.2	1.6	(1.4)	9.6	11.4	-1.9	(3.3)
To another community								
in Cape Breton	4.5	7.1	-2.6	(1.6)	9.0	4.6	4.4 *	(2.7)
Outside of Cape Breton	1.2	0.3	0.9	(0.6)	1.7	1.1	0.5	(1.3)
Moved back to Cape Breton	0.0	0.3	-0.3	(0.3)	0.0	0.0	0.0 .	
Non-resident mover	1.0	0.8	0.2	(0.7)	1.1	0.6	0.6	(1.0)
Reasons for moving								
Work-related (own or partner's)	3.3	1.9	1.5	(1.1)	2.8	1.7	1.1	(1.6)
Family reason	2.6	2.9	-0.3	(1.2)	5.6	2.3	3.4	(2.1)
Housing	5.0	5.3	-0.3	(1.6)	6.2	9.7	-3.5	(2.9)
Other	3.1	3.4	-0.3	(1.3)	9.0	9.7	-0.7	(3.1)
Sample size	**421**	**378**			**178**	**175**		

Source: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month survey.

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

Rounding may cause slight discrepancies in sums and differences.

Summary

Beyond providing participants with substantially more work over the course of its operations, CEIP led to participants working in longer-tenured positions with a greater variety of employers, allowing them to gain valuable skills and work experience. Although many participants were unable to find employment immediately after the end of their eligibility, 54-month results indicate that those who did were able to secure higher-skilled jobs than they otherwise would have in the absence of CEIP. For IA sample members, CEIP appears to have had a positive impact on program group members increasing the skill level of their positions after the project ended. Among EI sample member who did move to higher skilled positions after CEIP, a significant proportion did so in the context of new occupations, suggesting that CEIP led some individuals to pursue potentially more rewarding career opportunities that they would otherwise not have if they had not participated in the project. Positive impacts on post-CEIP job skill levels were accompanied by small improvements in program group members' working skills and attitudes towards employment, suggesting that community-based employment, even in the context of relatively low-skilled jobs and no formal training mechanisms, can have long-lasting effects on participants' skill sets and attitudes towards work.

Despite expectations to the contrary, CEIP did not lead to any observable effects on out-migration among program group members. One plausible explanation for the absence of effects is that mobility is highest among younger adults, who comprise only a small portion of the CEIP sample. In the absence of any large effects on mobility, it can be conjectured that any out-migration induced by CEIP's positive impacts on participants' skills and labour market attachment is counterbalanced by their stronger community ties because of being engaged in community-based employment for up to three years.

Chapter 5

Impacts on Social Capital and Volunteering

This chapter will review the sustained impacts the Community Employment Innovation Project (CEIP) had on the social capital and volunteering activities of participants. Recent efforts to define and measure social capital have focused on the social network approach, which emphasizes network characteristics that are measurable and possibly influenced by policy. This approach allows for the investigation of changes in social networks over time, and how such changes may be linked to well-being, economic and otherwise. It also effectively distinguishes social capital from activities to which it may be related, such as volunteering. Although an increase in volunteering may be a desirable goal in its own right, the extent to which it is associated with a change in network structure or access to new resources for the individuals involved is an important policy question.

The chapter will focus on longitudinal measures of change, charting the development of social networks and volunteering over a 54-month period. The primary question of interest is whether the in-program, 40-month impacts detailed in Gyarmati et al. (2007) would still be present more than a year after CEIP ended. In addition, the extent to which participants used their networks, particularly to search for jobs, will be examined, as will the question of whether and how changes in network characteristics are linked to changes in volunteering.

Overview: Social Capital

A Network-Based Definition

From a policy perspective, increasing the social capital of populations at risk of social exclusion, such as long-term unemployed individuals, is a desirable goal, but one that requires an operational framework for the measurement and analysis of social capital. To know when social capital has increased, some have proposed measures based on attitudinal norms such as trust, or behaviour such as volunteering or civic participation (Putnam, 2000; 2001). Others have cautioned that social capital cannot be quantified simply by measuring one or several of its possible precursors or consequences (Woolcock, 2001).

The conceptual quagmire around social capital has led to a widespread proposal that the definition focus on networks and resources. More specifically, social capital needs to be defined as a resource that arises from social networks, the value of which stems from the fact that it can open up access to other resources, depending upon the characteristics of the network (Levesque & White, 1999; Woolcock, 2001; Policy Research Initiative, 2003; Gyarmati & Kyte, 2003). In other words, the value of social capital at an individual level depends upon the resources to which it can be converted, which are, in turn, a function of network size and structure. One advantage of this definition is that it distinguishes between

social capital itself, which arises from networks, and possible normative and behavioural consequences and determinants of network formation — for example, trust and volunteering.

Network Structure and Access to Resources

Certain types of resource require specific types of networks. For example, emotional support after the loss of a job can best be sought from family and close friends, but reference letters require an employment network, usually made up of less intimate ties. Similarly, because people generally prefer to be with those who are similar to them, members of homogeneous networks may form strong bonds, even though they may also have access to a more limited range of resources than those who are connected to more diverse networks. Because access to resources may vary with network characteristics, social capital has often been dichotomized accordingly — bonding social capital refers to relatively homogeneous networks connected primarily by close or strong ties, while bridging social capital refers to more diverse networks that include important connections with those unlike ourselves, usually more distant or weak ties.

The bonding–bridging dichotomy need not imply cross-purposes — indeed bonding and bridging social capital may often be complementary. Strong ties are optimal for effective communication and planning, but may be redundant when repeated interactions within the same group of similar individuals bring no new knowledge or information. Weak ties with dissimilar others form less easily, but they may provide access to a wider variety of resources, ideas and opportunities. If weak ties include vertical linkages with persons of higher socio-economic status or in positions of power and influence — known as linking social capital — new ideas and opportunities can be leveraged into economic gain.

A classic example of the relative advantages and disadvantages of bonding and bridging social capital is found in Wellman (1979). He found that denser networks (i.e. those whose members were highly interconnected) had a facilitating effect on exchanges and coordination of effort, but that the resources available from such exchanges were less varied. For networks with fewer connections between members, the inverse was true — less well-coordinated exchanges, but a wider variety of accessible resources. Another example is the classic study by Granovetter (1974) who showed that weak ties were usually more useful than stronger ties when searching for a job because they gave job seekers information about a more diverse set of opportunities. Granovetter, however, studied a group of employed professionals, and asked them how they had obtained their current jobs. Studies on laid-off workers have shown that unemployed individuals favour strong ties when asking for help with a job search, perhaps because of the greater effort close connections will make on one's behalf, or simply because they lack a diversity of job connections (Karpi, 2001; Zhao, 2002).

To assess the effects of CEIP on social capital, several measures of network structure and resource accessibility were used. Survey questions were asked at the point of enrolment to establish a baseline for each respondent, then again 18, 40, and 54 months after enrolment. Questions on access to resources included resources that would normally be more associated with bonding social capital — such as help with household chores and emotional support — as well as those for which network diversity or bridging social capital may be more important, such as help finding a job and specialized advice. The latter of these indicators —

contacts for specialized consultations with lawyers and doctors, for instance — is one possible measure of vertical linkages and the presence of linking social capital. Strong and weak ties were assessed with questions on the number of contacts who were family members, close friends, or acquaintances. Network density was assessed with a question on interconnectedness between contacts. Finally, network heterogeneity was assessed with questions about how similar contacts were along a number of dimensions.

How Might CEIP Enhance the Social Capital of Participants?

Unemployed individuals in areas of chronic high unemployment, like Cape Breton, tend to have small networks that are characterized predominantly by strong ties and few potential bridges to the labour market. Johnson (2003) investigated social capital formation, and found that potentially beneficial but distant connections are often too costly to establish and maintain. One of the goals of CEIP was to make such connections less costly and help participants build bridging–linking social capital — in other words, less dense, more heterogeneous networks with a better balance between strong and weak ties, and with access to a wider variety of labour market resources. The design and implementation of CEIP put into place several mechanisms by which bridging–linking social capital could develop.

First, the simple opportunity of holding a steady job for up to three years ensured that participants could make new contacts in the workplace. In addition, participants were encouraged to work on several different projects during their three-year eligibility period — these multiple placements allowed for potential connections with a broad range of people from both within and outside the participants' communities. Because the projects were focused in the social economy and aimed at community betterment, they often involved the provision of services to wider groups of residents. This would often have given participants the opportunity to meet a range of individuals, not just their co-workers and CEIP sponsors, but wider groups of residents at large.

CEIP also provided the opportunity to make new connections outside one's community. Although participants were randomly selected from communities throughout the Cape Breton Regional Municipality (CBRM), only five communities developed CEIP projects and received CEIP workers. As a result, many participants were placed in communities throughout industrial Cape Breton, outside of their hometown, giving them the opportunity to meet more distant contacts and develop bridging social capital. Furthermore, participants could develop linking social capital by meeting individuals, including project sponsors, who possess extensive social networks and are in positions of influence. Before receiving CEIP participant workers, project sponsors were required to demonstrate that they had adequate resources, both financial and otherwise, for a successful project. In many cases, it was prominent residents and those with greater access to community resources and existing networks, who came forward to sponsor projects. This gave participants the opportunity to expand their networks and gain access to previously unavailable resources, beyond what they would have been in a position to develop without CEIP.

Impacts on Social Capital Development over 54 Months

Access to Resources

Table 5.1 presents CEIP's impacts on total network size, as well as specific resources available from the network, for the Employment Insurance (EI) and Income Assistance (IA) samples. For the IA sample, the story was the same at month 54 as it had been at month 40 — no impacts on either total number of contacts or contacts providing access to specific resources. For example, IA program and control group members both gained on average 3 to 4 job contacts while CEIP was in operation — by month 54, however, job contacts in both groups had diminished by roughly one-third compared to their 40-month levels.

In the EI sample, CEIP led to substantial 40-month gains in contacts providing access to specialized advice and help finding a job (Gyarmati et al., 2007). Although specialized advice and job contacts diminished after CEIP ended, they decreased by similar amounts in the program and control groups — thus EI sample impacts on access to specialized advice and job help that had been present at month 40 were maintained. By month 54, participating EI beneficiaries had gained on average one extra contact that could provide specialized advice, compared to zero by the control group, and two extra contacts that could provide help finding a job, compared to one by the control group. There also appeared to be impacts on overall network size in the EI sample with an increase of about two contacts compared to zero for the control group. However, each of these impacts on network size was reduced in magnitude after adjustment for baseline characteristics (see Appendix D).

Table 5.1   Number of Contacts Who Can Provide Various Resources

	EI Sample				IA Sample			
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error
Total number of contacts								
Mean at baseline	10.2	10.5	-0.3	(0.7)	8.7	8.7	0.0	(0.7)
Mean at 18 months	11.6	12.1	-0.4	(0.7)	12.4	12.0	0.3	(1.3)
Mean at 40 months	13.8	13.1	0.7	(0.9)	13.2	11.5	1.7	(1.5)
Mean at 54 months	11.6	10.9	0.7	(0.7)	9.6	9.2	0.4	(0.8)
Mean change from baseline to 54 months	1.8	0.3	1.6 *	(0.8)	1.0	0.3	0.6	(0.8)
Resources associated with bonding social capital								
Number of contacts who provide help								
with household chores								
Mean at baseline	5.5	5.7	-0.2	(0.4)	4.0	3.7	0.3	(0.4)
Mean at 18 months	7.4	7.0	0.4	(0.5)	6.3	6.4	-0.1	(0.7)
Mean at 40 months	7.7	7.5	0.2	(0.6)	6.4	6.7	-0.3	(1.0)
Mean at 54 months	6.4	5.8	0.6	(0.5)	4.7	5.1	-0.4	(0.5)
Mean change from baseline to 54 months	0.8	0.0	0.8	(0.5)	0.7	1.3	-0.7	(0.5)
Number of contacts who provide emotional support								
Mean at baseline	5.3	5.3	0.0	(0.4)	5.1	5.1	0.0	(0.4)
Mean at 18 months	7.3	7.3	0.0	(0.5)	7.6	7.2	0.4	(0.9)
Mean at 40 months	7.9	8.0	-0.1	(0.6)	7.2	6.5	0.7	(1.1)
Mean at 54 months	7.0	6.4	0.6	(0.6)	6.3	5.6	0.7	(0.6)
Mean change from baseline to 54 months	1.6	1.1	0.6	(0.6)	1.3	0.6	0.7	(0.6)
Resources associated with bridging and								
linking social capital								
Number of contacts who provide specialized advice								
Mean at baseline	2.8	3.0	-0.2	(0.2)	2.9	2.7	0.2	(0.3)
Mean at 18 months	3.9	4.2	-0.3	(0.3)	4.2	4.0	0.2	(0.5)
Mean at 40 months	4.8	4.0	0.8 **	(0.3)	3.8	3.9	-0.2	(0.8)
Mean at 54 months	3.7	3.2	0.5	(0.3)	3.4	3.0	0.3	(0.3)
Mean change from baseline to 54 months	0.9	0.2	0.6 *	(0.4)	0.5	0.4	0.1	(0.4)
Number of contacts who provide help finding a job								
Mean at baseline	4.1	4.3	-0.3	(0.3)	3.6	2.8	0.8 **	(0.4)
Mean at 18 months	5.9	5.9	0.0	(0.5)	5.8	6.2	-0.4	(0.9)
Mean at 40 months	7.5	6.5	1.0	(0.7)	7.0	6.6	0.4	(1.1)
Mean at 54 months	6.2	5.4	0.9	(0.6)	4.7	4.4	0.3	(0.5)
Mean change from baseline to 54 months	2.1	1.0	1.1 **	(0.6)	1.1	1.6	-0.5	(0.5)
Sample size	**401**	**367**	**768**		**172**	**169**	**341**	

Source: Calculations from the 54-month follow-up survey data.

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

Mean change is not always the difference between the 54-month mean and the mean at the baseline, because changes are only calculated for those with no missing values.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Although there was a significant impact on job contacts gained by the overall EI sample, subgroup analysis revealed that impacts were confined to EI sample members with at least a high school diploma or equivalent at baseline. Figure 5.1 shows that over the 54-month period, CEIP provided, on average, two extra job contacts that would have otherwise been unavailable to those with at least a high school diploma at baseline. There was no program impact on those with less than high school.

Impacts on job contacts among EI program group members with at least high school emerged at month 40, coinciding with the positive impact on high-skilled jobs. Both impacts were still present at month 54, suggesting that CEIP gave those with relatively high human

capital more access to high-skilled jobs and job contacts than they otherwise would have developed.[1]

There were no impacts on contacts providing help with household chores or emotional support, suggesting that the additional advice contacts gained by participating EI beneficiaries — and the job contacts gained by those beneficiaries with at least a high school education — did not provide broad, all-purpose help. Instead, it provided help in specialized areas associated with bridging and linking rather than bonding social capital.

Figure 5.1 Average Number of Contacts Who Can Help Finding a Job, by Education Level (EI Sample)
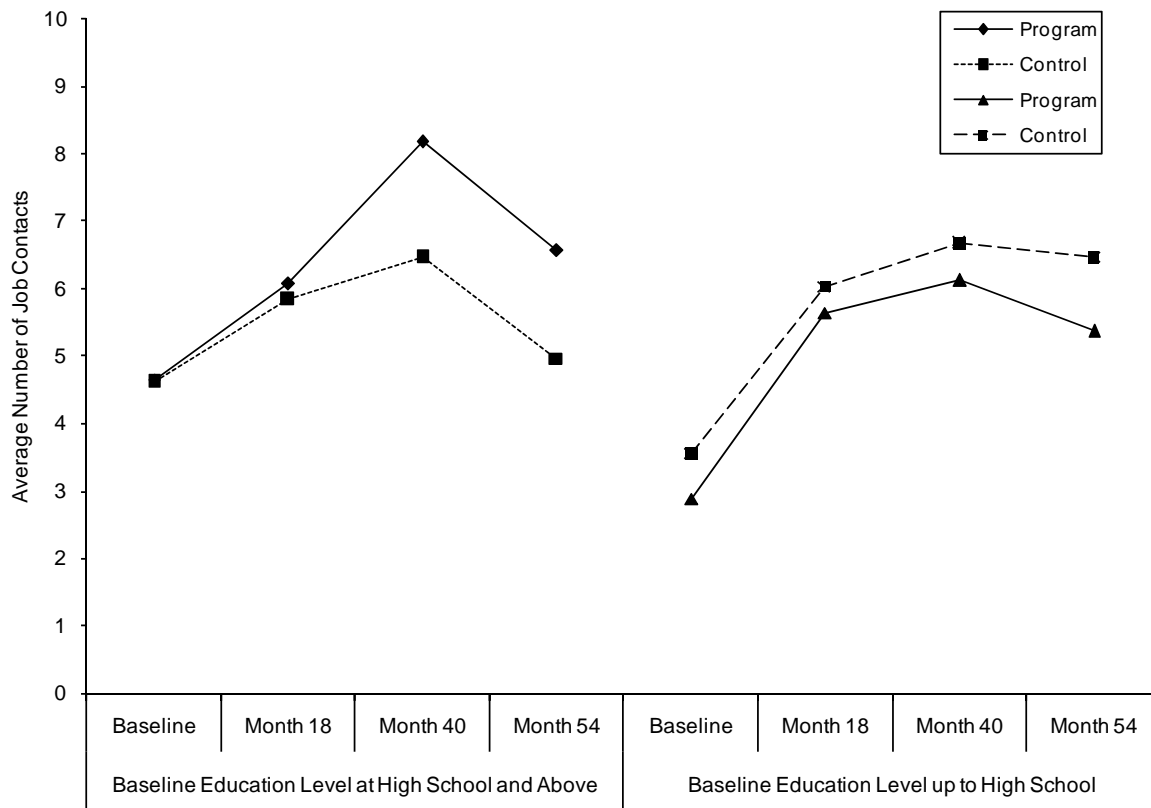
Sources: Calculations from the baseline, 18-, 40-, and 54-month follow-up survey data.
Notes: Sample size of the baseline, 18-, 40-, and 54-month surveys are 790, 748, 688, and 767, respectively.

[1] The subgroup impacts showing higher growth in job contacts among those with initially low levels of income that had been reported at month 40 showed a similar trend at month 54, but were no longer statistically significant.

Structural Characteristics of Networks: Tie Strength and Network Density

Table 5.2 presents CEIP's impacts on network density as well as presence of strong and weak ties — in the form of family and friends, and acquaintances, respectively — in the network. Few of the impacts on network density that had been present at month 40 for the EI and IA samples were maintained at month 54.

Over the course of CEIP, IA program group networks in which all or most of the contacts knew each other dropped from close to 90 per cent at baseline to about 67 per cent at month 40, while control group networks remained relatively unchanged. This result was promising because, as discussed in the introduction to this chapter, a lower degree of interconnectedness among members of a network implies an increase in the diversity of resources available. By month 54, however, the IA program group members were back to where they had been at baseline, with close to 85 per cent reporting that all or most of their contacts knew each other.

Similarly, the EI sample proportion reporting that only some of their contacts knew each other was 8 percentage points higher in the program group at month 40, but this impact was not sustained after CEIP ended. At month 54, there was no significant difference between program and control groups in the proportion reporting only some interconnectedness within their networks. Although drops in network density over the 54-month period were no more likely for EI program group members than for their control group counterparts, there is some evidence that program group networks were significantly less likely to grow denser over time. Some 37 per cent of control group members had networks where interconnectedness among members grew over 54 months, compared to 30 per cent of program group members.[2]

As for weak ties, over the course of CEIP, the average proportion of acquaintances had increased from about 12 per cent at baseline to 19 per cent at month 40 among IA program group members, while decreasing among control group members. At month 54, however, the proportion of acquaintances in the IA program group was down to 9 per cent, even lower than it had been at baseline. The drop in proportion of acquaintances from baseline to month 54 was smaller in the program group than in the control group — 3 vs. 8 percentage points.[3] There was no significant impact of CEIP on the proportion of acquaintances in the EI sample.

---

[2] The impact dropped slightly to 6 percentage points after regression adjustment, and was no longer statistically significant.
[3] The impact dropped slightly after regression adjustment, and was no longer statistically significant

Table 5.2   Structural Characteristics of Networks — Tie Strength and Network Density

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Network density - % of contacts who know each other								
Baseline								
All	38.1	34.8	3.3	(3.5)	51.2	51.5	-0.3	(5.4)
Most	36.4	41.3	-4.9	(3.5)	36.9	29.8	7.1	(5.1)
Some	22.1	20.9	1.2	(3.0)	11.3	15.2	-3.9	(3.7)
Few	1.5	1.9	-0.4	(0.9)	0.0	1.8	-1.8 *	(1.0)
None	1.9	1.1	0.9	(0.9)	0.6	1.8	-1.2	(1.2)
Month 18								
All	38.5	41.6	-3.2	(3.6)	43.0	47.6	-4.6	(5.4)
Most	36.0	33.7	2.3	(3.5)	32.6	33.1	-0.6	(5.1)
Some	21.6	18.2	3.4	(2.9)	20.9	13.3	7.7 *	(4.1)
Few	2.5	4.7	-2.2	(1.4)	2.9	3.6	-0.7	(1.9)
None	1.5	1.8	-0.3	(0.9)	0.6	2.4	-1.8	(1.3)
Month 40								
All	35.6	38.0	-2.3	(3.7)	41.4	47.4	-5.9	(5.7)
Most	30.3	38.3	-8.0 **	(3.6)	25.7	32.9	-7.2	(5.2)
Some	25.8	18.2	7.6 **	(3.2)	24.3	13.2	11.2 **	(4.4)
Few	6.9	4.2	2.7	(1.8)	7.2	5.3	2.0	(2.8)
None	1.3	1.3	0.0	(0.9)	1.3	1.3	0.0	(1.1)
Month 54								
All	44.2	48.6	-4.4	(3.6)	58.5	54.5	4.0	(5.4)
Most	32.3	27.2	5.1	(3.3)	24.6	26.3	-1.8	(4.8)
Some	18.4	20.2	-1.8	(2.9)	11.7	15.6	-3.9	(3.7)
Few	3.5	3.1	0.4	(1.3)	3.5	3.0	0.5	(1.9)
None	1.5	0.8	0.7	(0.8)	1.8	0.6	1.2	(1.2)
% for whom density *decreased* from baseline to month 54	26.0	23.6	2.4	(3.2)	23.9	29.7	-5.8	(4.9)
% for whom density *increased* from baseline to month 54	30.3	37.1	-6.7 *	(3.5)	27.0	27.9	-0.9	(4.9)
Tie strength								
Baseline								
Percentage family	51.7	50.7	1.0	(1.9)	55.2	53.2	1.9	(3.0)
Percentage friends	34.8	34.9	-0.1	(1.6)	32.9	31.8	1.1	(2.7)
Percentage acquaintances	13.5	14.4	-0.9	(1.2)	11.9	15.0	-3.0	(2.1)
Month 18								
Percentage family	54.1	52.6	1.5	(1.9)	51.8	50.9	0.8	(2.9)
Percentage friends	35.1	37.7	-2.6	(1.7)	35.8	37.1	-1.2	(2.5)
Percentage acquaintances	10.7	9.6	1.1	(1.2)	12.4	12.0	0.4	(2.1)
Month 40								
Percentage family	51.0	49.9	1.2	(2.1)	41.6	49.6	-8.0 **	(3.2)
Percentage friends	36.1	39.7	-3.6 *	(1.9)	39.3	38.8	0.5	(2.8)
Percentage acquaintances	12.8	10.4	2.4	(1.5)	19.0	11.6	7.4 ***	(2.6)
Month 54								
Percentage family	50.4	48.9	1.5	(2.0)	48.9	54.2	-5.3 *	(2.8)
Percentage friends	38.9	40.2	-1.3	(1.8)	42.5	38.6	3.9	(2.7)
Percentage acquaintances	10.7	10.9	-0.2	(1.4)	8.6	7.2	1.4	(1.8)
Mean change in % of acquaintances from baseline to month 54	-2.6	-2.8	0.2	(1.7)	-3.5	-8.3	4.8 *	(2.7)
Sample size	**385**	**352**	**737**		**166**	**159**	**325**	

Source: Calculations from the 54-month follow-up survey data.

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

Mean change is not always the difference between the 54-month mean and the mean at the baseline, because changes are only calculated for those with no missing values.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Network Heterogeneity

Since CEIP brought participants in touch with a range of individuals of different genders, age groups, education levels, and from different communities, one of the possible impacts of the program was to make networks more heterogeneous along these dimensions. As Table 5.3 shows, however, CEIP appeared to have little impact on increasing network heterogeneity. On several measures, especially age and education level, the program and control networks seemed, in fact, to become markedly more homogeneous over the 54-month period.[4]

In the EI sample, the program group had a slightly higher tendency to maintain network members of the opposite sex, as well as network members from outside their immediate communities. Both impacts, however, were reduced substantially in magnitude, and were no longer significant after adjustment for baseline characteristics.[5]

---

[4] These results are difficult to interpret since questions about fellow network members' age and education proved difficult for some participants to answer at baseline, and were subsequently simplified. For example, at baseline participants were asked how many of their contacts had less, more and similar levels of education as themselves. At months 18, 40, and 54, due to the response burden, they were only asked how many had similar levels. Thus the apparent increase in proportion of network members with similar levels of education may have resulted from the presence of fewer response options at month 18, 40, and 54 compared to baseline.

[5] After adjustment, gender impacts were reduced from 3.4 to 1.8 percentage points, and the P-value rose from 0.09 to 0.41. Similarly, impacts on average number of network members outside the immediate community dropped from 1.0 to 0.4 percentage points, and the P-value rose from 0.09 to 0.45.

Table 5.3   Network Heterogeneity

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Characteristics of Contacts								
Proportion of Contacts that are								
same gender as you								
Baseline	60.2	59.6	0.6	(1.6)	61.1	63.7	-2.6	(2.7)
Month 18	60.1	63.9	-3.8 **	(1.7)	64.7	67.5	-2.8	(2.5)
Month 40	59.6	63.8	-4.2 **	(1.9)	68.2	67.5	0.7	(2.6)
Month 54	61.6	63.7	-2.1	(1.6)	65.9	64.8	1.1	(2.5)
Change from baseline to month 54	1.0	4.5	-3.4 *	(2.0)	4.2	1.6	2.6	(3.1)
within 10 years of your age								
Baseline	37.9	39.4	-1.5	(2.0)	35.4	30.6	4.8	(3.0)
Month 18	62.9	59.9	3.0	(2.1)	58.8	55.3	3.6	(3.1)
Month 40	67.3	66.0	1.3	(2.3)	55.6	61.6	-5.9 *	(3.5)
Month 54	67.7	65.0	2.7	(2.2)	60.3	57.5	2.8	(3.2)
Change from baseline to month 54	29.1	25.2	3.9	(2.9)	24.1	25.9	-1.8	(4.2)
same level of education as you								
Baseline	34.2	36.9	-2.7	(2.1)	33.7	34.1	-0.4	(3.1)
Month 18	45.5	44.4	1.1	(2.5)	41.3	40.0	1.3	(3.6)
Month 40	50.6	52.1	-1.5	(2.6)	40.4	46.4	-6.0	(4.1)
Month 54	48.4	48.8	-0.4	(2.5)	45.7	47.4	-1.6	(3.6)
Change from baseline to month 54	13.2	11.7	1.5	(3.0)	11.0	11.7	-0.7	(4.2)
living within your community								
Baseline	66.7	65.4	1.3	(2.5)	75.5	78.7	-3.2	(3.6)
Month 18	68.2	67.8	0.4	(2.5)	72.1	73.5	-1.4	(3.5)
Month 40	70.1	73.4	-3.3	(2.5)	74.2	75.4	-1.1	(3.7)
Month 54	73.6	74.9	-1.2	(2.4)	71.4	74.6	-3.2	(3.5)
Change from baseline to month 54	7.5	9.0	-1.5	(3.2)	-3.5	-4.3	0.7	(4.4)
Number of contacts within and								
outside your community								
Living within your community								
Baseline	7.4	7.2	0.2	(0.7)	6.9	7.0	-0.1	(1.0)
Month 18	7.6	7.2	0.3	(0.6)	8.9	7.9	0.9	(1.0)
Month 40	9.3	9.8	-0.4	(0.8)	9.4	8.0	1.3	(1.2)
Month 54	7.7	7.3	0.3	(0.6)	6.1	6.4	-0.4	(0.6)
Change from baseline to month 54	0.3	0.0	0.3	(0.8)	-0.8	-0.6	-0.1	(1.0)
Living somewhere else in Cape Breton								
Baseline	3.1	3.7	-0.6	(0.5)	2.0	1.7	0.3	(0.4)
Month 18	2.8	3.3	-0.5	(0.4)	2.7	2.7	0.0	(0.6)
Month 40	3.2	2.3	0.9 **	(0.4)	3.0	2.6	0.4	(0.7)
Month 54	3.0	2.6	0.4	(0.4)	3.1	2.3	0.8	(0.5)
Change from baseline to month 54	-0.2	-1.2	1.0 *	(0.6)	1.1	0.5	0.6	(0.6)
Sample size	**401**	**367**	**768**		**172**	**169**	**341**	

Source: Calculations from the 54-month follow-up survey data.

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

Mean change is not always the difference between the 54-month mean and the mean at the baseline, because changes are only calculated for those with no missing values.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Composite Measures: Multiple Indicators of Improvements in Social Capital

This section has so far focused on individual indicators of enhanced social capital, each likely to be associated with the development of bridging or linking social capital. The presence of multiple indicators among CEIP recipients, however, would provide stronger evidence of social capital impacts. Accordingly, two composite measures were developed, based on multiple indicators of improved social capital over the 54-month period. Composite measure A combined the following four indicators:

- a gain of two or more contacts who could provide specialized advice

- a gain of two or more contacts who could provide help finding a job

- an increase of more than 5 percentage points in the proportion of contacts who are acquaintances

- a decrease in network density

Smaller gains in the first three indicators (i.e. one contact or 5 percentage points or fewer) were not counted because they could more conceivably be attributed to "noise" from one measurement period to the next.

Composite measure B added a fifth indicator — an increase of more than 5 percentage points in the proportion of contacts that are not from the participants' community. This was added as a possible indicator of increased network heterogeneity, even though it is not ideal as a stand-alone indicator of heterogeneity. Information about changes in network heterogeneity with respect to age and especially education would have ideally been part of a composite measure. As described above, however, such information was not available due to measurement difficulties and possible response bias.

Both composite measures are presented in Table 5.4. At month 40, there were significant impacts of CEIP on the composite measures, for the EI and IA samples (Gyarmati et al., 2007). At month 54, however, only the impacts on the EI sample were still present — a 10-percentage-point impact on composite measure A, and a 9-percentage-point impact on composite measure B.

Composite impacts on the IA sample were no longer significant at month 54, probably because the individual indicators of enhanced social capital that had been present in the IA program group at month 40 (reduced network density and increased proportion of acquaintances) were not maintained over a year after CEIP ended. By contrast, some 40-month indicators of enhanced social capital in the EI program group were still present at month 54. Furthermore, though some of these impacts lost statistical significance after regression adjustment, when combined into a composite measure, they strongly indicate the presence of sustained positive impacts on social capital. These impacts on the composite indicator are present among EI program group members even after regression adjustment.

Table 5.4   Composite Measures of Change from Baseline to Month 54

Percentage with a given level of change	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Composite measure A - Number of indicators of increasing bridging/linking social capital, out of a possible four (increases in advice contacts, job contacts, and proportion of acquaintances; decrease in network density)								
Zero	28.1	33.6	-5.6	(3.5)	38.4	34.2	4.2	(5.4)
One	33.2	37.3	-4.0	(3.6)	27.7	26.5	1.2	(5.0)
One or fewer indicators	*61.3*	*70.9*	*-9.6 ****	*(3.6)*	*66.0*	*60.6*	*5.4*	*(5.4)*
Two	24.3	16.7	7.6 **	(3.1)	21.4	25.2	-3.8	(4.8)
Three	11.4	9.7	1.7	(2.3)	11.9	11.6	0.3	(3.7)
Four	3.0	2.7	0.3	(1.3)	0.6	2.6	-2.0	(1.4)
Two or more indicators	*38.7*	*29.1*	*9.6 ****	*(3.6)*	*34.0*	*39.4*	*-5.4*	*(5.4)*
Mean	*1.3*	*1.1*	*0.2 ***	*(0.1)*	*1.1*	*1.2*	*-0.1*	*(0.1)*
Composite measure B - Number of indicators of increasing bridging/linking social capital, out of a possible five (the four listed above for composite measure A, plus an increase in proportion of contacts from other communities)								
Zero	19.4	25.6	-6.1 *	(3.2)	25.5	26.2	-0.7	(5.1)
One	33.1	36.0	-2.8	(3.7)	30.1	22.8	7.3	(5.1)
One or fewer indicators	*52.6*	*61.5*	*-8.9 ***	*(3.8)*	*55.6*	*49.0*	*6.6*	*(5.8)*
Two	25.4	19.9	5.6 *	(3.3)	24.8	24.1	0.7	(5.0)
Three	15.1	11.7	3.5	(2.6)	12.4	19.3	-6.9	(4.2)
Four	6.0	5.4	0.6	(1.8)	6.5	6.2	0.3	(2.8)
Five	0.9	1.6	-0.7	(0.8)	0.7	1.4	-0.7	(1.2)
Two or more indicators	*47.4*	*38.5*	*8.9 ***	*(3.8)*	*44.4*	*51.0*	*-6.6*	*(5.8)*
Mean	*1.6*	*1.4*	*0.2 **	*(0.1)*	*1.5*	*1.6*	*-0.1*	*(0.1)*
Sample size	**374**	**331**	**705**		**170**	**174**	**344**	

Source: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Use of Social Networks

The 54-month survey included questions on use of social networks. Participants were asked whether in the 12-month period preceding the survey they had at any time needed assistance, and whether they were able to get assistance, in gaining access to each of the four resource types outlined earlier: help with household activities, emotional support, specialized advice, or help finding a job. The results are shown in Table 5.5.

Participants from the EI and IA samples were able to obtain assistance the majority of the time they needed it. In general, both program and control groups used their networks most often for help around the house or emotional support, even though EI program group members needed help around the house less often than their control group counterparts.

Table 5.5   Network Usage

Percentage with a given level of network usage	EI Sample				IA Sample			
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error
Household activities								
Needed assistance from contacts	36.3	45.5	-9.2 ***	(3.5)	45.1	47.1	-2.0	(5.4)
Got assistance	32.5	42.9	-10.3 ***	(3.4)	39.9	44.6	-4.7	(5.3)
Emotional support								
Needed assistance from contacts	37.7	41.1	-3.4	(3.5)	54.0	48.0	6.0	(5.4)
Got assistance	34.9	39.4	-4.5	(3.4)	48.3	46.6	1.8	(5.3)
Specialized advice								
Needed assistance from contacts	22.1	26.0	-3.9	(3.1)	25.3	26.7	-1.5	(4.7)
Got assistance	18.3	23.3	-5.0 *	(2.9)	18.5	24.0	-5.5	(4.4)
Looking for a job								
Needed assistance from contacts	20.9	15.3	5.6 **	(2.8)	34.5	23.8	10.6 **	(4.9)
Got assistance	15.5	10.1	5.4 **	(2.4)	27.1	19.4	7.7 *	(4.5)
Obtained job as a result of assistance received	10.3	4.9	5.4 ***	(1.9)	15.5	7.6	8.0 **	(3.4)
Sample size	**405**	**374**			**175**	**172**		

Source: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table 5.6   Relationship Between Employment and Network Use During Months 43–54

	EI Sample			IA Sample		
	Program	Control	Impact	Program	Control	Impact
Employment in months 43–54						
- Observed percentage						
Employed full-time at least 9 months	36.5	42.4	-5.9 *	21.8	33.6	-11.8 **
Employed full-time less than 9 months	63.6	57.7	5.9 *	78.2	66.4	11.8 **
Job search assistance and employment						
- Observed percentage						
Got job search assistance	16.0	10.4	5.6 **	27.7	19.8	8.0 *
Employed full-time at least 9 months	3.6	2.3	1.3	3.3	2.0	1.3
Employed full-time less than 9 months	12.8	7.9	4.9 **	23.7	16.3	7.4
Did not get job search assistance	84.0	89.6	-5.6 **	72.3	80.2	-8.0 *
Employed full-time at least 9 months	34.1	40.2	-6.1 *	19.1	31.3	-12.2 **
Employed full-time less than 9 months	49.5	49.6	-0.1	54.0	50.3	3.6
Sample size	**390**	**353**		**152**	**147**	

Source: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Although using one's network for help finding a job was relatively rare overall, EI and IA program groups used their job networks more — and obtained jobs because of network assistance more — than their control group counterparts. As shown in Table 5.6, however, CEIP's impact on network usage for job search was largely a product of the large numbers of EI and IA program group members that were laid off and looking for jobs immediately after CEIP ended.

This table shows that generally speaking, for both program and control groups in the EI and IA samples, there was a link between employment from months 43 to 54 and job network usage over the same period. For all groups, the vast majority of those who used their networks for job search assistance were also likely to have worked full-time fewer than 9 out of the last 12 months. In other words, for all groups, those who spent less time working — and thus presumably more time searching for a job — were more likely to use their job networks. Because the entire CEIP workforce was laid off after the program ended, EI and IA program group members were significantly more likely than their control group counterparts to have worked fewer than nine of the last 12 months, and hence also more likely to have use their networks for job search assistance.

Interestingly, 66 per cent of EI program group members who got job search assistance from their networks ended up with jobs as a result, compared to only 49 per cent of control group members (not shown). Similarly, 57 per cent of IA program group members who got assistance found jobs, compared to only 39 per cent of control group members. It cannot be assumed, however, that CEIP is behind these differences. Program group members seeking job search assistance during this period may have been more highly skilled than those in the control group, since the end of CEIP meant that both higher- and lower-skilled program group members were out of work at roughly the same time, whereas the out-of-work population in the control group was likely composed largely of lower-skilled workers.

Impacts on Volunteering

This section looks at the impact of CEIP on volunteering, that is, freely performing a job or providing a service without pay, whether formally through an organization or more informally. At month 40, CEIP had substantial and wide-ranging impacts on formal volunteering in the EI and IA samples, but few impacts on informal volunteering. This may be because CEIP jobs were primarily in the third sector, and thus brought CEIP participants into contact with non-profit organizations that historically depend on volunteers for their day-to-day operation. As a result, CEIP participants in the EI and IA samples reported, at month 40, higher frequencies of formal volunteering, and more time spent volunteering for a higher number of organizations than their control group counterparts did, despite the fact that they also spent more time working full-time than their counterparts did. The question remained whether the impacts on formal volunteering would still be present at month 54, more than one year after CEIP ended.

Table 5.7 presents impacts of CEIP on formal volunteering with groups or organizations for both EI and IA groups.

Table 5.7   Impacts on Formal Volunteering with Groups or Organizations

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Frequency of formal volunteering								
How often did you volunteer in last 12 months								
Everyday	2.4	2.7	-0.3	(1.1)	1.1	1.1	0.0	(1.1)
A few times a week	11.2	6.4	4.8 **	(2.0)	10.2	9.2	1.0	(3.2)
About once a week	9.5	9.9	-0.4	(2.1)	8.0	7.5	0.5	(2.9)
About once a month	9.5	9.3	0.2	(2.1)	11.4	6.9	4.5	(3.1)
Less than once a month	13.1	9.1	4.0 *	(2.2)	11.9	5.2	6.8 **	(3.0)
At least once in the last 12 months	45.6	37.3	8.3 **	(3.5)	42.6	29.9	12.7 **	(5.1)
Never	54.4	62.7	-8.3 **	(3.5)	57.4	70.1	-12.7 **	(5.1)
Types of unpaid formal volunteering								
Canvassing, campaigning, fundraising	25.7	21.4	4.3	(3.0)	21.3	18.9	2.5	(4.3)
Member of board or committee	17.4	14.3	3.1	(2.6)	11.8	7.4	4.4	(3.1)
Providing info or helping educate public	15.7	11.4	4.3 *	(2.4)	12.9	9.7	3.2	(3.4)
Organizing or supervising activities	26.9	22.2	4.7	(3.1)	25.3	16.6	8.7 **	(4.3)
Teaching or coaching for an organization	15.0	8.5	6.5 ***	(2.3)	11.8	5.7	6.1 **	(3.0)
Office or administrative work	11.4	7.7	3.8 *	(2.1)	10.1	8.6	1.5	(3.1)
Providing care, support, or counselling	13.3	10.8	2.5	(2.3)	13.5	13.1	0.3	(3.6)
Collecting, serving, or delivering food	17.4	13.0	4.4 *	(2.5)	16.9	12.6	4.3	(3.8)
Volunteer driver for organization	12.6	8.2	4.4 **	(2.2)	10.7	6.9	3.8	(3.0)
Other	17.4	13.0	4.4 *	(2.5)	17.4	12.0	5.4	(3.8)
Hours of formal volunteering								
Average hours per month	7.2	5.5	1.7	(1.1)	7.4	4.5	2.8 *	(1.6)
% of sample that volunteered								
Less than 5 hours per month	14.8	15.1	-0.3	(2.6)	15.6	10.9	4.7	(3.6)
5–15 hours per month	13.8	11.4	2.5	(2.4)	12.7	9.2	3.5	(3.4)
More than 15 hours per month	14.8	8.9	5.9 **	(2.3)	11.6	9.2	2.4	(3.3)
Did not volunteer	56.6	64.6	-8.0 **	(3.5)	60.1	70.7	-10.6 **	(5.1)
Change hours volunteered in last 12 months								
Increased	8.8	7.9	0.9	(2.0)	6.2	7.4	-1.2	(2.7)
Stayed the same	79.3	84.7	-5.3 *	(2.7)	82.6	86.3	-3.7	(3.9)
Decreased	11.9	7.4	4.5 **	(2.1)	11.2	6.3	5.0	(3.0)
Number of organizations								
Average number of organizations volunteeered for	0.9	0.6	0.3 ***	(0.1)	0.8	0.7	0.1	(0.1)
% of sample that volunteered for								
One organization	19.5	19.3	0.2	(2.8)	21.3	12.6	8.8 **	(4.0)
Two to three organizations	20.2	15.3	4.8 *	(2.7)	16.9	12.6	4.3	(3.8)
Four or more organizations	5.7	2.1	3.6 ***	(1.4)	3.9	4.6	-0.6	(2.2)
Did not volunteer	54.6	63.2	-8.6 **	(3.5)	57.9	70.3	-12.4 **	(5.1)
Sample size	**421**	**375**			**176**	**174**		

Source: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

EI Sample

At month 54, CEIP continued to have a positive impact on the frequency of volunteering among EI sample members. Almost 46 per cent of EI program group members reported volunteering at some point in the last 12 months, compared with 37 per cent of the control group. Subgroup analysis revealed that these results were driven by women, who experienced a 15-percentage-point increase; even though there was a positive impact on volunteering frequency among both men and women at month 40, the impact was no longer significant for men at month 54 (See Appendix D, Table D.14 for subgroup results).

By month 40, program group members continued to volunteer for two or more organizations at significantly higher rates than their control group counterparts did — 26 vs. 17 per cent, respectively — and they continued to show higher rates of volunteering on a wide range of activities, including teaching or coaching, providing information or help to educate the public, assisting with office or administrative work, helping collect, serve or deliver food, and being a volunteer driver for an organization.

The positive impact on average hours spent volunteering that had been present at month 40, however, was not maintained at month 54. Although the percentage of those who volunteered more than 15 hours per month continued to be higher in the program group, 12 per cent of program group members reported reducing their volunteering hours in the past 12 months, compared to only 7 per cent of control group members.

IA Sample

CEIP also continued to have a positive impact on the frequency of volunteering among IA sample members, even though it was diminished from the 21-percentage-point impact that had been present at month 40. At month 54, almost 43 per cent of IA program group members reported some volunteering in the last 12 months, compared with only 30 per cent of the control group. Subgroup results show that the positive increase was largely among IA program group members who were single and who had children, with lone parents reporting a 25-percentage-point increase in their formal volunteering in the year following CEIP.

Although the positive impact on number of organizations that had been present at month 40 was not maintained at month 54, IA program group members continued to devote significantly more hours per month to volunteering than their control group counterparts did — 7.4 vs. 4.5, respectively.

Informal Volunteering

At month 40, 71 per cent of IA program group members had reported providing informal help to someone in the past 12 months, compared to 61 per cent of control group members. By month 54, however, this impact had disappeared, as around 75 per cent of both groups reported providing informal help. There was no impact on frequency of informal volunteering among the EI sample at either month 40 or 54.

How CEIP Impacts the Relationship Between Volunteering and Other Variables

Volunteering clearly serves as a great resource for communities, as most organizations in the voluntary sector rely quite heavily on unpaid volunteers. It can also be valuable for the volunteer, however, as it can provide a link to community and greater levels of social inclusion, as well as opportunities for the development of social capital. Furthermore, because formal volunteering activities take place in an organizational setting, they may provide opportunities to develop work-related contacts and work experience, and, in general, build human capital. Indeed, 47 per cent of Canadians cite networking or meeting people as a

motivation for formal volunteering, and 22 per cent want to improve their job opportunities (Hall, Lasby, Gumulka, & Tryon, 2006). This section will examine whether CEIP facilitated the formation of links between formal volunteering and either social or human capital.

Volunteering and Social Capital

To investigate the relationship between volunteering and social capital, changes in volunteering from baseline to month 54 were examined in conjunction with changes in social capital over the same period. The following will examine whether those who volunteered throughout the entire period, or made the transition from non-volunteer to volunteer, also had a tendency to develop enhanced social capital.

The top panel of Table 5.8 confirms CEIP's 54-month impact on volunteering in the IA sample, and shows that much of the impact had to do with moving people who had been non-volunteers into formal volunteering. The next two panels, however, show that CEIP's impacts on volunteering are largely confined to IA sample members whose social capital increased throughout the study. Although there was no overall impact on social capital in the IA sample, program group members who did develop social capital were far more likely to be volunteers than control group members who developed social capital were. The bottom panel of this table shows that 60 per cent of IA program group members who developed two or more indicators of enhanced social capital[6] were volunteers at month 54 — and almost half of these made the transition from non-volunteer at baseline to volunteer at month 54. In contrast, only 26 per cent of IA control group members who developed two or more indicators of enhanced social capital were volunteers at month 54 — and the vast majority of these had already been volunteers at baseline.

Thus CEIP changed the relationship between volunteering and social capital in the IA sample, even though further research is needed to untangle the causal mechanisms by which this happened. One possible scenario is that CEIP promoted not only higher rates of volunteering, but also types of volunteering that are more likely to enhance social capital. An alternative scenario is that because CEIP jobs were in the voluntary sector, program group members who developed social capital on the job were more likely to become volunteers than their control group counterparts.

There was little evidence of a link between volunteering and social capital in the EI sample. Similar to the IA sample, EI program group members were significantly more likely to make the transition from non-volunteer to volunteer, and significantly less likely to make the transition from volunteer to non-volunteer, than their control group counterparts. Unlike the IA sample, however, there was no significant tendency for volunteering impacts to be confined to those with two or more indicators of enhanced social capital.

---

[6] See composite measure A in Table 5.4.

Table 5.8   Relationship Between Volunteering and Social Capital

	EI Sample			IA Sample		
	Program	**Control**	**Impact**	**Program**	**Control**	**Impact**
Change in formal volunteering from baseline to month 54						
Volunteer at both baseline and month 54	32.2	28.1	4.1	28.0	22.4	5.6
Volunteer at month 54 only	13.4	9.4	4.0 *	14.9	7.5	7.4 **
Did not volunteer at either baseline or month 54	33.9	33.7	0.2	37.7	39.1	-1.4
Volunteer at baseline only	20.5	28.9	-8.4 ***	19.4	31.0	-11.6 **
Change in volunteering and development of multiple indicators of enhanced social capital						
Up to one indicator of enhaced social capital	61.3	70.9	-9.6 ***	66.0	60.6	5.4
Volunteer at both baseline and month 54	19.7	19.8	-0.1	17.7	15.5	2.2
Volunteer at month 54 only	8.2	5.5	2.7	6.3	6.5	-0.1
Did not volunteer at either baseline or month 54	21.3	25.2	-3.9	27.8	21.3	6.6
Volunteer at baseline only	12.0	20.7	-8.6 ***	13.9	17.4	-3.5
Two or more indicators of enhaced social capital	38.7	29.1	9.6 ***	34.0	39.4	-5.4
Volunteer at both baseline and month 54	14.2	8.8	5.4 **	10.8	8.4	2.4
Volunteer at month 54 only	5.5	4.9	0.6	9.5	1.9	7.6 ***
Did not volunteer at either baseline or month 54	10.7	7.6	3.1	8.9	15.5	-6.6 *
Volunteer at baseline only	8.5	7.6	0.9	5.1	13.5	-8.5 ***
Sample size	**366**	**329**		**158**	**155**	

Source: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Volunteering and Human Capital

To investigate whether the volunteering that arose because of CEIP might have increased participants' human capital, levels of volunteering at month 40 were examined in conjunction with the skill levels of jobs acquired in the post-CEIP period from months 41 to 54. The following will examine whether those who volunteered during CEIP ended up with higher-skilled jobs afterwards.

The top panel of Table 5.9 shows that CEIP moved some participants in the EI and IA samples into higher-skilled jobs than they otherwise would have held — a result first presented in Chapter 4. The next two panels show that the impact on job skill level was largely confined to those who had been volunteers while in CEIP, particularly for the EI sample. Among EI program group members who were volunteers at month 40, 33 per cent got high-skilled jobs and only 14 per cent got low-skilled jobs in the post-CEIP period from months 41 to 54. In contrast, program group members who were not volunteers at month 40 were equally likely to hold high and low-skilled jobs in the post-CEIP period — 22 and 24 per cent, respectively. There was no significant relationship between volunteering and job skill level in the EI control group, with about 20 per cent holding high-skilled jobs and another 20 per cent holding low-skilled jobs, regardless of their levels of volunteering.

There was a similar pattern of results in the IA sample — 29 per cent of volunteers in the program group ended up with high-skilled jobs compared to 20 per cent of non-volunteers.

The relationship between volunteering and job skill level, however, did not attain statistical significance in the IA sample.[7]

Although CEIP had an impact on the relationship between volunteering and job-skill level, especially in the EI sample, it is unclear exactly how the impact unfolded. Results from Gyarmati et al. (2007) showed that at month 40, EI program group members not only volunteered with greater frequency than their control group counterparts, but they also performed a wider variety of activities for a larger number of organizations. In addition, CEIP jobs were of a higher skill level than participants would have normally held (Gyarmati et al., 2007). The combination of high-skilled jobs plus diversity of voluntary activities and organizations associated with CEIP might have led program group volunteers to develop skills and experience above and beyond the levels attained not only by the control group, but also by program group members who did not volunteer.

Alternatively, rather than facilitating the development of skills through volunteering, CEIP might have attracted those who already possessed such skills to volunteering. Because CEIP jobs were in the voluntary sector, higher-skilled workers in the program group might have been more likely to become volunteers than were their counterparts in the control group, most of who probably held jobs in the private sector. Thus volunteers in the program group might have been more highly skilled than those in the control group, leading to the observed difference in post-CEIP job skill level.

Table 5.9   Relationship Between Volunteering at Month 40 and Job Skill Level During Months 41–54

	EI Sample			IA Sample		
	Program	Control	Impact	Program	Control	Impact
Skill level of main job						
from month 41 to 54 (%)						
High skilled	27.5	21.6	5.9 *	24.3	13.1	11.1 ***
Medium skilled	33.8	39.2	-5.4	31.4	30.6	0.7
Low skilled	19.6	21.3	-1.7	16.0	19.4	-3.4
Did not work	18.1	17.4	0.8	28.4	35.6	-7.2
Frequency of formal						
volunteering at month 40,						
and skill level of main job						
from month 41 to 54 (%)						
Volunteered at least once in past year	47.0	38.1	8.9 **	51.5	28.8	22.7 ***
High skilled	15.5	8.7	6.8 ***	14.8	3.8	11.0 ***
Medium skilled	15.8	16.0	-0.2	13.6	8.1	5.5
Low skilled	6.9	7.6	-0.7	7.1	5.6	1.5
Did not work	8.4	5.6	2.8	16.0	10.6	5.4
Did not volunteer in past year	53.0	61.9	-8.9 **	48.5	71.3	-22.7 ***
High skilled	11.8	12.9	-1.1	9.5	9.4	0.1
Medium skilled	18.2	23.2	-5.0 *	17.8	22.5	-4.7
Low skilled	12.6	13.7	-1.2	8.9	13.8	-4.9
Did not work	9.9	11.8	-1.9	12.4	25.0	-12.6 ***
Sample size	**406**	**357**		**169**	**160**	

Sources: Calculations from the 40- and 54-month follow-up survey data.

[7] Statistical significance was assessed with a chi-squared test of independence.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Summary

Social capital impacts that developed over the course of CEIP diminished with time after the program ended, particularly for the IA sample, where positive impacts on network density and weak ties that had been present at month 40 were no longer present at month 54. Among the EI sample, some 40-month impacts persisted to month 54, namely increased access to specialized advice and increased access to job contacts among those with at least a high school diploma. EI program group members also continued to be more likely to have developed multiple indicators of enhanced social capital at month 54, just as they had at month 40.

EI and IA program group members were more likely than their control group counterparts to use their social networks to assist them in finding a job. This, however, can likely be attributed to the fact that EI and IA program group members were also more likely to have worked full-time fewer months than their control group counterparts did over the 12-month period in which network usage was assessed.

CEIP continued to have substantial positive effects on formal volunteering among program group members in the EI and IA samples, as most of the 40-month volunteering impacts were still present at month 54. The percentage of EI and IA program group members engaged in formal volunteer activities increased because of CEIP. Furthermore, CEIP increased the average hours of volunteering per month in the IA sample and the number of organizations for which the EI sample volunteered.

CEIP spurred the joint development of social capital and volunteering in the IA program group. Not only did those who would otherwise have remained non-volunteers start volunteering, but they were also more likely to develop social capital than volunteers in the control group.

The voluntary-sector nature of paid CEIP work, coupled with the greater participation of EI and IA program group members in unpaid volunteering activities means that the benefits of CEIP extended beyond individual participants, to the organizations for which they worked and volunteered and by extension the communities in which they lived.

Chapter 6

Engaging Communities in Support of Local Development — Effects of CEIP on Communities

Alongside the participant impact study, the Community Employment Innovation Project (CEIP) included an assessment of the program's effects on participating communities. Although Gyarmati et al. (2008) presented the full range of community effects of CEIP; this chapter highlights those that are relevant to a cost-benefit analysis of the project and the overall conclusions and policy implications of the study. In particular, communities experienced improvements as a result of their participation in CEIP along several dimensions of broader community capacity, including the extent of social capital, cohesion, and inclusion among residents and enhanced capacity of organizations in the social economy.

A multiple-methods research design is used, which relies on both a "theory of change" approach and a quasi-experimental comparison sites design to assess the effects of CEIP on communities. Theory of change methodology — as discussed by Weiss (1995) and Connell and Kubisch (1998) — requires that evaluators lay out explicit or implicit theories about how and why a program should or should not work. All expected outcomes and critical assumptions built into the program, logic, timing, and thresholds for changes should be specified in detail. Methods for data collection and analysis are then constructed to track unfolding outcomes and show which theories the evidence best supports. For theories to be credible, they must be developed through consultation with key stakeholders who have interest and knowledge about the program and its potential effects. Since random assignment is usually infeasible for studying community level effects, theory-driven evaluation provides a means of validating findings. As evidence linking theory to outcome is found at each micro-step, the underlying theory is validated.

In order to increase the robustness of the overall evaluation, CEIP incorporates a quasi-experimental, comparison sites design. A group of similar communities in Cape Breton and mainland Nova Scotia were matched to the six program communities to serve as a counterfactual. Data was collected in all communities and compared across program communities and comparison sites using statistical techniques to adjust for community differences not related to CEIP. The quasi-experimental design allows evaluators to validate any changes that are observed in program communities over time by providing implicit thresholds for observed changes, where only changes that are statistically different from comparison sites are considered possible effects of CEIP.

Expected Effects of CEIP: Theory of Change Framework

Through an ongoing process of consultation with CEIP's funders and designers, and key stakeholders from participating communities, various theories of change were elicited over the course of the project. Although consensus was not obtained on all possible outcomes and effects of the program, input from each stakeholder fits consistently in a basic framework for expected change. Figure 6.1 provides a simplified framework of the theory of change, illustrating the three levels of expected outcomes within program communities over time: those related to residents, organizations, and community-level aggregate effects. It also identifies which outcomes are expected to be most prominent at various points during the intervention: those related to engagement and mobilization of communities in the first three years; to project development, service delivery, and some interim effects on communities in years 4 and 5; and to longer-term effects on communities in years 6 and 7.

Figure 6.1 CEIP Theory of Change Framework (Simplified Summary)
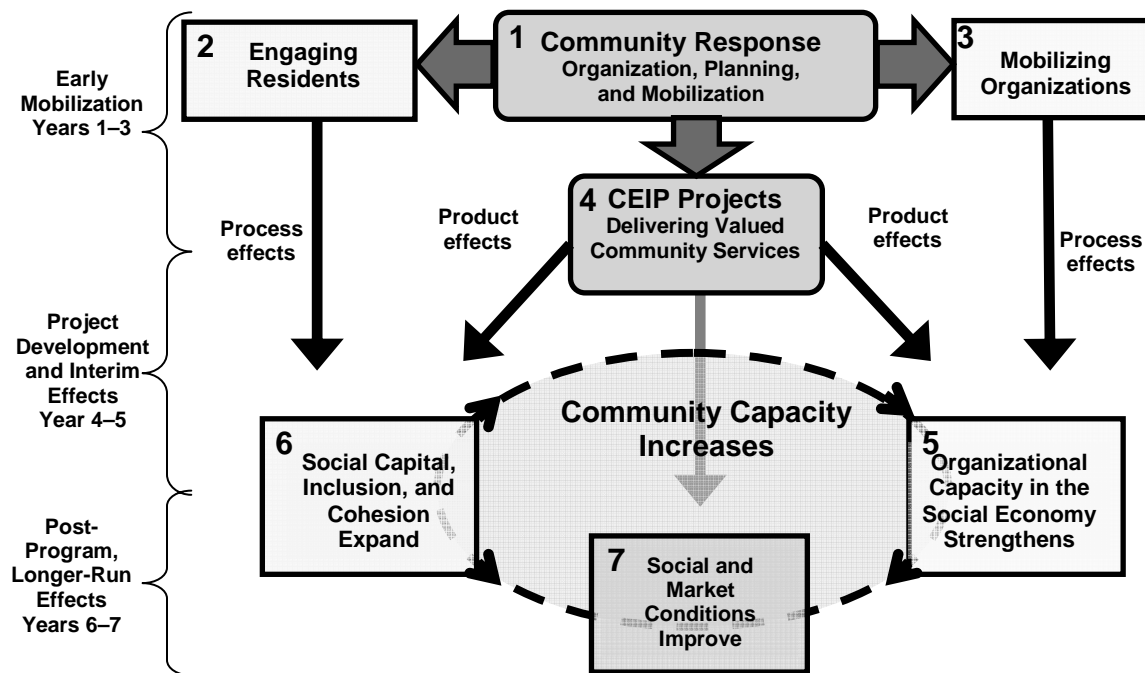
Early Mobilization and Project Development

During the initial 2–3 years of the program, certain community responses were expected to occur because of CEIP's offer (box 1). The Social Research and Demonstration Corporation (SRDC) would deliver the offer through public consultation meetings and residents would hold an open vote to accept or decline the offer. If accepted, each community was expected to elect a functional, democratic body or board within 18 months to develop a strategic plan and begin the process of developing projects to employ CEIP workers. The first project in each community was expected to be approved within 24 months of the board's formation.

Community boards were expected to effectively engage and mobilize residents (box 2) to become involved with their CEIP efforts by serving on steering committees, volunteering as board members, attending public meetings, planning activities, providing capacity assessment. Community boards were also expected to reach out to organizations in their communities (box 3) to contribute to their early planning activities and to develop and submit project proposals. Although project development was expected to begin early in the study (box 4), it was to expand in subsequent years as participant workers were recruited over the two-year period beginning in the second year of the study. With a three-year program period, communities had up to five years to make use of free labour, depending on how quickly they completed their organizational and planning responsibilities.

Process and Product Effects on Communities

Medium-term and longer-term effects on communities were expected to emerge through two sources: the process of each community's engagement, organization, and mobilization, and the products or output of the projects themselves. The offer of CEIP participant labour was expected to increase the capacity of local third-sector organizations to serve their community, particularly among CEIP project sponsors (box 5). Beyond CEIP labour, organizations might also obtain new resources or leverage existing ones as they implement CEIP projects, improve capacity from training or technical assistance, and improve links and co-operation with other third-sector organizations in and outside their community.

Increased involvement and interaction of residents was also an expected outcome of CEIP, both from the process of engagement and from the CEIP projects themselves, leading to improved social capital, inclusiveness, and cohesion among residents (box 6), each of which contribute to broader community capacity that can support future development efforts. Utilizing a network-based measure of social capital, CEIP is expected to improve connections between residents by providing opportunities for new social relationships or links to employment (referred to as bridging social capital). This may result in increases in the size of social networks or the number of links within them, or changes in the heterogeneity or density of the network structures themselves.

CEIP was expected to directly improve participation-based measures of social inclusion through increased, more diverse involvement of residents in community life, and access-based measures through improved options for resident involvement arising directly from CEIP projects, such as greater availability of childcare or transportation services, or indirectly from improved social capital, such as meeting other residents who offer to carpool to work. As well as enhancing such indicators of social cohesion as residents' shared sense of community and pride in local identity, attachment to their community, and reduced feelings of isolation, CEIP is expected to foster trust among community residents by increasing social contact as well as perceived improvements in local engagement and support from fellow residents.

CEIP is also expected to lead to changes in a wide range of additional outcomes at the community level, including economic effects on employment rates, wages, and income, as well as social effects on poverty and hardship, health, the environment, neighbourhood and housing quality, and population trends (box 7). Evidence of these hypothesized changes due

to either process or product effects was sought using indicators from a wide range of data, including the three-wave longitudinal survey, as well as administrative data, in-depth interviews with key stakeholders, local observations, environmental scans of local media and regular audits of the local economy.

Community Engagement, Organization, and Mobilization

Six communities in the Cape Breton Regional Municipality (CBRM) were identified as candidates for CEIP (see Gyarmati et. al., 2008 for further details on the selection process) including four lead communities — the pre-amalgamation towns of Dominion, New Waterford, Sydney Mines and the neighbourhood of Whitney Pier — where local engagement meetings would proceed in May and June of 1999. Two additional communities — the pre-amalgamation towns of North Sydney and Glace Bay — were engaged in January and February 2001. Each community had 18 months to form a representative board and up to an additional six months to begin project development (the first project had to be approved within 24-months of the first public meeting). Project operations and the availability of CEIP workers ran in parallel between August 2000 and July 2005.

As discussed in Chapter 2, results suggest that despite a number of early implementation difficulties and initial resistance to CEIP among some local organizations and groups, communities *can* effectively engage, organize and mobilize their resources to develop projects that both provide meaningful employment for participants and address a range of locally identified community development needs. Specifically, program communities were able to fulfil most of their responsibilities in establishing representative boards, preparing strategic plans, mobilizing residents and organizations, and developing projects that would employ workers.

All six communities accepted CEIP's offer through open votes at public meetings and formed steering committees to coordinate their initial involvement in the project. Each community then organized a representative and functional board and prepared a strategic plan to guide project development and use of CEIP workers. Five of the six communities then successfully began to mobilize residents and organizations to participate in the project. Although there was some initial resistance from existing organizations to participate and help facilitate the formation of community boards, there were no such difficulties in mobilizing organizations for project sponsorship in most communities. Over 250 community organizations were mobilized by program communities throughout the study to develop CEIP projects that would employ participants. Evidence suggests that with limited capital support and the relatively short timelines for project development inherent in CEIP's program model, communities largely relied on existing organizations in the non-profit and voluntary sectors to develop projects. Although some new partnerships were formed, most community projects were simply extensions of existing operations of non-profit organizations.

Throughout this process, community boards were successful in raising awareness of CEIP among about a third of residents in New Waterford, Whitney Pier, Sydney Mines, and North Sydney. Although this rate was slightly lower in Dominion and Glace Bay, at about a

quarter, it was still significantly higher than the level of awareness observed in comparison sites, at about one-fifth). These rates were steady for the remainder of the study, even though they climbed to about 40 per cent in Sydney Mines and North Sydney. By the end of the follow-up, in 2006, awareness of CEIP in all program communities remained above that in comparison sites. Among residents who were aware of the project, over 90 per cent supported the program in all communities, a steady rate throughout the project. The intensity of support varied, however, with the highest levels occurring in New Waterford and Sydney Mines where 60 per cent indicated that they "strongly supported" CEIP, compared to less than half in other communities.

Increased awareness and support for the program also led to higher levels of involvement and interaction among community residents at large (non-participants) in unpaid CEIP activities, which would increase the likelihood of achieving process-related effects on communities. This involvement took many forms, including attendance at community meetings, memberships on CEIP boards, engagement in board or committee activities, involvement in strategic planning, and serving as sponsors in CEIP project development. Levels of CEIP involvement were highest in New Waterford, Sydney Mines, Whitney Pier and North Sydney in the range of 3-5 percent of residents, significantly higher than observed in comparison sites.

CEIP Project Development and Job Creation

Throughout the study, five of the six participating communities were successful in developing 295 projects that served a wide range of community needs. Approximately 1,300 positions were generated through these projects, which spanned all 10 NOC categories, and were filled through over 2,100 unique work placements. Although each community was able to create a range of projects, the scale of projects and the distribution of CEIP's resources varied across communities.

Figure 6.2 illustrates the variation in CEIP's resources that were assigned to communities in terms of the number of CEIP worker-years, and the skill levels of jobs that were generated through projects approved by the respective community boards. New Waterford and Sydney Mines created CEIP projects that received the largest number of participant hours, at about 300 worker-years each. Glace Bay and Whitney Pier also received substantial resources, at about 250 and 200 worker-years, respectively. Projects approved by North Sydney received significantly fewer resources, at about 125 worker-years, due, in part, to their later enrolment in the study. The Dominion board, finally, did not approve any projects, even though a small number of participants worked in that community on projects approved by other community boards.

Figure 6.2 Full-Time Worker-Years Assigned, by Community and Job Skill Levels
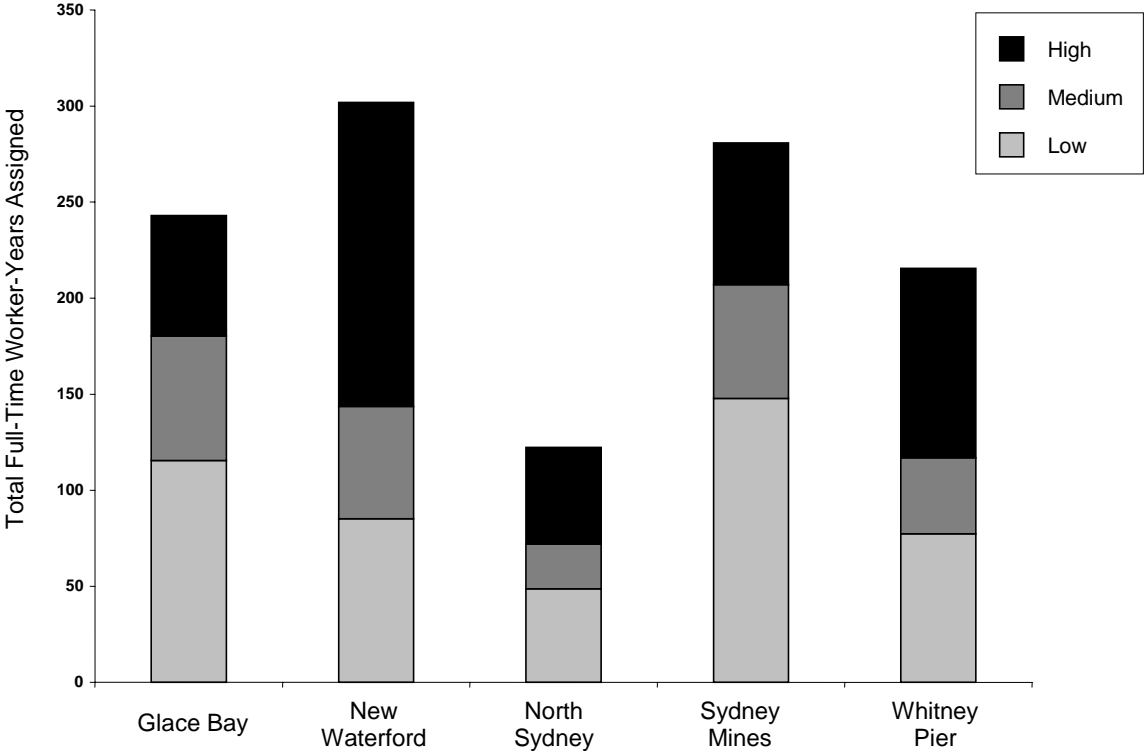
Sources: Calculations from the CEIP Program Management Information System (PMIS).

Despite some variation in the scale of projects, all communities were able to generate employment that was not only meaningful for participants, but that also added significant value to project-sponsoring organizations. Contrary to traditional programs of direct job creation, where uniformly low-skilled jobs are typically the norm, CEIP was successful in providing a range of occupations in both medium- and higher-skilled positions.

While there were broad similarities in how communities chose to allocate their CEIP resources, the extent to which resource allocation varied across communities could influence where effects on key subgroups are most likely to be observed in each of the CEIP communities. Figure 6.3 illustrates the allocation of CEIP resources in each of the communities by indicating the share of communities' assigned CEIP worker-years dedicated to each project category.

Figure 6.3   Percentage of Worker-Years Assigned, by Community and Sector Served
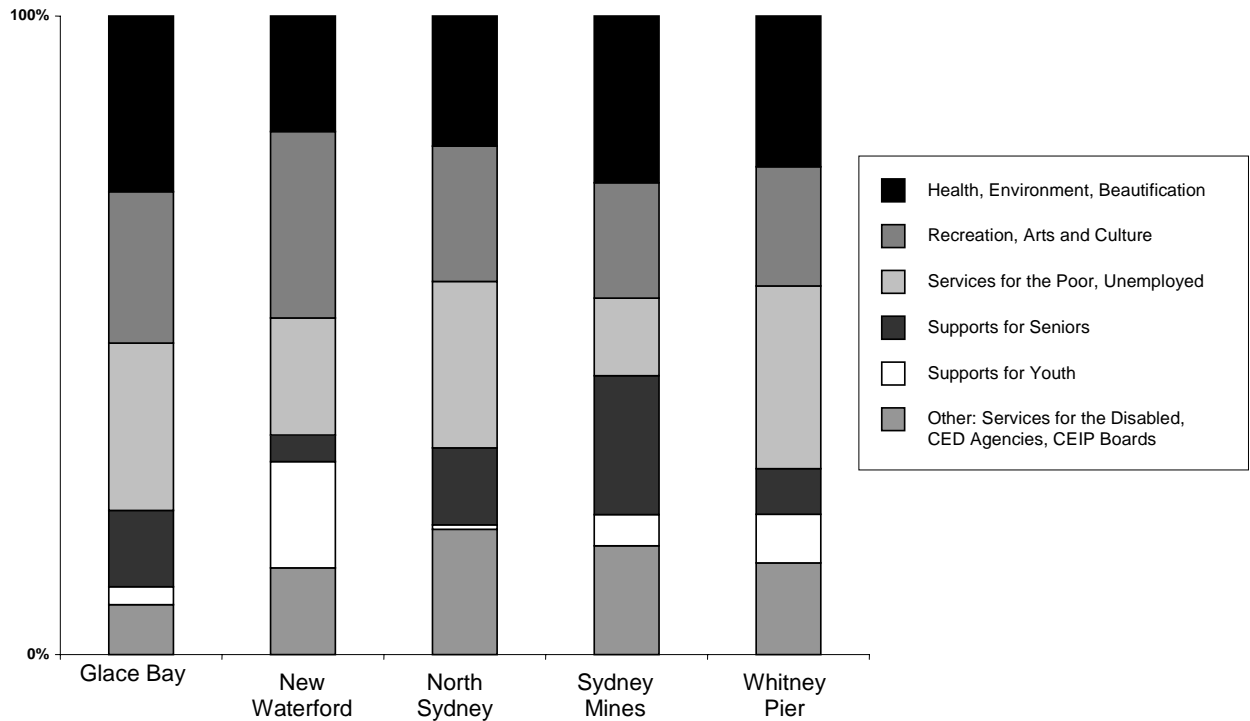
Sources: Calculations from the CEIP Program Management Information System (PMIS).

Each of the communities chose to dedicate nearly half of their resources to the two broad categories of the environment, beautification, and health as well as recreation, the arts, and culture, which suggests that the largest effects on program communities will most likely stem from these priority areas. In addition to these two categories, communities chose to support low-income individuals, seniors, and the youth to a varying extent. For example, Whitney Pier, North Sydney, and Glace Bay dedicated nearly a quarter of their resources to projects for low-income and unemployed individuals, while New Waterford focused on the youth sector and Sydney Mines chose to allocate substantial resources to support for seniors.

Projects that provided service to seniors included support for independent living, healthcare assistance, recreation, and advocacy, while youth-targeted projects included educational institutions, recreational and athletic associations, youth centres, religious organizations, and special events. Projects involving services to the poor included food banks, shelters, a housing association, a residential treatment centre, and various charitable organizations.

In summary, variation in the relative success that communities had with the early mobilization process, the scale of project development, and the sectors they chose to target, provides a means to link the expected effects of CEIP with the actual observed changes (for a full review of the variation in community outcomes see Gyarmati, 2008). New Waterford and Sydney Mines experienced engagement, organizational and mobilization processes that were

most consistent with expectations, with nearly 80 per cent of key indicators met, and had the largest proportion of participant resources for their projects. They achieved higher levels of awareness, support and involvement of residents earlier in the study period than other communities. They also chose to focus a larger proportion of their resources on projects for youth and seniors respectively. North Sydney, Whitney Pier and Glace Bay also experienced processes that were close to expectations with about 70 per cent of the indicators met, though with many achieved later in the study period, and with fewer CEIP resources for their projects.

Most notably, however, was Dominion (the smallest community taking part in CEIP), which experienced processes of engagement, organization, and mobilization that were most divergent from expectations, with only about 25 per cent of the key indicators met. Evidence suggests that the small size of the community may not have provided the critical mass needed for successful, sustained involvement and mobilization, at least within the 24-month timeline. As a result, effects of the project were least likely to be observed in this community.

Summary of Community Effects

Results from the community effects study indicate a preponderance of positive changes in program communities and improvements in local capacity and social conditions that are largely consistent with expectations outlined in the theory of change. Positive changes were more prominent in program communities that had more success in the organization and mobilization of local resources and in the development of CEIP projects. For instance, New Waterford and Sydney Mines experienced a large number and broad range of positive changes in social capital, inclusion and cohesion, which were significantly larger than that observed in comparison sites. At the same time, residents in these communities also experienced very few negative changes that were different from comparison sites. Furthermore, consistent with the expected timing of effects, New Waterford and Sydney Mines experienced more substantial positive change between 2001–2002 and 2003–2004 than any other community, which continued through 2005–2006.

North Sydney also experienced a large number and range of positive changes in social capital, inclusion, and cohesion, which are consistent with the expected timing of CEIP's effects. Residents in North Sydney experienced only a small number of significant changes in the first half of the project, but a substantial number in the second half, given their later enrolment in the project. Similarly, the number, range, and timing of changes in Whitney Pier are consistent with expectations. Given some of their early implementation challenges, it is not surprising that they experienced very few positive changes by 2003–2004, beyond those observed in comparison sites. With Whitney Pier's growing success and the increasing level of involvement in the project over time, however, positive effects would be expected later in the study. By 2005–2006, in fact, residents in Whitney Pier experienced as many as seven indicators of positive change on at least one measure of social capital, inclusion, and cohesion, over and above that observed in comparison sites.

Glace Bay also experienced several positive changes, but on a smaller range of outcomes. Residents had some improvements in their social capital and increased level of trust, but no changes in access- or participation-based measures of social inclusion. Given Glace Bay's

later enrolment in CEIP, and the apparent lower levels of awareness and involvement of residents in the project, it is not surprising that there are no significant changes in community participation detected. As expected, given its early implementation challenges and its lack of projects, Dominion experienced very few positive changes beyond those seen in comparison sites throughout the study.

The following sections summarize some of CEIP's more prominent effects, including those on organizational capacity in the social economy, the social capital, inclusion, and cohesion among community residents, and some of the broader economic and social conditions in CEIP communities.

Organizational Capacity

CEIP's effects on organizational capacity in program communities were most readily apparent among project-sponsoring organizations. The provision of CEIP's resources, particularly the multi-year supply of free labour, enabled project-sponsoring organizations to experience substantial improvements in their capacity to carry out their missions and engage in longer-term planning. CEIP appears to respond to two central needs of non-profits: availability of human resources and flexible, longer-term funding arrangements.

Capacity gains were identified along a number of dimensions, including the availability of sufficiently skilled workers, and other leveraged resources to aid in the operation of projects. Furthermore, nearly three-quarters of sponsors interviewed reported that CEIP enhanced their ability to network with other organizations and individuals in their community. In particular, organizations engaged in outreach efforts as part of their operations were significantly helped by participants.

Beyond project-sponsoring organizations, there appears to be little incremental effect of CEIP on the number of active third-sector organizations. Some indirect improvements in the relative reach and activities of non-project-sponsoring organizations were observed, however, including the number of residents served per third-sector group and an increase in the extent of collaboration among third-sector organizations within communities. Although community boards were active players in the social economy throughout the study — in both approving projects and facilitating relationships — no board was sustainable after the end of the project.

Social Capital

CEIP also appears to have generated improvements in a number of other outcomes critical to community capacity. Residents in program communities improved their social capital in terms of both the resources that are accessible within their networks as well as their network structural characteristics. Program communities also experienced larger improvements in network density than observed in comparison sites. While just under half of all respondents in comparison sites reported that all of their contacts knew one another, the percentage of those in program communities with very dense networks decreased significantly.

Social Cohesion

Most program communities also experienced improvements on at least one measure of social cohesion, including increases in trust among residents. On measures of interpersonal trust (trust in close friends and neighbours) and civic trust (trust in police officers), 90–95 per cent of respondents in all communities reported being somewhat or very likely to trust that a lost wallet would be returned. Although these rates were stable in most communities, slightly larger increases in civic trust were observed in three program communities. Furthermore, a significantly larger increase in trusting strangers was observed in several program communities. Several indicators of attachment to community also revealed larger positive changes in program communities. These positive effects, however, were not accompanied by any improvements in the attitudes of residents towards the collective levels of engagement within their communities and the extent to which neighbours are supportive of each other.

Social Inclusion

Several participation- and access-based measures of social inclusion have improved to a greater extent in program communities than in comparison sites, including the availability of transportation and childcare. While few effects were observed in areas where expectations were quite high, most notably in the level of participation in local recreation, which had a large share of CEIP's resources directed towards it in all communities, various participation-based measures of inclusion were observed. In addition to directly increasing community involvement while local boards were being organized, the level of actual participation in community life appears to have improved largely through increased CEIP involvement, with communities benefiting from the extent to which residents supported their CEIP efforts.

Local Economic Conditions

There were few statistically significant differences in changes in employment rates, wages, income, or broader economic activity across communities that can be reliably linked to CEIP. A slightly larger increase in the rate of full-time employment, hours of work, and the distribution of income was observed in a few program communities. These differences, however, were quite small and given the scale and distribution of CEIP projects, their pattern is less reliably attributed to the project than those relating to social conditions and local capacity.

Social Conditions

With respect to social conditions, several program communities experienced small improvements in a number of additional indicators, which are more consistent with expectations arising from the CEIP project mix. Small improvements in self-assessed health were observed in Sydney Mines, consistent with their priorities on health and safety as well as support for seniors. A number of positive indicators of improved neighbourhood and housing quality were also observed in program communities, including larger reductions in unsightly premises, which were consistent with the broad focus on environmental and beautification projects in most communities. The overall level of community satisfaction

appears to have improved in at least a couple of program communities. None of these changes, however, appears to have alleviated the negative population trends facing most communities in Cape Breton, including a declining percentage of youth and young workers and an increasing percentage of older workers and seniors.

Subgroup Effects

Some variation in effects was observed in key community sectors according to the priorities of where the communities concentrated their resources. For instance, Sydney Mines' investment in seniors, both in terms of hours allocated and diversity of projects, resulted in seniors being able to maintain and, in some cases, even improve their social capital in terms of both in-community contacts and links to emotional and financial support as well as exhibiting the most positive health outcomes among the program communities. In Whitney Pier, which allocated most of its senior-targeted resources to an outreach program designed to alleviate loneliness and isolation, the proportion of in-community contacts actually increased among seniors. Similarly, New Waterford focused on increasing security in and around a large senior residential facility, and experienced sustained improvements in trust among seniors, beyond those seen in any other program community or comparison site. In both cases, the closeness of fit between design and outcome makes CEIP the most likely cause of the observed improvements.

Another priority area for a number of communities was the youth sector, particularly the community of New Waterford, followed by Whitney Pier, Sydney Mines, and Glace Bay. The targeting of resources to youth-oriented projects was linked to some extent with positive youth outcomes, even though the correlation was not as large as expected. Positive outcomes, particularly on indicators of social capital and cohesion, were more likely to be found in the four communities with substantial allocation of youth-targeted projects, thus supporting the idea that at least some of these community-level effects can be attributed to CEIP.

Summary

Communities that had the most success in organizing and mobilizing local resources to develop CEIP projects experienced the most prominent changes as a result of participating in the project, while the fewest changes were observed in the community that did not go on to approve projects. CEIP's most readily apparent effect was on increasing the capacity of project-sponsoring organizations through the multi-year supply of CEIP workers who supported the missions of project-sponsoring organizations and helped them engage in longer-term planning. In addition to improvements in organizational capacity, CEIP also appears to have enhanced a number of other outcomes critical to community capacity. Results from the three-wave community survey suggest that residents in program communities have improved their social capital, including the structure of their social networks and the links to resources within them, relative to comparison sites. Social cohesion has also increased to a greater extent on a least one measure — improvements in generalized trust among residents — in most program communities. Furthermore, larger improvements in a number of participation- and access-based measures of social inclusion were observed in

program communities. In addition to directly increasing community involvement while local boards were being organized, CEIP may also have encouraged further associational activity and membership in community organizations to at least some extent.

Although the community effects study detected little definitive effect of CEIP on aggregate market outcomes at a community level, the positive effects on voluntary sector organizations, social capital of residents, and to a lesser extent on cohesion and inclusion are noteworthy. Although each is important in their own right as a measure of social conditions in communities, they are also significant components of broader community capacity. Improvements in any of these areas could "grease the wheels" of the social economy and provide support for future community development efforts.

Evidence also suggests that a number of positive changes have taken place for key groups that were of greater priority for certain community boards, including youth and seniors. Communities that allocated the highest number of participant hours to seniors' projects experienced improvements in local seniors' social capital, in terms of both in-community contacts and links to emotional and financial support, as well as positive health outcomes. The allocation of resources to youth-targeted projects was linked to some extent with positive youth outcomes, even though the correlation was not as large as expected. Positive outcomes, particularly on indicators of social capital and cohesion, were more likely to be found in communities with substantial allocation of youth-targeted projects, thus supporting the idea that at least some of these community-level effects can be attributed to CEIP.

Chapter 7

Cost-Benefit Analysis

The preceding chapters describe how the Community Employment Innovation Project's (CEIP) provision of a sustained period of employment led to enhanced employability for participants on a number of key indicators. Most notably, CEIP led to longer-term increases in job quality, transferable skills, social capital, volunteering, and small improvements in overall satisfaction with life. For communities, CEIP led to increases in organizational capacity, through the direct supply of participant labour as well as increased volunteering by participants and board members, in addition to improvements in community-level social capital, social inclusion and social cohesion

This chapter evaluates the benefits of CEIP to participants and communities over the full 54-month eligibility period in light of the costs of delivering a project of this nature. It will answer the following questions:

- What were the costs of the various components of CEIP?

- What is the net cost or benefit of CEIP from the perspective of participants, communities, governments, and society as a whole?

- How does the benefit-cost ratio of CEIP compare to other programs, and is it more or less efficient than other employment initiatives?

The methodology and framework applied to this cost-benefit analysis is outlined in the next section. It is followed by a presentation of the various components of the cost-benefit analysis, including a detailed summary of the most significant and readily monetized benefits and costs to participants and communities, the administrative and operational costs of CEIP, as well as its impacts on the budgets of governments. CEIP's cost-effectiveness will then be compared with similar programs using a conservative *benchmark* analysis as well as an *extended* model that accounts for impacts on intangibles that are more difficult to monetize.

Background

Although CEIP is an employment program, various aspects of its design are different from traditional employment programs, which will have implications for a cost-benefit analysis. First and foremost, CEIP participants are provided with an opportunity to work on community-sponsored projects, largely in the voluntary sector, as opposed to work with for-profit firms or governmental organizations, and the valuation of community-sector jobs is different from private-sector or public-sector employment. Second, CEIP aimed to enhance the employability of participants through the provision of meaningful work that was matched to their skills and abilities. This involved fairly intensive program services for participant management, employability assessments, job-matching, which add extra cost to program

delivery compared to traditional employment programs. Third, participants were offered three years of paid, full-time employment with the freedom to leave the program for other employment at any time without losing their eligibility. Therefore, CEIP's potential displacement of other, market-based employment is not as significant as in some other employment programs where participants were disqualified if they found other work.

The chapter presents the net average benefits and costs of CEIP per program group member over the entire 54-month period that complete data is available. All program and control group members — not just those who worked on CEIP jobs — were included in the calculations. To estimate the costs of CEIP as an ongoing program, implementation costs and costs related to the research or evaluation of CEIP are excluded from the analysis. Text Box 7.1 reviews in more detail the analytical approach, accounting methods, and key data sources used.

Text Box 7.1:   Analytical Approach, Accounting Methods and Data Sources

Analytical Approach

The basic analytical approach used for the CEIP cost-benefit analysis is similar to the analysis of the Self Sufficiency Project (SSP) in Ford, Gyarmati, Foley, and Tattrie, (2003), where a dollar value is assigned to CEIP's effects and resource costs, wherever possible, either through direct measurement or estimation. Positive and negative estimates of costs or benefits are used only when the impacts of the project are statistical significant at any point during the observation period.

Accounting Methods

The cost-benefit estimates presented in this chapter cover a 54-month observation period starting with the month of enrolment to the date of the final participant follow-up survey. This four-and-a-half-year observation period includes participant orientation, three years of eligibility for CEIP employment, and up to 18 months of post-CEIP activity.

All cost-benefit amounts in this chapter are expressed in constant 2002 dollars, using a 5-per-cent annual social discount rate (see Appendix E for valuations using various annual discount rates up to 15-per-cent).

Data Sources

Administration and operational costs of CEIP were measured using accounting records and administrative data from CEIP's office. CEIP's effects on earnings, participant volunteering, social network, and hardship were measured using data collected from the participant baseline and three follow-up surveys. Effects on community volunteering were estimated using data collected from the three waves of the community survey. CEIP's effects on benefit receipt were estimated using Employment Insurance (EI) and Income Assistance (IA) administrative records, and CEIP job values were estimated using Statistics Canada's Labour Force Survey 2000–2006 and CEIP's administrative data. CEIP's effects on tax payments, tax credits, child subsidies, EI or Canada Pension Plan Premiums, and EI or IA administration costs were imputed.

Analytical Perspectives

A government program is viable if its net present value is positive, or where its benefits outweigh its costs over a relevant period. In determining a program's cost-effectiveness, it is important to identify who bears the costs or benefits of the program since a program's effects can represent gains from one perspective and losses from another. Furthermore, a program may have desirable distributional effects even if it is not viable, which needs to be taken into account in its cost-effectiveness. CEIP's net costs and benefits will be shown from four perspectives: program group members, CEIP communities, provincial and federal governments, and society as a whole.[1] Table 7.1 illustrates the expected effects of CEIP on each of the four accounting perspectives. The expected effects are shown as a gain (+), loss (-) or neither a gain nor a loss (0).

---

[1] Non-CEIP employers, who are mostly in the private sector, are also accounted for in the model since CEIP participants worked less in market-based employment because of their participation in the project. The net benefit to this sector is zero and not shown. In an efficient market, the marginal productivity of a worker is equal to his or her marginal cost. When a participant forgoes working for a non-CEIP employer, the employer loses the value of the worker's productivity and saves the same amount in paid wages. Given the scale of CEIP, it is not likely that the project had any effect on the equilibrium of the Cape Breton labour market. Thus the total benefits lost are the same as the total costs saved from the perspective of non-CEIP employers. From society's point of view, the total loss in productivity is reflected in the foregone earnings of participants, and the revenue loss from EI and CPP premiums is paid by non-CEIP employers.

Table 7.1   The CEIP Cost-Benefit Analysis Framework

	Accounting Perspective			
	Individuals	Community	Government	Society
Benchmark model				
Participant impacts				
CEIP earnings	+	0	-	0
Non-CEIP earnings	-	0	0	-
Fringe benefits	+	0	-	0
Spousal earnings	+/-	0	0	+/-
Taxes, transfer payments, and premium				
Transfer payment to participants	-	0	+	0
Taxes and premiums participants paid	-	0	+	0
Premiums employers paid	0	0	-	-
Administrative cost				
CEIP administrative cost	0	0	-	-
EI and IA administrative cost	0	0	+	+
Third-sector organizational effects				
Value of CEIP jobs	0	+	0	+
Participant volunteering	0	+	0	+
Community volunteering	0	+	0	+
Total	+	+	-	+/-
Extended model				
Participants				
Leisure forgone	-	0	0	-
Reduced hardship	+	0	0	+
Social capital	+	0	0	+
Community effects				
Social cohesion (trust)	0	+	0	+
Social capital (network)	0	+	0	+
Total	+	+	-	+/-

The individual's perspective identifies net gains or losses for program group members, indicating how they fared because of the program. It is expected that the program group gains from CEIP earnings and fringe benefits at the expense of higher taxes and premiums as well as lower transfer payments, including Employment Insurance (EI) and Income Assistance (IA) benefits as well as various child benefits. CEIP may also affect the working decisions of a program group member's spouse, as was evident among the IA sample. By working more hours, program group members are also giving up greater amounts of leisure time. Since any participant can quit the program without penalty, it is expected that program group members experienced net gains from CEIP.

The government budget perspective identifies gains and losses incurred by the federal and provincial governments. Human Resources and Social Development Canada (HRSDC) and the Nova Scotia Department of Community Services (NS-DCS) funded CEIP jointly, thus sharing the operating and administration costs of CEIP. Although this analysis does not account for transfers from the federal government to the provincial government, it will consider benefits and costs for the federal and provincial governments separately. Due to the increase in participants' income, the federal government budget gains from increases in

federal taxes and premiums, as well as decreases in transfer payments. The federal government also loses some revenue from non-CEIP employers' contributions to EI and the Canada Pension Plan (CPP), as CEIP participants worked less in market-based jobs due to their participation in the project. Similarly, the provincial government gains from increases in provincial income tax and premiums and reductions in IA transfer payments. The administration and operation costs of CEIP are assumed to be funded by the provincial government in the analysis.

CEIP introduces an element that is not common in cost-benefit analysis: the community perspective. It identifies the benefits received by the communities, through community organizations' increased organizational capacity arising from the contributions of CEIP participants as well as the increased level of volunteering by participants and community residents. The community's organizational capacity may also be indirectly improved through the process of implementing CEIP.

The societal perspective combines the perspectives of all three groups: the program group, the community, and those outside the program, with the government budget representing alternative uses of tax funds. A net benefit to society arises when the benefits of all groups outweigh the costs of the program. For a given component, if a gain to one group equals the loss to another, there is no net cost or benefit to society and it is simply considered a transfer. For example, CEIP earnings are transfers from the government to program group members. If the gain to participants is greater than the cost to government, it represents a net gain to society. Similarly, CEIP administrative costs imply a net cost to society.

A simple criterion of the viability of a government program is whether it produces a net benefit to society. This criterion assumes that a loss by one group can be compensated for by gains to another, which may not be true in reality.[2] Nonetheless, the analysis treats every dollar the same, no matter to who receives it.[3]

Limitations

While this analysis accounts for the major effects of CEIP, it does have some limitations, some of which are inherent in any cost-benefit analysis and some of which are unique to CEIP. First, CEIP was designed and run as an independent research demonstration project, completely separate from other government programs. A separate office for CEIP was established and staffed to serve only CEIP participants, representing start up costs that would not be incurred to the same extent if CEIP were run within existing government infrastructure. In this case, CEIP's operating costs would also likely be lower due to economies of scale.

Second, this analysis includes the benefits and costs arising from the major impacts of CEIP but some non-financial effects of the program are not included in the framework due to

---

[2] In theory, the government may aim to facilitate inter-group compensation through taxes. A more restrictive alternative assumption to maintain the net benefit criterion is to assume that the value placed on a dollar gained or lost is equivalent for each of the groups.

[3] The alternative is to establish a social welfare function that takes into account issues of distribution. Unfortunately, a social welfare function requires a subjective judgment of fairness that is outside the scope of this study.

the lack of established methodology to estimate their monetary value. As well, mean benefits and costs are presented that do not account for variation at the individual level. Finally, the results discussed in the chapter were derived using data from CEIP in Cape Breton that covers the 1999–2006 period. As is the case when interpreting any experimental results, the specific characteristics of the local population, economy, and policy environment should be considered before attempting to generalize the findings to other populations, regions, or periods.

The next section of the chapter describes the major components of cost-benefit analysis.

Major Components of the Benefits Cost Analysis

Benefits and Costs of CEIP to Governments

This component includes three categories: the direct costs of CEIP administration and operations, tax and premiums received, as well as transfer payments and associated administrative costs. The first category is unique to program group members, while the latter two categories cover both the program and control groups. Since the control group represents the counterfactual in the absence of CEIP, the differences in tax and transfer payments between the program and control groups represent CEIP's costs and benefits to government.

CEIP Administration

The costs of CEIP administration are all related to the major activities in CEIP's operations, including the overhead cost of CEIP's office, the management information system, initial employability assessments, job matching, job-readiness and generic skills training, administration of transitional jobs and the resource centre, and support for the planning and development of community boards. The largest cost component is the CEIP payroll, which includes the earnings and fringe benefits paid to program group participants, as well as EI premiums, CPP contributions and Worker's Compensation premiums.

Taxes and Premium Revenue

Since CEIP increased earnings of program group members, the program increased the federal and provincial taxes as well as the EI and CPP premiums they were required to pay. Both employers and employees are required to pay EI and CPP premiums. Since program group members earned less from non-CEIP employers than their control group counterparts did, CEIP's costs to government also include some foregone revenue from EI and CPP premiums paid by non-CEIP employers.

Transfer Payments

As a result of increased earnings of program group members, government spent less on Canadian Child Tax Benefits (CCTB), National Child Benefit Supplements (NCBS), Nova Scotia Child Benefits (NSCB), and GST credits as well as associated administrative costs of running these programs.

Benefits and Costs of CEIP to Participants

Benefits and costs of CEIP to participants include employment earnings, taxes and premiums paid, transfer payment receipts and miscellaneous intangible benefits and costs. Program group members received earnings, vacation pay, and health insurance coverage from CEIP jobs. At the same time, they were observed to work less in non-CEIP employment and received lower earnings from non-CEIP jobs. Depending on a participant's household arrangement, the spouse of a participant may have also worked more or less in the labour market when compared to the spouse of a control group member. Program group members' increased earnings led to higher income tax, and EI and CPP premiums. Program group members also reduced their receipt of EI and IA benefits, child tax benefits and GST Credits.

CEIP's impact analysis revealed that program group members endured less hardship during the program because of the stability of their CEIP earnings, which represents an added benefit on top of the total earnings they received. Program group members also developed larger social networks because of CEIP, but gave up leisure time to engage in CEIP employment. The foregone leisure time is a cost, unless its perceived value is zero.[4] However, it is difficult to determine values of social capital, hardship, and leisure time, and an attempt is made to account for these benefits and costs only in the *extended* model.

Benefits to Communities

CEIP benefited the community through sponsored projects and increased volunteering among participants and local community residents. The CEIP communities not only benefited directly from sponsored projects and the incremental volunteering, but also from the process of mobilization of communities, which produced improvements in the capacity of local organizations as well as indicators of social cohesion and social capital among community residents. Similarly, however, it is difficult to place a dollar value on the community effects of CEIP beyond the value provided by participants' labour and the increased level of volunteering.

Benefits and Costs of CEIP to Governments

CEIP is a research and demonstration project rather than a mature government program. CEIP's office was established to handle all CEIP-related administration, such as enrolment, orientation, and participant management, and it was generously staffed to accommodate any contingencies. Thus the cost of CEIP administration is possibly higher than if CEIP were to be operated as an integrated, ongoing government program. In this analysis, the cost of CEIP administration is estimated using accounting records that cover periods of the implementation that are relevant to each component of the CEIP program model. The estimates are considered to be the closest approximation to what the actual operating costs of CEIP would be as part of an ongoing program.

---

[4] If people are self-maximizing and leisure time has a positive value, people would volunteer only if they derive positive value from volunteering itself. Similarly, it can be argued that participants derived positive value from working in projects.

CEIP Administration

Table 7.2 presents the cost of administering CEIP by each activity that is central to the program model (see Greenwood, et. al. 2003 for a complete description of program services). For each activity, a unit cost is estimated using the accounting records of the CEIP office and partners of the project as well as data from CEIP's Program Management Information System (PMIS). A "unit" of activity differs for each program component. For example, a single employability assessment was provided to each participant during their initial enrolment and therefore costs can be calculated *per assessment*. In contrast, participant management was an ongoing activity provided throughout the program and unit costs are estimated *per year of management activities* (based on staffing costs and the number of participants managed). The cost of each activity per participant is obtained by multiplying each unit cost with the average number of "units" that active participants[5] received. These cost estimates are then discounted and calculated per program group member (final column of the table) so they can be included consistently in the overall cost-benefit totals later in the chapter. See Appendix E for further details on this approach.

Table 7.2   Estimated Administrative Costs for CEIP Program Services, by Sample

	Costs per Unit ($)	Units per Participant	Total Cost ($)	Present Value Costs per Participant ($)	Present Value Costs per Program Group Member ($)
EI sample					
CEIP office (overhead)	349.7 /year	3.5	478,861	1,151	952
Employability assessment	281.6 /person	1.0	117,158	282	233
Job matching	146.8 /assignment	4.3	245,690	591	488
Job-readiness and generic skills training	92.9 /course	5.5	199,474	480	397
Participant management	283.7 /year	3.5	388,465	934	772
Administration of transitional jobs	1.6 /hour	482.2	290,879	699	578
Resource centre	3.0 /hour	89.3	102,828	247	204
Planning and development support	80.5 /year	3.5	110,212	265	219
Total CEIP administrative cost			1,933,568	4,648	3,844
IA sample					
CEIP office (overhead)	349.7 /year	3.5	268,208	1,151	1,040
Employability assessment	281.6 /person	1.0	65,620	282	254
Job matching	146.8 /assignment	4.8	155,611	668	603
Job-readiness and generic skills training	92.9 /course	5.8	119,093	511	462
Participant management	319.8 /year	3.5	245,269	1,053	951
Administration of transitional jobs	1.6 /hour	313.9	106,069	455	411
Resource centre	3.0 /hour	125.8	81,138	348	314
Planning and development support	80.5 /year	3.5	61,729	265	239
Total CEIP administrative cost			1,102,739	4,733	4,274

Sources: SRDC's administrative records and PMIS database.

Notes: Annual discount rate is 5%. All estimates are in constant 2002 dollars. Gross domestic product (GDP) deflators from Statistics Canada are used to adjust for inflation. Active participants are program group members who received at least one dollar from CEIP. Out of the 503 program group members of the EI sample, 416 are active participants. Among 258 program group members of the IA sample, 233 are active.

---

[5] Active participants are program group members who received at least one dollar from CEIP. Out of the 503 program group members of the EI sample, 416 were active participants. Among 258 program group members of the IA sample, 233 were active. Though costs per active participant are relevant from a costing and implementation perspective, costs per program group are also needed for the purposes of the overall cost-benefit analysis.

The total CEIP administration costs per program group member are estimated to be $3,844 and $4,274 for the EI and IA sample, respectively. The IA sample had a higher administrative cost because of the sample's higher rate of active participation and the higher usage of job assignments, training, and more intensive participant management.

CEIP Payroll Costs

Table 7.3 presents the payroll costs of CEIP. All data in this table is calculated based on data from the PMIS. CEIP earnings are the largest cost item of the project. On average, each program group member earned $27,040 and $30,698 among the EI and IA samples, respectively. Participants earned 1 day of vacation time for every 121.3 hours of active participation, in addition to 5 days of statutory holiday every year. Therefore, vacation pay is equivalent to 7.69 per cent of earnings paid to participants. CEIP also offered to pay half of the premium for the voluntary group health insurance coverage for participants and their families. The average amount CEIP paid for health insurance is based on CEIP payroll records.

The employer portion of EI and CPP premiums paid by CEIP are the imputed differences of premiums on individuals' total and non-CEIP earnings. Since Nova Scotia Workers' Compensation premiums vary with experience rating, the year with the best experience rating is used in the calculation, the fiscal year of April 2003 to March 2004 when the premium was $0.8197 per $100 payroll. Note that EI, CPP, and Nova Scotia Workers' Compensation premiums are payments to the government. Although there is a shift of funds, there is no change in the government budget when different departments from both the federal and provincial governments are considered as one entity.

Table 7.3   Present Values of CEIP Costs of Payroll, by Sample

	Costs ($)	
	EI Sample	**IA Sample**
CEIP earnings	27,040	30,698
CEIP fringe benefits		
Vacation pay	2,253	2,558
Health benefit	692	1,088
Benefits paid	*2,945*	*3,646*
CEIP tax premiums		
EI	851	946
CPP	1,045	1,179
Workers' Compensation	261	299
Premiums paid	*2,156*	*2,424*
Total payroll cost	32,141	36,767

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey and administrative data.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

EI, CPP, and Workers' Compensation premiums are all simulated data based on the estimated earnings and income of participants.

Rounding may cause slight discrepancies in sums and differences.

Combining administration and payroll costs, the direct costs of operating CEIP are $35,985 and $41,041 per program group member from the EI and IA samples, respectively.

Taxes and Premium Revenue

Table 7.4 shows the present values of CEIP's impacts on government budgets. Federal and provincial income taxes were imputed[6] using tax codes and total taxable income estimated from CEIP's survey and administrative data. Similarly, CEIP participants' EI and CPP contributions were imputed based on their total earnings. Non-CEIP employers' contributions to EI and CPP were calculated based on the non-CEIP earnings of individuals.

Because of CEIP, governments received additional tax revenue of $1,685 and $3,559 per program group member among the EI and IA samples, respectively, while they lost a lesser amount in revenue from foregone premiums paid by non-CEIP employers of $1,037 and $638 per EI and IA program group member, respectively. This leads to an overall net increase in tax and premium revenue.

---

[6] GST credits, CCTB, NCBS, NSCB, and federal and provincial taxes are simulated based on tax codes. Family income is not directly available in each tax year. Instead, the income of the spouse (or an adult dependent, if the participant is not married) is estimated for the calculation based on the sample, program participation, gender, presence of spouse (or adult dependent), and employment status of the spouse (or adult dependent) in the closest survey to the tax year, using regression adjusted means of real other household income in the 18-month survey. Refer to Appendix E for the estimates of spousal income.

Table 7.4   Present Values of CEIP Impacts on Government Budget over 54 Months, by Sample

	EI Sample			IA Sample		
	Program	Control	Impact	Program	Control	Impact
Taxes and premiums paid by individuals						
Federal income tax	5,752	5,137	615 *	3,370	1,747	1,623 ***
Provincial income tax	3,517	3,197	320	1,412	776	635 ***
EI	1,191	922	269 ***	862	394	468 ***
CPP	2,136	1,654	482 ***	1,497	664	833 ***
Total	12,595	10,911	1,685 **	7,141	3,582	3,559 ***
Premium paid by non-CEIP employers						
EI	817	1,292	-474 ***	260	552	-292 ***
Employer Contribution to CPP	1,091	1,654	-563 ***	318	664	-346 ***
Total	1,909	2,946	-1,037 ***	579	1,216	-638 ***
Transfer payments to individuals						
EI	8,144	13,231	-5,088 ***	4,420	3,104	1,316 ***
IA	356	1,155	-799 ***	6,254	15,476	-9,222 ***
GST credit	1,359	1,274	86 ***	1,732	1,730	2
Canada Child Tax Benefits	2,774	3,108	-334	5,749	6,592	-842
National Child Benefit Supplements	1,513	2,092	-579 **	6,987	9,517	-2,530 ***
Nova Scotia Child Benefits	146	271	-125 ***	1,117	1,675	-559 ***
Total	14,292	21,132	-6,840 ***	26,259	38,094	-11,836 ***
Government program administration						
Cost of EI administration	90	146	-56 ***	49	34	14 ***
Cost of IA administration	19	61	-42 ***	329	814	-485 ***
Total	108	206	-98 ***	378	848	-471 ***
Sample size	**499**	**499**		**258**	**258**	

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey and administrative data.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

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

Tax, EI premiums, CPP premiums, CCTB, NCBS, NSCB, GST credits are all simulated data based on the estimated income of participants.

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

Rounding may cause slight discrepancies in sums and differences.

Transfer Payments

Based on the administrative records of EI and IA, CEIP reduced benefit payments to individuals significantly. In additional to the reduction of benefit payments, the administration costs[7] of the EI and IA programs were also decreased.

---

[7] EI administration cost is assumed to be 1.1 per cent of the EI benefit payments. IA administration cost is assumed to be 5.26 per cent of the IA benefit payments. These percentages are calculated from the cost–benefit analysis of Ford et al. (2003) for welfare applicants.

Program group members' earnings also affected other transfer payments paid to individuals. GST Credits, Canada Child Tax Benefits, National Child Benefit Supplements, Nova Scotia Child Benefits, and associated administrative costs were imputed according to tax codes and individual income. With the exception of the GST Credit increasing slightly, child benefits were reduced significantly, especially among the IA sample. The net reductions of transfer payments amounted to $6,938 and $12,306 per program group member for the EI and IA samples, respectively.

Total Net Costs to Governments

Even though CEIP was jointly funded by the federal and provincial governments, it is assumed here that an ongoing CEIP program would be funded solely by the provincial government. Table 7.5 presents a summary of the costs of CEIP to both governments.

Table 7.5   Present Values of CEIP Costs to Governments over 54 Months, by Sample

	EI Sample	IA Sample
Costs to provincial government		
CEIP administration and operations		
Administration	3,844	4,274
Payroll	32,141	36,767
Tax and premiums		
Provincial income tax	-320	-635
Workers' Compensation	-261	-299
Transfer payments		
IA benefits	-799	-9,222
IA administration	-42	-485
Nova Scotia Child Benefits	-125	-559
Total	*34,438*	*29,842*
Costs to federal government		
Tax and premiums		
Federal income tax	-615	-1,623
CEIP's contribution to EI	-851	-946
Non-CEIP employers' contribution to EI	474	292
Workers' contribution to EI	-269	-468
CEIP's contribution to CPP	-1,045	-1,179
Non-CEIP employer's contribution to CPP	563	346
Workers' contribution to CPP	-482	-833
Transfer payments		
EI benefits	-5,088	1,316
EI administration	-56	14
GST credit	86	2
Canada Child Tax Benefits	-334	-842
National Child Benefit Supplements	-579	-2,530
Total	*-8,194*	*-6,452*
Cost to the governments	***26,244***	***23,390***

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey and administrative data.

Notes: Annual discount rate is 5%. All estimates are in constant 2002 dollars. GDP deflators were used to adjust for inflation. EI, CPP, and Workers' Compensation premiums are all simulated data based on the estimated earnings and income of participants. Rounding may cause slight discrepancies in sums and differences.

This table shows that payroll costs are the largest cost item to government. CEIP, on an ongoing basis, would cost the provincial government $34,438 and $29,842 per EI and IA participant, respectively, while the federal government would save $8,194 and $6,452 in net expenditures. Combining both levels of governments, CEIP would cost taxpayers $26,244 per participant from the EI program and $23,390 per participant from the IA program. Even though the payroll and administrative costs are higher for IA participants, the net cost to taxpayers is lower because of larger offsetting increases in tax revenue and larger decreases in benefits payments.

Benefits and Costs of CEIP to Participants

The present values of various benefits and costs to individuals are presented in Table 7.6.

Table 7.6   Present Values of CEIP Impacts on Individuals over 54 Months, by Sample

	EI Sample				IA Sample			
	Program	Control	Impact		Program	Control	Impact	
Employment								
CEIP earnings	27,040	0	27,040	***	30,698	0	30,698	***
CEIP fringe benefits	2,945	0	2,945	***	3,646	0	3,646	***
Participant's non-CEIP earnings	30,805	46,704	-15,899	***	9,961	20,935	-10,974	***
Spousal earnings	16,364	16,850	-487		4,004	1,969	2,035	***
Transfer payment receipts								
EI	8,144	13,231	-5,088	***	4,420	3,104	1,316	***
IA	356	1,155	-799	***	6,254	15,476	-9,222	***
GST credit	1,359	1,274	86	***	1,732	1,730	2	
Canada Child Tax Benefits	2,774	3,108	-334		5,749	6,592	-842	
National Child Benefit Supplements	1,513	2,092	-579	**	6,987	9,517	-2,530	***
Nova Scotia Child Benefits	146	271	-125	***	1,117	1,675	-559	***
Total	*14,292*	*21,132*	*-6,840*	***	*26,259*	*38,094*	*-11,836*	***
Taxes and premiums paid								
Federal income tax	5,752	5,137	615	*	3,370	1,747	1,623	***
Provincial income tax	3,517	3,197	320		1,412	776	635	***
Workers' Contribution to EI	1,191	922	269	***	862	394	468	***
Workers' Contribution to CPP	2,136	1,654	482	***	1,497	664	833	***
Total	*12,595*	*10,911*	*1,685*	**	*7,141*	*3,582*	*3,559*	***
Total Financial Benefits to Individuals	*62,487*	*56,926*	*5,561*		*67,426*	*57,416*	*10,009*	
Sample size	**499**	**499**			**258**	**258**		

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey and administrative data.

Notes: Annual discount rate is 5%. All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

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

Tax, EI premiums, CPP premiums, CCTB, NCBS, NSCB, GST credits are all simulated data based on the estimated income of participants.

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

Rounding may cause slight discrepancies in sums and differences.

Employment

Earnings and Fringe Benefits of CEIP were estimated based on PMIS data. Non-CEIP earnings were estimated from the employment history data collected in the three participant follow-up surveys. On average, CEIP increased the net earnings of program group members in the EI sample by $14,086 and by a much larger amount, $23,369, in the IA sample. The larger increase among IA sample members is due to a combination of their lower foregone non-CEIP earnings and higher CEIP earnings.

The 40-month participant impact study (Gyarmati, et. al., 2007) provided evidence that CEIP increased spousal employment among IA sample members during program eligibility. Using imputed spousal earnings,[8] CEIP increased the spousal earnings by $2,035 per program group member in the IA sample. There is no evidence that CEIP had any significant impact on the spousal employment of EI sample members.

Taxes and Premiums Paid by Individuals

As discussed above, CEIP increased total tax and premium payments by $1,685 and $3,559 per program group member in the EI and IA samples, respectively.

Transfer Payment Receipts

The net reductions of transfer payments amount to $6,840 and $11,835 per program group member in the EI and IA samples, respectively.

Net Financial Benefits to Individuals

Combining CEIP's impacts on earnings, taxes, premiums, and transfer payments, each program group member experienced a net financial gain that amounted to $5,561 and $10,009 per program group member in the EI and IA samples, respectively. Both amounts are substantially lower than the net costs to the government, suggesting that the program would not be viable *if* only individual benefits and costs are taken into consideration.

---

[8] Spousal earnings is the regression-adjusted net real household income of other household members of participants with a working spouse over those without a working spouse using data from the 18-month follow-up survey. The imputed spousal earnings are assigned based on the sample, gender of the participants, and the spousal working status in the reported in closest survey of each tax year. Refer to Appendix E for further technical details.

Benefits to Communities

Volunteering

The value of participants' formal volunteering is presented in Table 7.7. In this analysis, the value of unpaid volunteering work is estimated based on its market replacement cost, i.e. the real average market hourly wage to hire a replacement from the labour market.[9] The participant impact analysis reveals that CEIP had positive impacts on the hours of formal volunteering. The values of these increased hours are $1,800 and $1,381 per program group member in the EI and IA samples, respectively.

Table 7.7   Present Values of CEIP Impacts on Volunteering over 54 Months, by Sample

	EI Sample			IA Sample		
	Program	**Control**	**Impact**	**Program**	**Control**	**Impact**
Hours of volunteering per month						
at month 18	8.8	6.4	2.4 **	6.7	6.4	0.4
at month 40	8.2	4.7	3.4 ***	7.2	4.5	2.6 *
at month 54	7.2	5.5	1.7	7.4	4.5	2.8 *
Value of volunteering per month						
at month 18	125.6	89.4	36.2 **	100.1	86.3	13.9
at month 40	120.1	73.4	46.7 ***	96.2	63.1	33.2
at month 54	101.6	79.3	22.3	104.5	61.9	42.7 *
Present value of volunteering						
over 54 months	5,702.3	3,902.6	1,799.5 ***	4,826.3	3,445.6	1,380.7 *
Sample size	**499**	**499**		**258**	**258**	

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey and administrative data.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

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

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

Rounding may cause slight discrepancies in sums and differences.

---

[9] Valuing unpaid volunteering work at market replacement cost is a commonly accepted methodology (Ross (1994); Quarter, Mook, & Richmond (2002); Hamdad (2003)). Nine occupations are assumed equivalent to the types of volunteering that participants reported. The value of each hour of volunteering is the mean market wage of equivalent occupations in the 2006–2007 Labour Market Information Survey (LMI), or at a general wage of $7.60 if the type of volunteering is not reported. The total present value of volunteering is the discounted sum of monthly volunteering hours and the number of months between surveys. Refer to Appendix E for further technical details.

Community boards were formed to organize, mobilize, and approve CEIP community projects. Board members contributed significant hours that they would not have in the absence of CEIP. In addition, other residents of program communities volunteered for CEIP-related activities through their local community board or project sponsors. From the community surveys, an average of 798 people volunteered for CEIP, without pay, in all five of the participating program communities at any given time of the project (Gyarmati, et. al., 2008).[10] Using a conservative estimate of 3 hours per month of volunteering at the lowest average market real wage of $6.71 would imply a present value of volunteering by community residents equal to $1,023 per program group member.

Value of CEIP Jobs

The products or services of community projects, such as services to the poor, are usually not tradable, providing no directly comparable market value that can be used to estimate the value of the community projects. In addition, many services and products of CEIP projects supported existing programs or extended existing services of the sponsoring community organizations. Therefore, instead of estimating the output value of CEIP projects, this analysis applies a valuation methodology similar to that of the volunteering valuation, by using a market replacement estimate to value CEIP jobs.

A detailed description of each CEIP job was documented in the PMIS where it was assigned a corresponding four-digit occupational code using HRSDC's National Occupational Classification. To place a dollar value on each community job, the market wage of the occupation is used. Market wages of the 2-digit occupations in Statistics Canada's NOC in Nova Scotia were estimated using data from the Labour Force Surveys over the 2000–2005 period. To account for the fact that participants, with their lower levels of skills and experience, would most likely have received less than the median or mean market wage if they had been working in market-based jobs, the occupational wage at the 10th percentile of the distribution is used to estimate the value of their CEIP jobs.

However, it can be argued that the assumption of job value at the 10th percentile of the corresponding occupational wage distribution is very conservative, since CEIP jobs could be considered as being very similar to other, market-based jobs. Participants were matched carefully to the positions according to their skills and experience, and CEIP's office was constantly updated about the performance of participants as well as the sponsoring community organizations. If a participant was not performing in the position, the sponsoring community organization could request for a replacement.[11] Furthermore, interviews with project-sponsoring organizations revealed that most sponsors were overwhelmingly satisfied

---

[10] There were 41,832 adults in the five active program communities (excluding Dominion, which did not approve any projects). The percentage of residents that were not CEIP participants (or control group members), but who volunteered for the project without pay are 1.93, 1.82, and 1.98 per cent in the Wave 1, Wave 2, and Wave 3 of the community survey, respectively. As a result, the average percentage of residents within program communities who volunteered for CEIP in any given month is 1.91 per cent, which is equivalent to 798 people. This number does not include the 0.6 per cent of the adult population in other communities who also volunteered for CEIP. These increases are considered incremental, as the community effects study revealed little evidence of displacement of existing voluntary activities.

[11] CEIP terminated the participation of a few participants because of repeated absenteeism and poor performance.

with the contributions of CEIP participants, and they were found to be contributing directly to the organization's capacity, often freeing up the time of management staff to attend to other important matters. As is often the case, managers of voluntary sector organizations are burdened by administrative and clerical tasks, which are lessened when lower-skilled employees or volunteers are involved.

This analysis is also conservative in the scope of CEIP jobs that are included in the estimates. Jobs are only assigned value if they were approved through the local community board. All transitional CEIP jobs – those provided as temporary assignments through the local CEIP office or delivery partner – are excluded from the estimations. Even though transitional jobs were in all likelihood making positive contributions to the community, they were not approved through local boards and hence not necessarily linked with locally identified community priorities.

Table 7.8 presents a summary of CEIP community job values by skill level. Note that the average job value per hour is $7.43, which is lower than the CEIP wage.[12] On average, a program group member in the EI sample contributed $18,398 worth of work, while each IA sample member contributed $20,024, reflecting the higher number of hours worked in CEIP jobs. These values are significantly lower than the earnings and fringe benefits paid to the participants[13] due to the conservative nature of valuing CEIP jobs and the exclusion of transitional jobs. If CEIP jobs were valued at their median occupational wage, the contribution of CEIP to the community would be at least 50 per cent higher,[14] more than enough to cover the cost to the government.

Combining the value of volunteering and CEIP jobs, the program communities benefited from $21,221 and $22,428 worth of services per program group member in the EI and IA samples, respectively.

---

[12] The community wage started at $8 per hour, and increased several times along with minimum wage increases.

[13] The combined earnings and fringe benefits are $29,985 and $34,343 for the EI and IA sample members, respectively.

[14] Refer to Appendix E for a sensitivity analysis of the valuation of CEIP jobs.

Table 7.8   Present Values of CEIP Jobs to Community Organizations

	Total Hours	Average Job Value per hour	Total Present Values	Job Value Per Program Group Member
EI sample				
Management occupations	35,606	12.15	401,424	
NOC skill level A	105,430	10.52	1,015,480	
NOC skill level B	371,355	8.14	2,783,069	
NOC skill level C	295,045	7.45	2,031,720	
NOC skill level D	543,780	6.02	3,022,545	
Total	*1,351,215*	*7.43*	*9,254,238*	*18,398*
IA sample				
Management occupations	10,682	12.14	117,828	
NOC skill level A	63,740	10.31	603,361	
NOC skill level B	220,867	8.05	1,641,176	
NOC skill level C	150,412	7.29	1,018,266	
NOC skill level D	319,242	6.07	1,785,551	
Total	*764,943*	*7.32*	*5,166,182*	*20,024*

Sources: Hours are calculated from the PMIS data. Occupational wages of Cape Breton are estimated from the Labour Force Surveys of Statistics Canada.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

There are 503 and 258 program group members from the EI and IA samples, respectively.

Net Costs and Benefits: Benchmark Model

The benefits and costs presented above represent the most important and readily monetized items in the analysis. These are sufficient to establish a benchmark model to evaluate the viability and relative cost-effectiveness of CEIP. Tables 7.9 and 7.10 show the net benefits and costs per program group member over the full 54-month follow-up period for the EI and IA samples, respectively. For each item, a positive value represents a gain or benefit while a negative value represents a loss or cost. The bottom panel of each table presents the overall benefit-cost ratio for the program, where values greater than one indicate positive net present values (net benefits divided by net costs).

EI Sample

It is apparent in the benchmark model that CEIP would be only marginally viable as a program aimed at EI participants. The average net cost to the government is $26,243 per individual, providing on average $5,561 in benefits to the participating individual and $21,221 to the community. The net benefit to society, over and above the expenditure by government, amounts to $538 per program group member over the 54-month period of analysis. In other words, each dollar in net cost to government translates into $0.21 in net benefits to the participants and $0.81 in benefits to communities. Combining individuals, communities and government budgets produces a small net gain to society, where each dollar in net cost to government produces $1.02 in net benefits to society.

Table 7.9   Benchmark Model of Benefits and Costs per Program Group Member During Months 1–54 (EI Sample)

	Accounting Perspective			
	Individuals	Community Organizations	Government	Society
Participant impacts				
CEIP earnings	27,040	0	-27,040	0
Non-CEIP earnings	-15,899	0	0	-15,899
Fringe benefits	2,945	0	-2,945	0
Spousal earnings	0	0	0	0
Taxes, transfer payments, and premiums				
Transfer payment to participants	-6,840	0	6,840	0
Taxes and premiums participants paid	-1,685	0	1,685	0
Premiums employers paid	0	0	-1,037	-1,037
Administrative cost				
CEIP administrative cost	0	0	-3,844	-3,844
EI and IA administrative cost	0	0	98	98
Third-sector organizational effects				
Value of CEIP jobs	0	18,398	0	18,398
Participant volunteering	0	1,799	0	1,799
Community volunteering	0	1,023	0	1,023
Total	*5,561*	*21,221*	*-26,243*	*538*
Benefits per dollar of cost to Government				
To Individuals			0.21	
To Communities			0.81	
To Society			1.02	

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey, three waves of the community survey, and administrative data.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

Rounding may cause slight discrepancies in sums and differences.

IA Sample

CEIP appears to be a more viable option for IA recipients. For each program group member in the IA sample, it costs the government $23,390, an amount slightly lower than that of the EI sample. At the same time, it provides larger benefits to individuals and communities — $10,009 and $22,428, respectively. The net benefit to society, over and above the expenditure by government, amounts to $9,048 per program group member over the 54-month period of analysis. In other words, each dollar in net cost to government translates into $0.43 in net benefits to the participants and $0.96 in benefits to communities. Overall, CEIP produces a larger net gain when aimed at IA participants, where each dollar in net costs to government produces $1.39 in net benefits to society.

Table 7.10 Benchmark Model of Benefits and Costs per Program Group Member During Months 1–54 (IA Sample)

	Accounting Perspective			
	Individuals	**Community Organizations**	**Government**	**Society**
Participant impacts				
CEIP earnings	30,698	0	-30,698	0
Non-CEIP earnings	-10,974	0	0	-10,974
Fringe benefits	3,646	0	-3,646	0
Spousal earnings	2,035	0	0	2,035
Taxes, transfer payments, and premiums				
Transfer payment to participants	-11,836	0	11,836	0
Taxes and premiums participants paid	-3,559	0	3,559	0
Premiums employers paid	0	0	-638	-638
Administrative cost				
CEIP	0	0	-4,274	-4,274
EI and IA	0	0	471	471
Third-sector organizational effects				
Value of CEIP jobs	0	20,024	0	20,024
Participant volunteering	0	1,381	0	1,381
Community volunteering	0	1,023	0	1,023
Total	*10,009*	*22,428*	*-23,390*	*9,048*
Benefits per dollar of cost to Government				
To Individuals			0.43	
To Communities			0.96	
To Society			1.39	

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey, three waves of the community survey, and administrative data.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

Rounding may cause slight discrepancies in sums and differences.

Extended Model: Valuing Intangibles

The impact analysis shows that the project had positive impacts on participants beyond earnings and volunteering. There are a few important impacts that are not included in the benchmark model due to difficulties in valuation, including foregone leisure, improved social networks, decreased hardship, and improved community-level effects. With the exception of foregone leisure, most of these impacts are positive and beneficial to individuals or the communities without any additional impact on government budgets. This section attempts to place a dollar value on the impacts of foregone leisure, social networks, and hardship reduction. Although the estimated benefits and costs could be very sensitive to the choice of valuation models, the extended analysis model provides a more complete picture.

Foregone Leisure

One may argue that an hour spent working is an hour lost in valuable leisure time. Valuing leisure time for unemployed individuals who are willing to work, however, is challenging since the value of each hour of leisure can be anything from a negative value up to the after-tax value of the market wages for which they would be willing to work.

Hughes (1981) used a value of 20 per cent of the market wage as a measurement of leisure value. Though other methods have been used to estimate the value of leisure, for instance drawing on regional unemployment rates and reservation wages, these approaches do not apply well in the current context. This analysis adopts a method similar to that of Hughes, assuming that foregone leisure is worth as much as 20 per cent of program group members' increased personal and spousal earnings. Under this methodology, an EI program group member gave up $2,228 worth of leisure to work more because of CEIP, while an IA program group member gave up $4,352 worth of leisure time.

Social Capital

CEIP was found to increase the size of social networks among EI sample members, particularly in the number of contacts who can provide help finding a job. One method of valuing social networks is to estimate an increase in earnings due to increased employment from an expanded social network. Unfortunately, the timing of the 54-month follow-up survey is too early to reliably estimate any longer-term increase in employment following CEIP. An alternative method is to estimate the perceived value of one's social capital. Helliwell and Huang (2005) estimated the perceived value of social capital in a workplace by the relative effect of social capital and income on one's life satisfaction. Both income and social capital contribute to one's life satisfaction. The *relative* contribution of social capital and income to life satisfaction forms the basis for valuing these kinds of intangibles.

Applying a similar method, the estimated value of CEIP's impacts on the number of job-related contacts is presented in Table 7.11.[15] On average, a program group member in the EI sample had gained the equivalent of $2,214 of personal income from his or her improved job-related contacts. Impacts on job contacts among IA program group members were estimated to be about half that value but are not included in the analysis, as they failed to reach statistical significance during the follow-up.

Hardship

Gyarmati et al. (2007) reported that by the 40-month follow up survey, CEIP had reduced the percentage of IA sample members who had difficulty in paying for day-to-day expenses by 14.4 percentage points. CEIP also reduced the proportion of EI sample members who were unable to get groceries or food by 4.2 percentage points.

Increased income is the major source of reduced hardship. However, measuring only the average income increase over the period does not measure the full effects of improvements in income stability provided by the program. Income instability could be a major source of difficulty in paying bills and meeting daily expenses, giving rise to significant uncertainty and the associated stresses that this brings. Applying the Helliwell and Huang approach, this analysis estimates the perceived value of the reduced hardship beyond the increased income that CEIP provided.

---

[15] Refer to Appendix E for the technical details of estimation.

Table 7.11 shows the estimated present value of hardship reductions during the three years of CEIP eligibility. The hardship reduction is equivalent to $4,912 of income per program group member in the EI sample, and $9,428 in the IA sample.

Other Non-Monetized Impacts

There are many other impacts of CEIP that cannot be reliably monetized and/or are considered outside the scope of the current analysis. For example, program group members had experienced additional indications of enhanced social networks, such as decreased network density and tie strength — both of which are considered improvements in social capital. However, the extended analysis includes only those impacts on job-related contacts, as they were deemed more reliable in the sensitivity testing. Furthermore, the community effects study also revealed improvements in social capital and social cohesion at the community level. There are several challenges in valuing community-level effects, which place it outside the scope of the current analysis. [16] Fortunately, these effects all represent net positive benefits. They are indicated in the summary tables of the extended model as such (with a +), however, their values are not included in the totals.

---

[16] Applying Helliwell and Huang's model on the data from Wave 3 of the community survey, the value of CEIP's effects on social capital and trust are nearly 30 times the value of net benefits accruing to program group members. Due to the quasi-experimental nature of the community effects study, however, the dollar value estimated is sensitive to specifications and possible influences other than CEIP. Since the benchmark model includes a reliable estimated value of CEIP jobs as a direct measure of the contribution of CEIP projects, the monetized value of these extra community effects on residents are not included in the total net benefits in this chapter. Refer to Appendix E for details on the attempted estimation of the value of these community effects.

Table 7.11 Present Values of CEIP Impacts on Social Capital and Hardships, by Sample

	EI Sample			IA Sample		
	Program	**Control**	**Impact**	**Program**	**Control**	**Impact**
Number of contacts who can help finding a job						
At baseline	4.1	4.4	-0.3	3.5	2.9	0.6 **
At month 18-month	5.9	5.9	0.0	5.5	5.5	0.0
At month 40	7.6	6.4	1.2 *	6.8	6.2	0.6
At month 54	6.2	5.4	0.9	4.7	4.4	0.3
Value of social network (contacts for jobs) ($)	33,866	31,652	2,214	19,221	18,065	1,156
Proportion who endured hardship (at month 40)						
Difficulties in paying for day-to-day expenses	21.8	22.1	-0.3	17.2	31.6	-14.4 ***
Unable to get groceries or food	9.4	13.6	-4.2 *	25.2	29.9	-4.7
Value of Hardship (for 36 months) ($)						
Difficulties in paying for day-to-day expenses	-22,237	-22,545	308	-11,295	-20,723	9,428 ***
Unable to get groceries or food	-10,884	-15,796	4,912 *	-18,747	-22,242	3,495
Sample size	**499**	**499**		**258**	**258**	

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey and administrative data.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

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

Rounding may cause slight discrepancies in sums and differences.

Net Benefits and Costs: Extended Model

EI Sample

Table 7.12 shows the summary of benefits and costs of the extended model among the EI sample. Foregone leisure reduces individuals' gain by $2,228, but it is not enough to eliminate the net benefit to individuals. If hardship reduction and improvements in social networks are also included, net benefits to program group members in the EI sample are nearly double those under the benchmark model at $10,459. Re-estimating the benefit-cost ratio suggests that for each dollar in net cost to government, EI program group members gain $0.40 while communities gain $0.81. Combining all net benefits and costs under the extended model, CEIP is a viable and cost-effective program aimed at EI beneficiaries. For each dollar in net cost to government, the net benefit to society is $1.21.

Table 7.12 Extended Model of Benefits and Costs per Program Group Member During Months 1–54 (EI Sample)

	Accounting Perspective			
	Individuals	**Community Organizations**	**Government**	**Society**
Total (Benchmark Model)	*5,561*	*21,221*	*-26,243*	*538*
Participants (Extended Model)				
Leisure forgone	-2,228	0	0	-2,228
Reduced hardship	4,912	0	0	4,912
Social capital	2,214	0	0	2,214
Community effects (Extended Model)				
Social cohesion (trust)	0	+	0	+
Social capital (network)	0	+	0	+
Total (Extended Model)	*10,459*	*>21,221*	*-26,243*	*>5,436*
Benefits per dollar of cost to Government				
To Individuals			>0.40	
To Communities			>0.81	
To Society			>1.21	

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey, three waves of the community survey, and administrative data.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

A + sign refers to a positive effect of the program but one whose value was not estimated or included in the analysis.

A > sign indicates that the benefit is likely greater than the value shown due to the exclusion of positive intangible benefits.

Rounding may cause slight discrepancies in sums and differences.

IA Sample

Table 7.13 shows the summary of benefits and costs of the extended model for the IA sample. Foregone leisure reduces individuals' gain by $4,352, while hardship reduction arising from CEIP increases benefits to individuals by $9,428. The total net benefit to IA program group members is about 50 percent higher under the extended model at $10,459. In other words, for each dollar in net cost to government, the net benefit to IA program group members is $0.65 while the net benefit to communities remains $0.96. Combining all net benefits and costs under the extended model, CEIP is an even more viable and cost-effective program aimed at IA recipients. For each dollar in net cost to government, the net benefit to society is $1.61.

Caution is urged in using the benefit-cost ratio as a means for judging a program's effectiveness. It is only one indicator whose usefulness depends on several factors not least of which are the methodology, analytic framework, and context of the program implementation. Though the benefit-cost ratio facilitates easy comparisons between programs they are only relevant to the extent that the underlying programs and analyses share characteristics. For CEIP, it is difficult to compare results to those of related programs, as few of the alternatives have been implemented with similarly rigorous cost-benefit analyses, particularly, in the context of an experimental design.

Nonetheless, earlier employment programs provide a starting point for comparisons. For instance, some community work experience or transitional jobs programs, which were often

made up of largely low-skilled work opportunities and with few links to community development, have been estimated to generate as little as $0.30 in net benefits per dollar of government expenditure. In contrast, other active labour market policies such as earnings supplements and financial incentives have been estimated to produce $1.50 in net benefits per dollar spent by government (Self Sufficiency Project, Michalopoulos, et. al. 2002).

Based on the conservative *benchmark* model, CEIP appears to fall somewhere in the middle, generating fewer benefits per dollar spent than some programs that used earnings supplements, but certainly more than some transitional employment programs. It should also be kept in mind that there are costs associated with taxation and any government expenditures. It has been estimated that a one dollar direct cash transfer translates into only $0.85 in net benefits for the intended recipient. Some argue that when comparisons between programs are difficult, this serves as a reasonable benchmark for identifying suitable uses of government funds. With a benefit-cost ratio in excess of 1.0 for each of the scenarios considered in this chapter, CEIP is a viable and efficient policy tool, as long as governments have dual policy objectives to support both unemployed individuals and communities.

Table 7.13 Extended Model of Benefits and Costs per Program Group Member During Months 1–54 (IA Sample)

	Accounting Perspective			
	Individuals	**Community Organizations**	**Government**	**Society**
Total (Benchmark)	*10,009*	*22,428*	*-23,390*	*9,048*
Participants (Extended)				
Leisure forgone	-4,352	0	0	-4,352
Reduced hardship	9,428	0	0	9,428
Social capital	+	0	0	+
Community effects				
Social cohesion (trust)	0	+	0	+
Social capital (network)	0	+	0	+
Total (Extended)	*>15,086*	*>22,428*	*-23,390*	*>14,124*
Benefits per dollar of cost to Government				
To Individuals			>0.65	
To Communities			>0.96	
To Society			>1.61	

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey, three waves of the community survey, and administrative data.

Notes: Annual discount rate is 5%.

All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

A + sign refers to a positive effect of the program but one whose value was not estimated or included in the analysis.

A > sign indicates that the benefit is likely greater than the value shown due to the exclusion of positive intangible benefits.

Rounding may cause slight discrepancies in sums and differences.

Summary

The above results indicate that CEIP is a viable program with a positive net present value for society. It is also a relatively cost-effective program with each dollar in government expenditures generating net benefits for society that were conservatively estimated at $1.02 among the EI sample and $1.39 among the IA sample. Under an extended model, which includes some of the intangible benefits and costs, such as social capital and foregone leisure, the efficiency of CEIP was even greater with a benefit-cost ratio of $1.21 and $1.61 from EI and IA participation, respectively..

The cost-benefit analysis, however, identifies that the net benefits to communities are substantially larger than the net benefits to participants and suggests that CEIP is costly and inefficient as a participant-focused project alone. It is, however, a viable and very efficient policy tool for achieving the *dual* goal of supporting unemployed individuals and vulnerable communities.

Chapter 8

Conclusions

This report has reviewed the effects of the Community Employment Innovation Project (CEIP) on participants and communities over a year after eligibility had ended and funding for jobs had ceased. It has addressed a number of important questions regarding the longer-term sustainability of impacts on participants and communities as well as the program's cost-effectiveness for governments. This chapter presents a concluding summary of these key findings by revisiting the central research questions of interest in the CEIP evaluation. A number of important policy implications are then offered and discussed, which are relevant to similar programs and job strategies that may implemented in partnership with communities.

Research Questions

CEIP was established in order to address five specific research questions related to the effectiveness of providing transfer payments to unemployed workers that are linked both to work and to desirable community outcomes. Two research questions deal with individuals, two with communities, and one regarding the overall cost or benefit of the program to society.

1. Will an offer of a significant period of stable employment on a series of community-based projects be attractive to unemployed workers?

A number of key observations help shed light on this question, including the initial take-up rate, the percentage who remain active in the program, the percentage who left and returned to Employment Insurance (EI) or Income Assistance (IA), and the extent of program satisfaction among participants. Results from CEIP lead to the following conclusions regarding the take-up and sustainability of interest in a long-duration, community-based jobs program.

Many in the target population are unlikely to be interested in an offer similar to CEIP, particularly EI beneficiaries, if wages are set at similarly low levels.

Approximately 20 per cent of the eligible EI and IA target populations who were mailed initial offers to learn more about CEIP eventually joined the study. Among the EI eligible group, most declined to attend an information session simply because they recently found a job or were expecting recall to a former employer. Among those who attended a session, however, only about two-thirds accepted the offer, with the most often cited reason for declining participation being the low CEIP wage. In contrast, among IA recipients, over 90 per cent of those who attended a session joined the program. Among those who declined the offer, reasons were primarily due to personal, family or health problems — and not due to program features.

Among volunteers, long-duration, community-based employment will be of continued interest as an alternative to EI and IA for the full length of program eligibility.

High rates of ongoing participation in CEIP and substantial program satisfaction tend to confirm the hypothesis that the offer was, in fact, of continued interest to the eligible group of volunteers. Furthermore, a very low percentage of program group members left CEIP during their eligibility to return to EI or welfare. As a result, large and sustained reductions in receipt of EI and IA benefits can be expected throughout the program.

2. Will individuals acquire work experience, skills, and social capital in ways that improve their post-program labour market outcomes and quality of life?

The second research question pertains to the impacts of the program on participants, which itself addresses a two-part hypothesis. Specifically, CEIP sought to provide a stable period of meaningful work experience, in varied positions, in order for individuals to preserve and possibly improve their skills and social capital. In turn, this enhanced experience and larger networks were hoped to improve longer-term, post-program labour market outcomes and quality of life. It was uncertain, however, whether CEIP could improve skills and networks and whether this would increase post-program employment in an economically depressed area.

During the eligibility period, CEIP led to substantially higher rates of full-time work, increased employment duration, and a larger number of jobs held — often in higher-skilled positions — thereby providing more substantial and varied work experience.

Results suggest that not only are participants interested in community work as an alternative to transfer receipt, but also that it will, in fact, produce substantial incremental impacts on employment and earnings, over and above what would have occurred without the program. These incremental gains in employment and earnings are sustainable throughout a long-duration eligibility, with little incidence of return to EI or IA transfer receipt, even among those with the least employability at the outset.

Furthermore, CEIP was successful not only in increasing employment rates, but also in shifting some EI and IA program group members into occupations that were higher skilled than jobs they would have otherwise held. In addition, the program appears to have achieved a balance by providing them varied and multiple job opportunities, while also improving the duration of a primary job held. This afforded many program group members more varied work experience and increased job stability.

However, CEIP's positive effects on employment rates and earnings were not sustained, with no observed impact over a year after the end of program eligibility.

Members of both EI and IA program groups experienced dramatic decreases in employment immediately after CEIP, leading to negative impacts on employment rates early in the post-CEIP follow-up period. The negative impacts were not sustained, however, as the employment rates of program group members quickly caught up to control group members, resulting in no significant differences in full-time employment rates or earnings, a full four and a half years after participants entered the program.

Nonetheless, CEIP appears to have had modest improvements in the quality of post-CEIP jobs, in terms of the skill levels of positions, as well as sustained increases in participants' transferable skills and positive attitudes towards work.

Although many participants were unable to find employment immediately after the end of their eligibility, 54-month results indicate that those who did were able to secure higher-skilled jobs than they otherwise would have in the absence of CEIP. Positive impacts on post-CEIP job skill levels were also accompanied by small improvements in program group members' transferable skills and attitudes towards work. Among the EI program group, CEIP produced positive effects on measures of persistence, lifelong learning, adaptability, and systems thinking. Among IA program group members, there was a positive effect of CEIP on a sense of responsibility and receptiveness to continuous life-long learning. This suggests that community-based employment, even in the context of relatively low-skilled jobs and with no formal training mechanisms, can have long-lasting effects on participants' skill sets and attitudes towards work.

Sustained reductions in the receipt of IA benefits – over three years after the end of the program – are further indicative of notable improvements in employability and stronger links to the labour market.

A majority of program group members initially established an EI claim immediately after the end of CEIP eligibility. Among EI sample members, the increase was short lived, however, with no difference in rates of receipt of EI between program and control groups by 54 months. In contrast, among IA program group members there was a sustained decrease in IA receipt among program group households, where their rate remained below that of the control group by over 12 percentage points through 72-months after enrolment in the study. This was accompanied by increased rates of EI receipt in the post-CEIP period of about 8 percentage points, suggesting that CEIP resulted in long-term shifts away from welfare reliance to a combination of employment and EI receipt – indicative of a much stronger link to the labour market.

At the same time, CEIP led to improvements in social capital for program group members, some of which were sustained over a year after the end of eligibility.

Throughout the program, CEIP helped program group members develop their social networks, particularly "bridging" contacts, providing access to support for employment and specialized forms of advice. It also led to the development of weaker ties and improved the structure of networks among the EI and IA program groups with substantial reductions in network density.

However, these impacts were diminished after the program ended, particularly for IA program group members, with most impacts no longer present at month 54. Among the EI sample, even though the magnitude of some impacts diminished, several persisted, including increased access to specialized advice and job contacts, among those with at least a high school diploma. EI program group members also continued to be more likely to have developed multiple indicators of enhanced social capital over a year after the end of the program.

> *CEIP also led to increases in job search activity, use of social networks, and most notably, formal volunteering among the EI and IA program group members, which were sustained over a year after the program ended.*

Although program group members were not successful in achieving higher post-program employment rates, CEIP influenced the extent to which they were looking for work, were utilizing their social networks, and were engaged in unpaid volunteering. Most notably, the impacts on formal volunteering through community organizations, which were present throughout the eligibility period, persisted through 54 months. CEIP led to an increase in the percentage of both EI and IA program group members who were engaged in any formal volunteering. Furthermore, a sustained increase was observed in the average hours of volunteering per month in the IA program group and the number of organizations for which the EI program group volunteered.

> *Most of CEIP's additional positive effects on income, hardship, and well-being experienced throughout the program, have not remained following the end of eligibility.*

Throughout the program, CEIP reduced the severity of poverty and financial hardship among the EI and IA program group households. At the same time, program group members, particularly in the EI sample, reported increased levels of satisfaction with life. With the end of CEIP eligibility and the associated decline in employment and earnings, however, most positive effects on income, hardship, and quality of life measures were eliminated. Program group members in the EI and IA samples reported similar levels of household income to their respective control groups by the 54-month mark. Few differences in hardship were apparent and no impacts on the incidence or severity of poverty were observed. Nonetheless, modest sustained increases in life satisfaction were present among EI program group members.

3. Can communities generate worthwhile projects that provide meaningful work opportunities for unemployed workers?

Results suggest that communities can effectively engage, organize, and mobilize their resources to develop projects that provide not only meaningful employment for participants, but also address a range of locally identified community development needs. Each community successfully organized functional representative boards and prepared strategic plans to guide project development that were largely consistent with community priorities. Most communities were successful in engaging and mobilizing both residents and organizations to participate in this process to, at least, some extent. Results, however, also suggest the importance of existing capacity and, possibly, minimum thresholds for population and size of the third sector for successful engagement and mobilization.

Evidence also suggests that, with the limited capital support and the relatively short timelines for project development inherent in CEIP's program model, communities will largely rely on existing organizations in the non-profit and voluntary sectors to develop projects. Although some new partnerships were formed, most community projects were extensions of existing operations of non-profits. Nonetheless, these projects were successful in providing meaningful employment for participants in terms of the skill-level of jobs offered and the varied nature of work provided. Contrary to traditional programs of direct job

creation, where uniformly low-skilled jobs are typically the norm, CEIP provided a range of occupations in both medium- and high-skilled positions.

4. Will the process of planning for and operating projects contribute to local capacity growth and longer-term community development by strengthening the social and market economies?

Results from the community effects study indicate a preponderance of positive changes in program communities and improvements in local capacity and social conditions, largely consistent with expectations. Positive changes were more prominent in program communities that had more success in the organization and mobilization of local resources and in the development of CEIP projects, even though few changes in market conditions can be reliably linked to CEIP.

Positive effects on the capacity of project-sponsoring organizations were the most readily apparent. The multi-year availability of CEIP workers was reported to provide support for the missions of project-sponsoring organizations and to help them engage in longer-term planning than they otherwise would have been able to realize under a single-year, renewable grants program. CEIP appears to respond to two central needs of non-profits: availability of human resources and flexible, longer-term funding arrangements.

In addition to organizational capacity, CEIP also appears to have generated improvements in a number of other outcomes critical to community capacity. Evidence suggests that residents in program communities have improved their social capital, including the structure of their social networks and the links to resources within them, relative to comparison sites. Social cohesion has also increased to a greater extent on a least one measure — improvements in generalized trust among residents — in most program communities. Furthermore, larger improvements in a number of participation- and access-based measures of social inclusion were observed in program communities. In addition to directly increasing community involvement while local boards were being organized, CEIP may also have encouraged further associational activity and membership in community organizations to at least some extent.

Although this study detects little definitive effect of CEIP on aggregate market outcomes at a community level, the positive effects on voluntary sector organizations, social capital of residents, and to a lesser extent on cohesion and inclusion are noteworthy. Although each is important in their own right as a measure of social conditions in communities, they are also significant components of broader community capacity. Improvements in any of these areas could "grease the wheels" of the social economy and provide support for future community development efforts.

5. Is CEIP a cost-effective means of increasing the employability of transfer recipients and contributing to the development of economically depressed communities?

Results from the cost-benefit analysis demonstrate that CEIP led to net gains for participants, in both the EI and IA samples, for communities, and for society as a whole. Even under a very conservative "benchmark" model, CEIP led to positive net present values.

Over the 54-month follow-up period, EI program group members gained an average of approximately $5,500, while IA program group members gained nearly double at over $10,000. Benefits to communities arising from either EI or IA recipients' participation were about the same at about $22,000 per program group member. The combined net benefits to individuals and communities were therefore approximately $27,000 and $32,000, arising from each EI and IA program group member, respectively.

Nonetheless, there was an incremental cost to government for CEIP wages and program administration. After accounting for the increased taxes from earnings and reduced receipt of transfers, however, it only cost $26,000 and $23,000 per EI and IA program group member, respectively. This results in a positive net present value for society as whole, for both samples, even though net benefits from IA participation are substantially higher. Under the conservative benchmark model, EI participation leads to a net benefit to society — over and above the expenditure by government — of less than a $1,000 per program group member over the 54-month follow-up period. In contrast, IA participation produces over $9,000 in net benefits to society over and above the expenditure by government. Under the extended model, which includes some of the intangible benefits and costs such as social capital and foregone leisure, net benefits to society are about $5,000 per EI program group member and about three times greater, at over $15,000, per IA program group member.

Most importantly, compared to direct cash payments as well as other government transfer programs, CEIP was very cost-efficient when considering the combined net benefits to participants and communities. It has been estimated that for every dollar that government spends on direct cash transfers only about $0.85 in net benefits are produced. Some earlier transitional jobs programs have fared much worse, generating as little as $0.30 in net benefits for every dollar in government expenditure. In contrast, CEIP resulted in significantly greater net benefits to individuals and communities for every dollar in government expenditure. From EI sample members' participation, every dollar that government spent on CEIP produced $1.02 in net benefits for society. IA sample members' participation was even more cost-efficient, where every dollar spent generated combined net benefits for individuals and communities of $1.39. Under the extended model, the efficiency of CEIP was even greater with net benefits of $1.21 and $1.61 for every dollar in government expenditure for EI and IA recipients' participation, respectively.

Policy Implications

Results from the evaluation of CEIP provide significant new evidence about the merits of locally driven employment programs that are implemented in partnership with communities, and that aim to utilize the social economy. These findings have important implications for policy decisions from the perspective of programs for both unemployed individuals as well as those that aim to support communities. This section offers several insights for policymakers about what similar community-based employment programs and related policy tools can be expected to achieve, who they might best be targeted to, and how they should be implemented to maximize their value.

Community-based employment can be an attractive option for many EI and IA recipients, helping them maintain their link to the labour market while contributing to local communities.

CEIP has demonstrated that community-based employment provides transfer recipients with a stable income, reducing poverty and hardship in ways that allows them to maintain their link to the labour market and gain significant work experience while also contributing to local communities. Irrespective of its limited effects on longer-term, post-program employment levels, CEIP can be viewed as an effective program of redistribution in its own right. It is an attractive alternative to conventional income support transfers, evidenced in the high, ongoing participation rates, significant program satisfaction, and a very low rate of return to EI or IA receipt during CEIP program eligibility.

Community organizations in the social economy can provide "meaningful" employment that leads to modest improvements in participants' job quality, skills, and attitudes towards work.

CEIP tested the notion that communities could utilize the social economy to provide a range of "meaningful" work opportunities for participants. Although arguably any job is better than no job, the underlying goal was to provide opportunities to preserve, and possibly enhance, participants' employability. Many previous programs, with shorter timelines, limited support, and a lack of local control or third-sector focus, tended to offer positions with little chance for skill development, in uniformly low-skilled transitional jobs (Roy & Wong, 1998). In contrast, results from CEIP's program model suggest that communities can create a wider range of jobs, focused in the voluntary sector, which, for many, were in higher-skilled positions than they would have held in the absence of the program. This also leads to improvements in their generic skills, which are transferable to an array of jobs, beyond those provided throughout the program.

However, in economically depressed areas, CEIP also demonstrates that these employability gains will not result in higher post-program employment rates, at least in the year following the end of the program. Nonetheless, they lead to modest improvements in participants' post-program job quality, in terms of the skill-levels of positions held, which may lead to longer-term wage gains. The increases in transferable skills are also sustainable and attitudes towards work improved, providing further evidence of the efficacy of community employment in the third sector as a means to preserve employability.

Governments can have a role in developing social capital for unemployed individuals, in partnership with communities, through similar locally driven employment initiatives.

Although social capital has gained significant attention among policy makers and academics, few studies to date have actually demonstrated — through a rigorous evaluation, and with a clear definition — that a specific policy measure or program can, in fact, enhance social capital. Results from CEIP demonstrate that governments can encourage the development of social capital of unemployed individuals, in partnership with communities, through a jobs strategy like CEIP. In particular, a longer-duration program of community-based employment, with strong local involvement and control, may help expand participants

"bridging" contacts and improve the structure of their social networks in ways that provide better and sustained connections to the labour market.

Community-based employment, when focused largely in the voluntary sector, can encourage increased longer-term volunteering and higher levels of local involvement.

With employment primarily in the non-profit voluntary sector, a community-based jobs strategy may help facilitate a greater awareness of volunteerism among participants and possibly a commitment to similar altruistic missions as that of the organizations in which they work. This can result in substantial increases in volunteering activity, which, for CEIP, was sustainable in the longer term over a year after the program ended. This is important for both individuals and communities, as it provides an important resource for local organizations, and for the volunteer, it serves as another link to employment, community, and greater levels of social inclusion.

Benefits to communities are likely to be substantial, with increased capacity in the under-resourced voluntary sector, and, in turn, with positive effects for the priority areas and local groups that they serve.

Evidence from CEIP suggests that communities will largely utilize and support existing non-profit organizations in the voluntary sector. By requiring community oversight of project development, the subsidized labour is often focused in areas that are under-resourced and consistent with wider community priorities. This effective targeting of resources, along with their multi-year availability, significantly increases the capacity of project-sponsoring organizations to carry out their missions. As a result, large positive community effects can be expected for those sectors and groups served by sponsors, which are often under-serviced without the program and at risk of social exclusion. A range of positive effects are likely, which have been estimated — conservatively — to be three times as large as the incremental benefits accruing to participant workers.

Community-based employment can be a suitable policy tool from a cost-benefit perspective only if one has dual objectives to provide support for both unemployed workers and vulnerable communities.

The benefits to communities significantly outweigh those to participant workers, in large part, because there are few costs or foregone benefits to communities from their involvement with CEIP. In contrast, many participants would have worked in the absence of CEIP, which decreases the incremental benefit that the program has for them, particularly, among the more employable EI sample. As a result, the relative efficiency of a community-based jobs strategy (how much government has to spend to generate every dollar in extra benefits) depends greatly on the value of those jobs to communities, in particular, for third-sector organizations, and, in turn, for those that they serve.

If governments are only interested in participant outcomes, CEIP's program model is a costly and inefficient program, with every dollar in expenditures generating less than $0.50 in participant benefits. With the incremental value, however, that those participants generate for communities, even when estimated conservatively, makes CEIP a highly efficient way of providing dual support for participants and communities. Overall, CEIP produces a larger net

gain, particularly when aimed at IA participants, where each dollar in net costs to government produces nearly $1.40 in net benefits to society.

Community-based employment may be best targeted to longer-term unemployed individuals, as they work less in the absence of the program, leading to substantially larger net benefits.

The added value that a community-based employment program can generate for society arises, in large part, from the incremental work that is performed from participants who would otherwise have been unemployed or under-employed. Offering community-based employment as an option to longer-term unemployed individuals on IA can be expected to produce greater net benefits for society. A striking result from CEIP tends to confirm that not only do IA participants achieve a greater net benefit themselves compared to EI participants, but their work also appears to contribute a similar value to communities.

However, given that CEIP involved the parallel recruitment of both EI beneficiaries and IA recipients, who were often assigned on the same projects, there may be significant positive effects of having more employable participants working alongside longer-term unemployed individuals. In addition to possible positive normative effects on the perceptions and attitudes of workers, project-sponsoring organizations may have been able to "leverage" the more employable participants to support the less experienced participants. It is possible that higher skilled jobs for IA participants would not have been generated, or performed as productively, to the same extent in the absence of more experienced EI participants.

Results from CEIP cannot be generalized to mandatory work programs, transitional job initiatives, those that lack any local oversight and third-sector involvement, or programs without ongoing support for participants.

CEIP tested a very specific model of community-based employment, which was implemented in partnership with communities and local oversight for project development. Jobs were generated largely through the voluntary sector, were often higher-skilled, and longer-duration than most transitional work programs. CEIP was also a voluntary program, and in many respects, quite flexible. Participants could turn down the offer, without repercussion, or could leave subsequent to joining, either permanently, or temporarily to pursue other work, education, or training. CEIP also included extensive support for participants in the form of job-readiness training, job-matching, and ongoing case (participant) management. Results from CEIP should not be generalized to programs that share few of these features. Most notably, CEIP results do not speak to mandatory "workfare" programs or transitional jobs initiatives involving short-term transitory work placements.

CEIP's program model represents a promising approach that could form the basis of a voluntary yet permanent policy option, made available alongside conventional transfer programs.

Particularly for long-term unemployed individuals, community-based employment could provide a valuable ongoing alternative to traditional income support programs. It would serve not as a replacement for existing programs, but as one additional policy tool for governments to implement in support of current measures. For instance, such a policy could be implemented as

permanent option available to long-term IA recipients. CEIP results suggest that a program offering long-term unemployed individuals an option of employment within local communities, even at relatively low wages, would not only be attractive to a significant portion of IA recipients, but it would also help reduce hardship, preserve transferable skills and social networks, and provide substantial support to communities. The cost-effectiveness of this type of permanent program, however, would depend on the extent to which it encouraged increased use of IA ("entry-effects"). If the entry effects could be minimized —by restricting eligibility to IA recipients who have spent a year or more on IA — then CEIP's cost-benefit results may be more applicable, suggesting that such a program would be another cost-effective policy tool that governments could use to support traditional transfer programs.

Appendices

Five appendices are included in this report.

Appendix A gives an analysis of the response bias of the 54-month report sample. Since only 1,094 of all potential 1,522 enrollees completed the final participant survey, the appendix determines whether the omission of 28 per cent of the original baseline sample has affected the reliability of the estimates in this report.

Appendix B produces a set of unadjusted impacts that were not included in the report. Additional impacts include estimates of average monthly earnings in each quarter of the Community Employment Innovation Project (CEIP), cumulative estimates of earnings, hours worked, months with employment, average number of jobs held in the 54-month follow-up period, duration of the main job held during the follow-up period, impacts on household Low-Income (LICO) status, average monthly Employment Insurance (EI) and Income Assistance (IA) benefits by quarter, personal finance (savings and debt), and measures of future expectations, health, and life satisfaction.

Appendix C provides regression-adjusted impact estimates for all outcomes presented in this report. It reviews the basic approach and rationale for using regression-adjusted impacts and compares their value to unadjusted impacts followed by a summary of some of the key differences between the two sets of estimates.

Appendix D examines a set of key impacts across a series of subgroups that have been constructed using baseline characteristics of the survey sample. Since the main body of the report focuses on the average effects of CEIP on sample group members, this appendix illustrates to what extent these are concentrated among certain subgroups of the sample or whether certain subgroups were affected by CEIP even when, on average, most program group members were not.

Appendix E provides technical details for the cost-benefit analysis provided in Chapter 7. It also provides a sensitivity analysis to determine how CEIP's benefits and costs vary according to the choice of discount rate used in the analysis.

Appendix A

Analysis of Non-Response Bias
in the 54-Month Report Sample

The focus of this report is the respondents who completed the 54-month follow-up survey, referred to as the 54-month report sample. As expected, not all 1,522 enrollees completed the final participant survey, which occurred approximately four-and-a-half years after their enrolment into the Community Employment Innovation Project (CEIP). From the original sample, 765 Employment Insurance (EI) sample members (408 program group, 357 control group) and 329 IA sample members (169 program group, 160 control group) responded to the survey, for a total of 1,094 respondents, representing a 72-per-cent survey response rate from the original baseline sample.

This appendix examines non-response bias in the 54-month sample to determine whether the omission of 28 per cent of the original baseline sample may affect the reliability of the estimates in this report. If any observed differences in characteristics between the baseline sample and 54-month report sample vary across program and control groups, then non-responses bias may affect the reported results. If sample attrition is equally spread across the two groups, however, then non-response bias is unlikely.

Baseline Characteristics of the Report Sample

Tables A.1 and A.2 present a comparison of the baseline characteristics of the original baseline sample and the 54-month survey sample, respectively. EI and IA sample members are shown separately. Comparing the baseline characteristics across the two subgroups (columns 1 and 2 in each table), EI respondents are more likely than IA sample members to be male, older (with an average age of over 40 compared to approximately 36 among the IA sample) and have at least a high school diploma. They are nearly twice as likely to be married and are more likely to have no children living in their household. While nearly three-quarters of both EI and IA sample members have lived in Cape Breton their entire lives, EI sample members are much more likely to have lived longer at their current address. EI sample members also tend to have nearly 10 more years of paid work experience than their IA sample counterparts and have a higher household income — while over half of IA sample members made less than $10,000 in the year before their baseline interview, over half of EI sample members made $20,000 or more. At baseline, EI sample members tended to be more likely to volunteer in some capacity.

As was illustrated in Greenwood et al. (2003), random assignment was implemented successfully without any systematic differences between program and control groups. Some differences did arise due to sampling variation, including a smaller proportion of EI program group members who were female and who had a lower household income, and among IA

program group members, a higher proportion of who lived in Cape Breton all their lives, had a higher household income, and who did not volunteer on behalf of an organization. The differences, however, were deemed insufficient to lead to any systematic bias in observed impacts among the sampled population. Still, non-response in the follow-up surveys may exacerbate pre-existing differences in the baseline sample and therefore these differences need to be reassessed in the 54-month report sample.

Any new differences that arise in the 54-month report sample are provided in column 6 of tables A.1 and A.2, with the differences among non-respondents provided in column 9, with the final column in each table providing a test of whether discrepancies between program and control groups are different for respondents and non-respondents. A summary of any significant differences between both samples is provided in the next section.

EI Sample Differences at Month 54

Overall, sample attrition in the 54-month survey has not led to substantial differences between the program and control groups that raise concerns about sampling bias. In most cases, attrition has led to some exacerbation of pre-existing differences rather than overall systematic differences between the two sub-samples over the four-and-a-half year period. For instance, the proportion of women in the program group compared to the control group decreased in the 54-month survey sample to 6.8 percentage points, significant at the 10-per-cent level, even though this difference is not as exaggerated as at month 40.

The extent to which group members are more likely to report an activity limitation also increased, from 3.8 to 6.5 percentage points, significant at the 5-per-cent level, nearly double the difference within the baseline sample. Program group members in the 54-month sample had an increased likelihood of living in households with no children by 6.5 percentage points, significant at 10-per-cent level, and single person households by 3.8 percentage points, significant at the 5-per-cent level. Both differences were not significant at baseline. They are also more likely to live in higher-income household with an annual income above $30,000 (9.4 percentage points, significant at the 1-per-cent level, compared to a difference of 7.1 percentage points at baseline). The difference in the program group's number of contacts observed at baseline persists at the same magnitude in the 54-month sample, while the baseline differences in the age of the respondent's youngest child are smaller and not significant at month 54.

The analysis of non-response of EI sample members identifies a few instances where there are significant differences between respondents and non-respondents, even though the results do not indicate systematic differences between the program and control group members in the 54-month sample. Apart from household income and single person households, the differences between the program and control groups in the 54-month sample are diminished compared to the 40-month sample.

IA Sample Differences at Month 54

Overall, attrition in the IA sample by the 54-month survey has led to fewer differences between the respective program and control groups when compared to the EI sample. 54-month survey respondents are more likely to report having lived in Cape Breton all their lives. The difference between the program and control groups, however, is not significant. Similarly, 54-month survey respondents are more likely to report having higher household income (at the $20,000–30,000 level compared to the $10,000–20,000 level), which does not translate into significant differences between the program group and control groups.

Program group members in the IA sample are more likely to live in larger households than the control group (an 8-percentage-point increase in households of four or more persons) while being 11.8 percentage points less likely to live in 2-3 person households. The differences are significant at the 5- and 10-per-cent significance thresholds, respectively, and both were not significant in the baseline sample. Similar to the baseline sample, program group members in the IA sample are less attached to Cape Breton than their control group counterparts are, being 9.2 percentage points more willing to move outside of Cape Breton for work, and 7.4 percentage points more willing to move part of each year for a job — significant at the 5- and 10-percentage-point thresholds, respectively. While the above differences in the IA sample are larger in magnitude and in some cases more significant than the differences reported at month 40, the difference in educational attainment observed in the 40-month sample is not significant at month 54.

Table A.1 Comparison of Characteristics of Baseline and 54-Month Survey Cross-Sectional Samples (EI Sample)

	Baseline Research Sample			54-Month Survey Sample			54-month Non-Respondents			
	Program	Control	Impact	Program	Control	Impact	Program	Control	Impact	Difference from Respondents
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9-6)
IA history										
Average number of months of IA in last 12 months	6.1	6.1	0.0	6.1	6.3	-0.2	6.1	5.6	0.5	0.7 n.s.
Average monthly IA payment in month of random assignment ($)	849	866	-17	849	843	6	849	937	-89	-94.7 n.s.
Work history										
Years worked at paid job since the age of 16	18.3	17.8	0.4	19.3	18.3	1.0	12.6	16.4	-3.8 **	-4.8 †††
In paid work at baseline (%)	19.6	17.0	2.6	19.6	17.9	1.7	19.2	14.1	5.2	3.5 n.s.
Personal characteristics										
Female (%)	39.5	43.7	-4.2	41.3	48.1	-6.8 *	29.5	29.8	-0.3	6.6 n.s.
Age when selected	40.3	40.4	-0.1	41.3	41.1	0.2	34.7	38.0	-3.3 **	
Single/separated/divorced/widowed at baseline (%)	42.5	41.2	1.3	38.7	35.3	3.4	62.8	59.5	3.3	-0.1 n.s.
Activity limitations or fair/poor health at baseline (%)	29.9	26.1	3.8	33.3	26.7	6.5 **	11.5	24.0	-12.4 **	-19.0 †††
Less than high school education (%)	31.5	30.5	1.0	31.4	28.9	2.5	32.1	35.5	-3.5	-6.0 n.s.
10 or more contacts at baseline (%)	37.0	43.7	-6.7 **	37.0	43.7	-6.7 *	37.2	43.8	-6.6	0.0 n.s.
Time lived in Cape Breton (%)										
Less than 10 years	4.4	4.8	-0.4	5.0	4.3	0.8	1.3	6.6	-5.3 *	-6.1 †
More than 10 years	95.6	95.2	0.4	95.0	95.7	-0.8	98.7	93.4	5.3 *	6.1 †
All my life	75.2	76.4	-1.3	75.4	77.6	-2.2	74.0	72.7	1.3	3.5 n.s.
Years lived at current address (%)										
Less than 1	11.8	13.4	-1.6	11.0	10.8	0.1	16.7	21.5	-4.8	-4.9 n.s.
1–4	19.7	19.8	-0.2	19.8	19.3	0.5	19.2	21.5	-2.3	-2.7 n.s.
5–9	9.8	13.0	-3.2	9.3	13.0	-3.7 *	12.8	13.2	-0.4	3.3 n.s.
10 or more	58.6	53.7	4.9	60.0	56.9	3.1	51.3	43.8	7.5	4.4 n.s.
All my life	14.9	13.2	1.6	14.5	13.8	0.8	16.7	11.6	5.1	4.3 n.s.
Household characteristics (%)										
Children in houshold										
0	57.5	53.1	4.4	59.1	52.6	6.5 *	48.7	54.5	-5.8	-12.3 n.s.
1–2	37.1	39.7	-2.6	34.9	40.7	-5.8 *	48.7	36.4	12.4 *	18.2 ††
3 or more	5.4	7.2	-1.8	5.9	6.6	-0.7	2.6	9.1	-6.5 *	-5.9 n.s.
Age of youngest child in household										
Less than 3	16.1	16.7	-0.6	15.8	14.5	1.3	17.5	23.6	-6.1	-7.4 n.s.
3–5	14.2	22.2	-8.0 **	13.5	19.6	-6.1	17.5	30.9	-13.4	-7.3 n.s.
6–12	35.1	24.8	10.3 **	31.6	28.5	3.1	50.0	12.7	37.3 ***	34.2 †††
13–17	32.7	35.0	-2.3	38.0	36.9	1.1	10.0	29.1	-19.1 **	-20.2 ††
Number of people in household										
1	8.0	6.6	1.4	8.3	4.5	3.8 **	6.4	13.2	-6.8	-10.6 ††
2–3	56.3	59.9	-3.6	55.8	61.4	-5.6	59.0	55.4	3.6	9.2 n.s.
4 or more	35.7	33.5	2.2	35.9	34.1	1.7	34.6	31.4	3.2	1.5 n.s.
Household income										
Less than $10,000	11.7	9.9	1.8	10.7	9.3	1.5	16.7	11.9	4.8	3.3 n.s.
$10,000–20,000	32.4	30.4	2.0	31.0	28.0	3.0	39.7	38.1	1.6	-1.4 n.s.
$20,000–30,000	24.5	21.2	3.4	25.5	20.6	4.9	19.2	22.9	-3.7	-8.6 n.s.
$30,000 or more	31.4	38.5	-7.1 **	32.7	42.1	-9.4 ***	24.4	27.1	-2.8	6.6 n.s.
Attitudes towards work (%)										
Will take additional training to improve job prospects	97.2	98.0	-0.8	97.1	97.6	-0.5	97.4	99.2	-1.7	-1.2 n.s.
Will move permanently outside Cape Breton in order to get a job	17.5	17.4	0.1	16.4	16.6	-0.2	23.7	20.0	3.7	3.9 n.s.
Will move part of each year in order to get a job	29.8	27.4	2.4	29.0	24.5	4.4	34.2	36.5	-2.3	-6.7 n.s.
Will work for a lower wage in order to get a job	50.9	51.3	-0.4	53.7	50.4	3.3	36.4	54.2	-17.9 **	-21.2 †††
Will work in a different occupation or industry in order to get a job	91.9	90.4	1.5	92.8	91.6	1.1	87.0	86.4	0.6	-0.6 n.s.
Volunteer activities										
Volunteered on behalf of group or organization	50.9	54.4	-3.5	52.7	57.0	-4.3	41.0	46.3	-5.3	-1.0 n.s.
Volunteered informally	88.6	85.9	2.6	88.1	85.9	2.2	91.0	86.0	5.1	2.9 n.s.
Sample size	**499**	**499**		**421**	**378**		**78**	**121**		

Sources: Calculations based on baseline and 54-month survey data and EI administrative records.

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

Two-tailed t-tests were applied to differences between the program and control groups, and to the differences between the 54-month report sample and the baseline research sample. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Table A.2   Comparison of Characteristics of Baseline and 54-Month Survey Cross-Sectional Samples (IA Sample)

	Baseline Research Sample			54-Month Survey Sample			54-month Non-Respondents			
	Program	Control	Impact	Program	Control	Impact	Program	Control	Impact	Difference from Respondents
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9-6)
IA history										
Average number of months of IA in last 12 months	10.4	10.5	-0.1	10.5	10.7	-0.1	10.1	10.0	0.1	0.2 n.s.
Average monthly IA payment in month of random assignment ($)	525	506	19	528	526	2	517	463	54	51.2 n.s.
Work history										
Years worked at paid job since the age of 16	7.6	8.4	-0.9	7.9	7.9	0.0	6.8	9.4	-2.7 *	-2.7 n.s.
In paid work at baseline (%)	14.3	15.8	-1.5	13.6	17.4	-3.8	15.8	12.3	3.4	7.2 n.s.
Personal characteristics										
Female (%)	60.1	63.6	-3.5	65.2	71.4	-6.3	48.8	47.0	1.8	8.0 n.s.
Age when selected	35.6	35.9	-0.3	36.2	36.1	0.1	34.3	35.3	-1.0	
Single/separated/divorced/widowed at baseline (%)	78.8	84.0	-5.2	78.9	84.5	-5.6	78.8	83.1	-4.4	1.2 n.s.
Activity limitations or fair/poor health at baseline (%)	36.8	32.6	4.3	38.8	34.3	4.5	32.5	28.9	3.6	-0.9 n.s.
Less than high school education (%)	42.1	36.6	5.6	41.5	34.3	7.2	43.6	41.5	2.1	-5.1 n.s.
10 or more contacts at baseline (%)	32.7	31.9	0.8	34.3	32.2	2.1	29.1	31.3	-2.2	-4.3 n.s.
Time lived in Cape Breton (%)										
Less than 10 years	4.3	5.4	-1.1	5.1	5.1	-0.1	2.5	6.0	-3.5	-3.5 n.s.
More than 10 years	95.7	94.6	1.1	94.9	94.9	0.1	97.5	94.0	3.5	3.5 n.s.
All my life	75.1	67.8	7.3 *	78.0	72.0	6.0	68.8	59.0	9.7	3.7 n.s.
Years lived at current address (%)										
Less than 1	24.4	24.4	0.0	21.9	17.7	4.2	30.0	38.6	-8.6	-12.8 n.s.
1–4	37.6	32.2	5.4	39.3	36.0	3.3	33.8	24.1	9.7	6.3 n.s.
5–9	12.0	16.3	-4.3	10.1	17.7	-7.6 **	16.3	13.3	3.0	10.6 n.s.
10 or more	26.0	27.1	-1.2	28.7	28.6	0.1	20.0	24.1	-4.1	-4.2 n.s.
All my life	10.9	10.5	0.4	13.5	10.3	3.2	5.0	10.8	-5.8	-9.0 †
Household characteristics (%)										
Children in houshold										
0	41.2	34.9	6.4	39.5	27.4	12.1 **	45.0	50.6	-5.6	-17.7 †
1–2	47.5	51.2	-3.7	49.7	57.7	-8.0	42.5	37.3	5.2	13.1 n.s.
3 or more	11.3	14.0	-2.7	10.7	14.9	-4.1	12.5	12.0	0.5	4.6 n.s.
Age of youngest child in household										
Less than 3	25.0	21.4	3.6	24.1	20.5	3.6	27.3	24.4	2.9	-0.7 n.s.
3–5	21.1	24.4	-3.4	19.4	25.2	-5.8	25.0	22.0	3.0	8.8 n.s.
6–12	32.2	32.1	0.1	32.4	33.1	-0.7	31.8	29.3	2.6	3.2 n.s.
13–17	19.1	20.2	-1.2	20.4	19.7	0.7	15.9	22.0	-6.0	-6.7 n.s.
Number of people in household										
1	11.3	12.0	-0.7	10.1	6.3	3.8	13.9	24.1	-10.2	-14.0 ††
2–3	58.4	61.6	-3.3	56.7	68.6	-11.8 **	62.0	47.0	15.0 *	26.9 †††
4 or more	30.4	26.4	4.0	33.1	25.1	8.0 *	24.1	28.9	-4.9	-12.9 n.s.
Household income										
Less than $10,000	56.6	60.7	-4.1	56.2	56.0	0.2	57.5	70.7	-13.2 *	-13.4 n.s.
$10,000–20,000	36.0	35.8	0.2	34.8	40.6	-5.7	38.8	25.6	13.1 *	18.9 ††
$20,000–30,000	4.3	2.7	1.5	5.6	2.3	3.3	1.3	3.7	-2.4	-5.7 †
$30,000 or more	3.1	0.8	2.3 *	3.4	1.1	2.2	2.5	0.0	2.5	0.3 n.s.
Attitudes towards work (%)										
Will take additional training to improve job prospects	95.7	98.4	-2.8 *	94.9	97.7	-2.8	97.5	100.0	-2.5	0.3 n.s.
Will move permanently outside Cape Breton in order to get a job	23.2	16.7	6.5 *	21.1	11.8	9.2 **	27.8	26.5	1.3	-7.9 n.s.
Will move part of each year in order to get a job	25.6	23.8	1.8	24.6	17.2	7.4 *	27.8	37.3	-9.5	-16.9 ††
Will work for a lower wage in order to get a job	41.9	40.9	1.0	38.9	36.6	2.3	48.6	49.4	-0.7	-3.0 n.s.
Will work in a different occupation or industry in order to get a job	89.9	87.3	2.5	91.5	86.3	5.1	86.3	89.5	-3.2	-8.3 n.s.
Volunteer activities										
Volunteered on behalf of group or organization	44.7	52.9	-8.2 *	46.9	53.1	-6.3	40.0	52.4	-12.4	-6.2 n.s.
Volunteered informally	86.4	84.1	2.3	87.6	84.0	3.6	83.8	84.3	-0.6	-4.2 n.s.
Sample size	**258**	**258**		**178**	**175**		**80**	**83**		

Sources: Calculations based on baseline and 54-month survey data and IA administrative records.

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

Two-tailed t-tests were applied to differences between the program and control groups, and to the differences between the 54-month report sample and the baseline research sample. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Table A.3   Impacts on EI Receipt and Payments, by Respondents and Non-Respondents (54-Month Cross-Sectional EI Sample)

	Baseline Research Sample			54-Month Survey Sample			54-month Non-Respondents			
	Program	Control	Impact	Program	Control	Impact	Program	Control	Impact	Difference from Respondents
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9-6)
Receiving EI (%)										
Quarter 1	78.6	90.4	-11.9 ***	78.4	90.4	-12.0 ***	79.5	90.6	-11.1 ***	0.9 n.s.
Quarter 2	12.7	65.8	-53.1 ***	12.1	65.0	-52.9 ***	15.8	68.3	-52.5 ***	0.4 n.s.
Quarter 3	6.9	30.3	-23.4 ***	6.3	30.9	-24.5 ***	9.8	28.4	-18.5 ***	6.0 n.s.
Quarter 4	5.9	30.7	-24.8 ***	5.4	32.6	-27.2 ***	9.0	24.8	-15.8 ***	11.4 †
Quarter 5	6.2	31.9	-25.7 ***	5.7	34.0	-28.3 ***	9.0	25.1	-16.1 ***	12.2 ††
Quarter 6	7.1	25.3	-18.1 ***	7.0	25.5	-18.4 ***	7.7	24.5	-16.8 ***	1.6 n.s.
Quarter 7	8.8	26.4	-17.6 ***	8.3	27.1	-18.8 ***	11.5	24.2	-12.7 **	6.1 n.s.
Quarter 8	9.8	33.9	-24.0 ***	9.5	34.7	-25.2 ***	11.5	31.4	-19.9 ***	5.3 n.s.
Quarter 9	9.0	33.1	-24.1 ***	8.3	34.4	-26.1 ***	12.8	29.2	-16.4 ***	9.7 n.s.
Quarter 10	9.0	28.5	-19.5 ***	8.2	29.2	-21.0 ***	13.2	26.4	-13.2 **	7.8 n.s.
Quarter 11	9.0	27.4	-18.4 ***	8.6	27.7	-19.1 ***	11.1	26.4	-15.3 ***	3.7 n.s.
Quarter 12	9.9	28.8	-18.9 ***	9.2	30.4	-21.2 ***	13.7	23.7	-10.0 *	11.2 †
Quarter 13	25.7	28.3	-2.7	25.8	29.1	-3.3	24.8	25.9	-1.1	2.2 n.s.
Quarter 14	54.0	24.7	29.3 ***	55.1	25.8	29.4 ***	48.3	21.5	26.8 ***	-2.6 n.s.
Quarter 15	54.9	29.5	25.5 ***	56.1	30.7	25.4 ***	48.3	25.6	22.7 ***	-2.8 n.s.
Quarter 16	53.4	30.6	22.8 ***	54.6	33.8	20.8 ***	47.0	20.7	26.3 ***	5.6 n.s.
Quarter 17	36.5	30.3	6.3 **	37.3	31.7	5.5 *	32.5	25.6	6.9	1.3 n.s.
Quarter 18	21.8	25.9	-4.1 *	21.4	27.6	-6.2 **	23.9	20.7	3.3	9.5 n.s.
Average EI payments ($/month)										
Quarter 1	581.3	792.2	-210.9 ***	585.4	773.4	-188.0 ***	559.3	851.0	-291.7 ***	-103.8 n.s.
Quarter 2	93.5	467.4	-373.8 ***	91.3	441.4	-350.0 ***	105.5	548.7	-443.1 ***	-93.1 n.s.
Quarter 3	47.4	168.6	-121.1 ***	43.3	168.6	-125.3 ***	69.6	168.5	-98.9 **	26.4 n.s.
Quarter 4	52.9	244.0	-191.2 ***	45.2	267.8	-222.7 ***	94.4	169.8	-75.3	147.3 †††
Quarter 5	42.9	249.9	-207.0 ***	37.7	267.5	-229.8 ***	70.8	194.7	-123.9 **	105.9 †
Quarter 6	54.3	175.1	-120.8 ***	52.1	177.4	-125.2 ***	65.9	167.9	-102.0 **	23.2 n.s.
Quarter 7	78.8	208.1	-129.3 ***	73.1	200.6	-127.5 ***	109.6	231.5	-121.8 *	5.7 n.s.
Quarter 8	94.5	281.9	-187.4 ***	88.9	289.7	-200.8 ***	124.9	257.8	-133.0 **	67.8 n.s.
Quarter 9	82.9	269.7	-186.8 ***	75.7	282.0	-206.3 ***	121.3	231.2	-109.9 **	96.4 n.s.
Quarter 10	83.7	215.9	-132.2 ***	75.7	221.1	-145.4 ***	126.7	199.6	-72.8	72.6 n.s.
Quarter 11	79.4	216.9	-137.4 ***	75.1	201.6	-126.6 ***	103.1	264.6	-161.5 **	-35.0 n.s.
Quarter 12	89.3	243.8	-154.5 ***	82.4	253.1	-170.7 ***	126.6	214.8	-88.2	82.6 n.s.
Quarter 13	157.7	230.2	-72.5 ***	153.7	230.9	-77.2 ***	179.5	228.2	-48.7	28.5 n.s.
Quarter 14	388.9	184.5	204.4 ***	390.7	186.4	204.3 ***	379.3	178.6	200.7 ***	-3.6 n.s.
Quarter 15	423.2	243.1	180.1 ***	427.6	249.2	178.4 ***	399.6	224.2	175.4 ***	-3.0 n.s.
Quarter 16	403.1	286.2	117.0 ***	404.4	309.4	95.0 ***	396.6	213.7	182.9 ***	87.9 n.s.
Quarter 17	262.4	265.0	-2.6	258.3	269.6	-11.3	284.3	250.7	33.7	44.9 n.s.
Quarter 18	186.8	205.6	-18.8	179.6	211.3	-31.7	225.4	187.6	37.8	69.5 n.s.
Sample size	**499**	**499**		**421**	**378**		**78**	**121**		

Source: Calculations based on EI administrative records.

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

Two-tailed t-tests were applied to differences between the program and control groups, and to the differences between the 54-month report sample and the baseline research sample. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Table A.4   Impacts on IA Receipt and Payments, by Respondents and Non-Respondents (54-Month Cross-Sectional IA Sample)

	Baseline Research Sample			54-Month Survey Sample			54-month Non-Respondents			
	Program	Control	Impact	Program	Control	Impact	Program	Control	Impact	Difference from Respondents
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(9-6)
Receiving IA (%)										
Quarter 1	87.1	90.8	-3.7 *	86.1	92.0	-5.9 **	89.2	88.4	0.8	6.7 n.s.
Quarter 2	47.7	82.6	-34.9 ***	46.4	85.1	-38.7 ***	50.4	77.1	-26.7 ***	12.0 †
Quarter 3	37.3	77.1	-39.8 ***	37.3	80.0	-42.7 ***	37.5	71.1	-33.6 ***	9.2 n.s.
Quarter 4	33.3	72.0	-38.6 ***	33.5	73.0	-39.4 ***	32.9	69.9	-37.0 ***	2.5 n.s.
Quarter 5	32.0	67.1	-35.0 ***	31.6	67.6	-36.0 ***	32.9	65.9	-32.9 ***	3.0 n.s.
Quarter 6	30.0	62.7	-32.7 ***	29.0	65.1	-36.1 ***	32.1	57.4	-25.3 ***	10.8 n.s.
Quarter 7	26.7	58.5	-31.8 ***	25.5	59.8	-34.3 ***	29.6	55.8	-26.2 ***	8.1 n.s.
Quarter 8	28.3	57.1	-28.8 ***	26.8	60.0	-33.2 ***	31.7	51.0	-19.3 ***	13.9 †
Quarter 9	26.4	56.5	-30.1 ***	23.4	58.5	-35.1 ***	32.9	52.2	-19.3 ***	15.8 †
Quarter 10	26.1	56.6	-30.5 ***	22.5	59.6	-37.1 ***	34.2	50.2	-16.0 **	21.1 ††
Quarter 11	26.2	52.8	-26.6 ***	25.1	56.0	-30.9 ***	28.8	46.2	-17.4 **	13.5 n.s.
Quarter 12	23.9	54.8	-30.9 ***	21.7	56.6	-34.8 ***	28.8	51.0	-22.3 ***	12.6 n.s.
Quarter 13	26.0	54.7	-28.7 ***	23.0	55.4	-32.4 ***	32.5	53.0	-20.5 ***	11.9 n.s.
Quarter 14	21.1	53.6	-32.6 ***	20.2	53.7	-33.5 ***	22.9	53.4	-30.5 ***	3.0 n.s.
Quarter 15	18.0	50.3	-32.3 ***	17.6	52.0	-34.4 ***	18.8	46.6	-27.8 ***	6.6 n.s.
Quarter 16	17.8	47.5	-29.7 ***	16.5	49.1	-32.7 ***	20.8	44.2	-23.3 ***	9.3 n.s.
Quarter 17	23.9	43.5	-19.6 ***	23.2	45.9	-22.7 ***	25.4	38.6	-13.1 **	9.5 n.s.
Quarter 18	32.2	42.8	-10.6 ***	33.5	44.4	-10.9 **	29.2	39.4	-10.2	0.7 n.s.
Average IA payments ($/month)										
Quarter 1	464.3	513.5	-49.1 **	480.7	526.7	-46.0	427.9	485.5	-57.5	-11.5 n.s.
Quarter 2	131.7	465.6	-333.9 ***	136.0	482.0	-346.1 ***	122.3	431.0	-308.7 ***	37.4 n.s.
Quarter 3	102.1	416.7	-314.6 ***	101.7	430.2	-328.5 ***	102.9	388.2	-285.2 ***	43.2 n.s.
Quarter 4	94.5	385.3	-290.8 ***	97.1	388.0	-290.9 ***	88.8	379.8	-291.0 ***	-0.1 n.s.
Quarter 5	108.8	364.5	-255.7 ***	105.6	371.1	-265.6 ***	115.9	350.5	-234.6 ***	31.0 n.s.
Quarter 6	101.3	335.4	-234.1 ***	96.7	349.6	-252.9 ***	111.5	305.6	-194.1 ***	58.8 n.s.
Quarter 7	97.2	311.2	-213.9 ***	87.7	316.6	-228.9 ***	118.4	299.7	-181.3 ***	47.6 n.s.
Quarter 8	99.2	296.9	-197.8 ***	90.7	316.2	-225.4 ***	118.0	256.4	-138.5 ***	87.0 †
Quarter 9	102.1	305.8	-203.8 ***	94.8	314.5	-219.7 ***	118.3	287.5	-169.2 ***	50.5 n.s.
Quarter 10	108.4	314.0	-205.5 ***	90.9	325.8	-235.0 ***	147.5	288.9	-141.4 ***	93.5 †
Quarter 11	108.0	293.1	-185.0 ***	97.3	312.5	-215.3 ***	132.0	252.0	-120.0 ***	95.2 †
Quarter 12	106.1	305.0	-198.9 ***	97.0	315.2	-218.2 ***	126.1	283.3	-157.2 ***	60.9 n.s.
Quarter 13	128.1	307.5	-179.4 ***	117.0	308.3	-191.3 ***	152.7	305.7	-153.0 ***	38.4 n.s.
Quarter 14	109.4	303.9	-194.5 ***	105.5	300.2	-194.8 ***	118.2	311.6	-193.4 ***	1.4 n.s.
Quarter 15	93.0	287.1	-194.1 ***	86.7	295.3	-208.6 ***	107.0	269.8	-162.8 ***	45.8 n.s.
Quarter 16	94.9	264.1	-169.1 ***	82.7	271.3	-188.5 ***	122.1	248.8	-126.7 ***	61.8 n.s.
Quarter 17	147.5	251.1	-103.6 ***	143.2	258.0	-114.8 ***	157.1	236.6	-79.5 *	35.3 n.s.
Quarter 18	181.8	229.1	-47.3 *	185.8	235.4	-49.6	173.1	215.9	-42.8	6.8 n.s.
Sample size	**258**	**258**		**178**	**175**		**80**	**83**		

Source: Calculations based on IA administrative records.

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

Two-tailed t-tests were applied to differences between the program and control groups, and to the differences between the 54-month report sample and the baseline research sample. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Appendix B

Additional Unadjusted Impact Estimates

This appendix presents an additional set of unadjusted impacts that were not included in this report. Impacts include estimates of average monthly earnings in each quarter of the Community Employment Innovation Project (CEIP), cumulative estimates of earnings, hours worked, months with employment, average number of jobs held in the 54-month follow-up period, duration of the main job held during the follow-up period, impacts on household Low-Income (LICO) status, and average monthly Employment Insurance (EI) and Income Assistance (IA) benefits in each quarter.

Table B.1   Quarterly Impacts on Average Monthly Earnings (EI Sample)

	CEIP Employment		Non-CEIP Employment				Employment			
	Program	**Standard Error**	**Program**	**Control**	**Impact**	**Standard Error**	**Program**	**Control**	**Impact**	**Standard Error**
Average earnings ($/month)										
Quarter 1	313.9 ***	(13.7)	262.5	465.6	-203.1 ***	(55.0)	586.2	493.0	93.2	(57.1)
Quarter 2	918.2 ***	(26.5)	377.5	724.9	-347.4 ***	(71.9)	1,301.5	767.6	534.0 ***	(71.8)
Quarter 3	943.0 ***	(27.1)	369.5	845.7	-476.2 ***	(70.5)	1,318.5	895.5	423.1 ***	(70.6)
Quarter 4	947.2 ***	(27.0)	385.1	803.5	-418.4 ***	(68.9)	1,341.5	850.8	490.7 ***	(68.8)
Quarter 5	911.8 ***	(28.3)	467.2	970.5	-503.4 ***	(79.5)	1,392.2	1027.6	364.5 ***	(77.6)
Quarter 6	880.7 ***	(29.8)	495.2	1,028.9	-533.6 ***	(73.1)	1,397.3	1089.4	307.8 ***	(68.8)
Quarter 7	868.6 ***	(30.7)	483.0	979.0	-496.0 ***	(68.9)	1,338.7	983.1	355.6 ***	(63.7)
Quarter 8	860.9 ***	(31.0)	483.3	886.9	-403.6 ***	(74.0)	1,356.1	933.4	422.7 ***	(71.7)
Quarter 9	841.2 ***	(31.8)	576.1	959.0	-382.9 ***	(81.1)	1,429.1	1018.3	410.8 ***	(77.9)
Quarter 10	847.6 ***	(32.9)	590.6	1,076.9	-486.2 ***	(77.6)	1,452.1	1143.4	308.7 ***	(73.0)
Quarter 11	859.7 ***	(33.3)	643.2	1,062.8	-419.5 ***	(79.9)	1,521.4	1128.5	393.0 ***	(74.4)
Quarter 12	836.4 ***	(33.9)	677.5	962.1	-284.6 ***	(78.5)	1,537.6	1021.5	516.1 ***	(73.7)
Quarter 13	511.6 ***	(25.0)	860.1	1,050.1	-190.0 **	(94.8)	1,392.9	1115.0	277.9 ***	(92.4)
Quarter 14	8.6 ***	(2.5)	903.3	1,179.1	-275.8 ***	(88.5)	906.8	1184.2	-277.4 ***	(89.9)
Quarter 15	0.5	(0.4)	997.3	1,090.2	-93.0	(91.4)	997.5	1093.1	-95.6	(91.5)
Quarter 16	0.0	(0.0)	1,113.6	1,111.6	1.9	(98.6)	1,113.6	1114.6	-1.0	(98.7)
Quarter 17	0.0	(0.0)	1,200.0	1,159.0	41.1	(98.8)	1,200.0	1162.0	38.0	(98.9)
Quarter 18	0.0	(0.0)	1,264.0	1,288.6	-24.6	(98.9)	1,265.7	1304.9	-39.2	(101.0)
Sample size	**409**			**357**						

Source: Calculations from the 54-month follow-up survey and administrative data.

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

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

Rounding may cause slight discrepancies in sums and differences.

Table B.2   Quarterly Impacts on Average Monthly Earnings (IA Sample)

	CEIP Employment		Non-CEIP Employment				Employment			
	Program	Standard Error	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Average earnings ($/month)										
Quarter 1	188.9 ***	(15.3)	45.6	153.0	-107.4 **	(49.5)	236.9	160.3	76.6	53.1
Quarter 2	1,035.6 ***	(30.3)	93.8	229.3	-135.6 **	(58.8)	1,133.3	240.3	893.0 ***	63.7
Quarter 3	1,071.9 ***	(33.6)	127.0	316.8	-189.8 **	(77.0)	1,205.7	332.0	873.8 ***	80.1
Quarter 4	1,012.6 ***	(36.8)	122.8	381.2	-258.5 ***	(77.8)	1,139.9	399.5	740.4 ***	82.5
Quarter 5	1,013.9 ***	(38.1)	126.3	402.6	-276.4 ***	(79.6)	1,157.0	421.9	735.2 ***	85.1
Quarter 6	994.9 ***	(40.0)	138.7	472.5	-333.7 ***	(83.5)	1,144.9	495.1	649.8 ***	89.6
Quarter 7	994.8 ***	(40.1)	144.0	420.7	-276.7 ***	(75.5)	1,145.7	438.8	706.9 ***	83.6
Quarter 8	968.2 ***	(43.6)	143.4	377.0	-233.6 ***	(58.1)	1,132.9	412.3	720.6 ***	69.9
Quarter 9	934.5 ***	(46.7)	139.6	370.3	-230.6 ***	(57.3)	1,110.3	405.0	705.3 ***	71.2
Quarter 10	948.9 ***	(47.6)	144.6	403.8	-259.2 ***	(61.7)	1,135.9	441.7	694.2 ***	75.2
Quarter 11	962.0 ***	(48.4)	161.8	475.5	-313.7 ***	(64.8)	1,163.8	520.1	643.7 ***	76.3
Quarter 12	953.3 ***	(48.5)	178.9	480.1	-301.2 ***	(66.6)	1,168.0	525.1	642.9 ***	76.4
Quarter 13	762.7 ***	(40.6)	211.1	488.4	-277.3 ***	(65.9)	992.9	534.2	458.7 ***	76.1
Quarter 14	20.8 ***	(4.9)	409.8	620.4	-210.6 **	(84.6)	438.7	607.8	-169.1 **	85.1
Quarter 15	0.0	(0.0)	523.2	672.8	-149.6 *	(87.2)	523.2	672.8	-149.6 *	87.2
Quarter 16	0.0	(0.0)	579.2	667.8	-88.6	(87.7)	579.2	667.8	-88.6	87.7
Quarter 17	0.0	(0.0)	591.3	666.5	-75.1	(91.6)	591.3	666.5	-75.1	91.6
Quarter 18	0.0	(0.0)	617.0	650.8	-33.8	(93.6)	605.3	683.3	-78.0	102.6
Sample size	**174**			**167**						

Source: Calculations from the 54-month follow-up survey and administrative data.

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

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

Rounding may cause slight discrepancies in sums and differences.

Table B.3   Cumulative Impacts on Earnings, Hours and Months with Employment During Months 1–54

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Cumulative Earnings								
CEIP	31,650	0	31,650 ***	(961.8)	35,589	0	35,589 ***	(1297.2)
Non-CEIP	36,660	54062	-17,402 ***	(2962.2)	13,694	25,194	-11,500 ***	(2844.4)
Total	67,556	54062	13,494 ***	(2673.3)	48,720	25,194	23,526 ***	(2976.0)
Cumulative Hours								
CEIP	3,659	0	3,659 ***	(110.4)	4,025	0	4,025 ***	(145.2)
Non-CEIP	2,985	4818	-1,833 ***	(206.1)	1,359	2,768	-1,409 ***	(256.9)
Total	6,553	4818	1,735 ***	(188.3)	5,321	2,768	2,553 ***	(282.1)
Cumulative Months with Employment								
CEIP	25.6	0	25.6 ***	(0.8)	28.3	0.0	28.3 ***	(1.0)
Non-CEIP	20.3	31	-11.1 ***	(1.2)	10.7	20.1	-9.4 ***	(1.6)
Total	41.4	31	10.0 ***	(1.0)	36.2	20.1	16.1 ***	(1.7)
Sample size	**421**	**377**			**178**	**175**		

Source: Calculations from the 54-month follow-up survey and administrative data.

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

All analyses were only for those who responded to the 54-month follow-up survey.

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

Rounding may cause slight discrepancies in sums and differences.

Table B.4   Average Number of Jobs Held During Months 1–54

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Number of Jobs								
Five or more	43.0	7.4	35.6 ***	(2.9)	41.6	2.9	38.7 ***	(3.9)
Two to four	49.2	55.3	-6.1 *	(3.5)	48.3	42.9	5.5	(5.3)
One	6.9	31.5	-24.6 ***	(2.6)	6.2	33.1	-27.0 ***	(4.0)
Did not work	2.1	7.9	-5.8 ***	(1.5)	4.5	24.6	-20.1 ***	(3.6)
Sample size	**421**	**378**			**178**	**175**		

Source: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month follow-up survey.

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

Rounding may cause slight discrepancies in sums and differences.

Table B.5   Impacts on Duration of Main Job During Months 1–54

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Job Duration								
More than two years	60.6	57.9	2.6	(3.5)	43.3	30.9	12.4 **	(5.1)
One to two years	32.1	21.4	10.6 ***	(3.1)	39.3	20.0	19.3 ***	(4.8)
Less than a year	6.4	13.5	-7.1 ***	(2.1)	13.5	25.7	-12.2 ***	(4.2)
Did not work	2.1	7.9	-5.8 ***	(1.5)	4.5	24.6	-20.1 ***	(3.6)
Sample size	**421**	**378**			**178**	**175**		

Source: Calculations from the 54-month follow-up survey data.

Notes: Sample sizes vary for individual measures because of missing values. This may cause slight discrepancies in sums and differences. All analyses were only for those who responded to the 54-month follow-up survey. Two-tailed t-tests were applied to differences between the outcomes for the program and control groups. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent. Rounding may cause slight discrepancies in sums and differences.

Table B.6   Impacts on Household Low-Income (LICO) Status Prior to the 54-Month Interview

	EI Sample				IA Sample			
Outcome	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error
Household income below LICO (%)[a]	24.6	23.2	1.3	(3.8)	74.1	81.9	-7.8	(5.7)
Below 75% of LICO	8.3	11.6	-3.3	(2.6)	49.1	63.8	-14.7 **	(6.8)
Below 50% of LICO	2.2	3.7	-1.6	(1.5)	21.3	27.6	-6.3	(5.9)
50 to less than 75% of LICO	6.1	7.9	-1.8	(2.2)	27.8	36.2	-8.4	(6.4)
75 to less than 100% of LICO	16.3	11.6	4.6	(3.1)	25.0	18.1	6.9	(5.7)
Household income above LICO (%)	75.5	76.8	-1.3	(3.8)	25.9	18.1	7.8	(5.7)
100 to less than 150 % of LICO	23.1	23.2	-0.1	(3.7)	15.7	11.4	4.3	(4.7)
150 to less than 175% of LICO	14.1	13.7	0.4	(3.1)	5.6	1.9	3.7	(2.6)
175 to less than 200% of LICO	12.3	8.7	3.6	(2.7)	1.9	1.9	-0.1	(1.9)
200% of LICO or more	26.0	31.1	-5.1	(4.0)	2.8	2.9	-0.1	(2.3)
Sample size	**421**	**378**			**178**	**175**		

Source: Calculations from the 54-month follow-up survey data.

Notes: Sample sizes vary for individual measures because of missing values. This may cause slight discrepancies in sums and differences. All analyses were only for those who responded to the 54-month follow-up survey. Two-tailed t-tests were applied to differences between the outcomes for the program and control groups. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent. Rounding may cause slight discrepancies in sums and differences.

Table B.7   Impacts on EI Monthly Benefits (EI Sample)

	Program	Control	Impact		Standard Error
Average monthly					
EI benefits ($)					
Quarter 1	585	773	-188	***	(32)
Quarter 2	91	441	-350	***	(26)
Quarter 3	43	169	-125	***	(17)
Quarter 4	45	268	-223	***	(25)
Quarter 5	38	268	-230	***	(23)
Quarter 6	52	177	-125	***	(20)
Quarter 7	73	201	-127	***	(24)
Quarter 8	89	290	-201	***	(27)
Quarter 9	76	282	-206	***	(26)
Quarter 10	76	221	-145	***	(25)
Quarter 11	75	202	-127	***	(23)
Quarter 12	82	253	-171	***	(26)
Quarter 13	154	231	-77	***	(24)
Quarter 14	391	186	204	***	(27)
Quarter 15	428	249	178	***	(31)
Quarter 16	404	309	95	***	(33)
Quarter 17	258	270	-11		(30)
Quarter 18	180	211	-32		(28)
Quarter 19	202	256	-54	*	(31)
Quarter 20	222	319	-97	***	(34)
Quarter 21	239	272	-33		(34)
Quarter 22	203	193	10		(29)
Quarter 23	191	191	-1		(28)
Quarter 24	202	231	-29		(31)
Sample size	**421**	**378**			

Source: Calculations from the Employment Insurance administrative data.

Notes: The estimates for the first 23 quarters are calculated by averaging the three months within the quarter.

The estimates for quarter 24 are calculated by averaging the two months within the quarter.

Sample sizes vary for individual measures because of missing values.

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

Rounding may cause slight discrepancies in sums and differences.

Table B.8   Impacts on EI Monthly Benefits (IA Sample)

Outcome	Program	Control	Impact		Standard Error
Average monthly					
EI benefits ($)					
Quarter 1	10	15	-5		(9)
Quarter 2	4	27	-24	**	(11)
Quarter 3	2	27	-25	***	(9)
Quarter 4	5	34	-29	***	(11)
Quarter 5	0	48	-48	***	(13)
Quarter 6	1	53	-52	***	(15)
Quarter 7	8	92	-84	***	(20)
Quarter 8	20	110	-90	***	(24)
Quarter 9	22	113	-91	***	(24)
Quarter 10	20	87	-67	***	(20)
Quarter 11	17	69	-52	***	(19)
Quarter 12	17	78	-61	***	(21)
Quarter 13	73	96	-23		(25)
Quarter 14	456	73	383	***	(35)
Quarter 15	448	71	377	***	(37)
Quarter 16	416	92	324	***	(38)
Quarter 17	276	112	164	***	(34)
Quarter 18	155	92	62	*	(34)
Quarter 19	146	127	19		(36)
Quarter 20	145	155	-10		(38)
Quarter 21	150	163	-13		(38)
Quarter 22	171	113	58	*	(35)
Quarter 23	166	103	62	*	(35)
Quarter 24	115	61	54	**	(27)
Sample size	**421**	**378**			

Source: Calculations from the Employment Insurance administrative data.

Notes: The estimates for the first 23 quarters are calculated by averaging the three months within the quarter.

The estimates for quarter 24 are calculated by averaging the two months within the quarter.

Sample sizes vary for individual measures because of missing values.

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

Rounding may cause slight discrepancies in sums and differences.

Table B.9   Impacts on IA Monthly Benefits (IA Sample)

Outcome	Program	Control	Impact		Standard Error
Average monthly IA benefits ($)					
Quarter 1	4	3	2		(2)
Quarter 2	1	12	-11	***	(4)
Quarter 3	0	29	-28	***	(6)
Quarter 4	4	32	-28	***	(7)
Quarter 5	2	30	-28	***	(6)
Quarter 6	4	35	-30	***	(7)
Quarter 7	9	27	-18	**	(7)
Quarter 8	8	21	-13	**	(6)
Quarter 9	8	20	-12	**	(6)
Quarter 10	9	20	-11	*	(6)
Quarter 11	9	23	-14	**	(7)
Quarter 12	7	27	-20	***	(6)
Quarter 13	10	25	-15	**	(6)
Quarter 14	7	20	-13	**	(6)
Quarter 15	5	22	-16	***	(5)
Quarter 16	5	19	-15	***	(5)
Quarter 17	13	24	-11	*	(7)
Quarter 18	21	26	-5		(7)
Sample size	**178**	**175**			

Source: Calculations from the Income Assistance administrative data.

Notes: The estimates for the first 23 quarters are calculated by averaging the three months within the quarter.

The estimates for quarter 24 are calculated by averaging the two months within the quarter.

Sample sizes vary for individual measures because of missing values.

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

Rounding may cause slight discrepancies in sums and differences.

Table B.10 Impacts on Personal Finance, at the 54-Month Follow-up Interview

Outcome	EI Sample				IA Sample			
	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error
Have any financial accounts (%)	84.7	85.7	-1.1	(2.6)	72.6	76.3	-3.8	(4.7)
No financial account	15.4	14.3	1.1	(2.6)	27.4	23.7	3.8	(4.7)
Amount less than $1,000	37.4	36.6	0.8	(3.7)	60.7	66.3	-5.6	(5.2)
$1,000 to less than $25,000	29.2	34.2	-5.0	(3.5)	10.4	9.5	0.9	(3.2)
$25,000 or more	17.0	13.4	3.6	(2.7)	1.2	0.6	0.6	(1.0)
Financial accounts compared to last year								
More than one year ago	35.0	39.4	-4.4	(3.5)	16.0	17.8	-1.8	(4.0)
Less than one year ago	23.1	20.6	2.5	(3.0)	29.1	25.4	3.7	(4.8)
The same as one year ago	26.1	25.4	0.8	(3.2)	27.4	33.1	-5.7	(5.0)
Have any debts (%)	73.2	70.9	2.3	(3.3)	49.1	49.7	-0.6	(5.4)
No debt	26.8	29.1	-2.3	(3.3)	50.9	50.3	0.6	(5.4)
Amount less than $1,000	5.3	2.9	2.4	(1.5)	7.0	5.4	1.7	(2.6)
$1,000 to less than $10,000	29.4	32.6	-3.2	(3.4)	26.9	26.8	0.1	(4.8)
$10,000 or more	37.0	34.0	3.0	(3.6)	14.0	17.3	-3.2	(4.0)
Debts compared to last year								
More than one year ago	28.1	31.6	-3.5	(3.3)	22.0	18.9	3.0	(4.4)
Less than one year ago	27.3	23.2	4.1	(3.2)	11.0	13.6	-2.6	(3.6)
The same as one year ago	17.4	15.9	1.4	(2.7)	15.6	17.2	-1.6	(4.0)
Sample size	**404**	**364**			**175**	**169**		

Sources: Calculations from the 54-month survey data.

Notes: Sample sizes vary for individual measures because of missing values. This may cause slight discrepancies in sums and differences. All analyses were only for those who responded to the 54-month survey. Two-tailed t-tests were applied to differences in outcomes between the program and control groups. Statistical significance levels are indicated as:
* = 10 per cent; ** = 5 per cent; *** = 1 per cent. Rounding may cause slight discrepancies in sums and differences.

Table B.11 Impacts on Expectation, Health, and Wellbeing at the 54-Month Follow-up Interview

	EI Sample				IA Sample			
Outcome	Program Group	Control Group	Difference (Impact)	Standard Error	Program Group	Control Group	Difference (Impact)	Standard Error
Expectation of Work and Finance								
Expectation of work in one year's time								
Working full-time	64.3	60.0	4.3	(3.6)	64.6	62.3	2.3	(5.4)
Working part-time	24.6	27.9	-3.3	(3.2)	24.2	25.2	-0.9	(4.8)
Not working at all	11.1	12.1	-1.0	(2.4)	11.2	12.6	-1.4	(3.6)
Expect to collect IA	2.7	2.7	0.0	(1.2)	15.4	18.4	-3.0	(4.1)
Expect to collect EI	27.3	32.3	-5.0	(3.3)	23.6	14.4	9.3 **	(4.3)
Expect to make more money	72.7	66.5	6.2 *	(3.3)	77.1	80.6	-3.5	(4.5)
Expect to work more hours	45.7	40.9	4.8	(3.6)	63.2	63.9	-0.7	(5.3)
Expect to rely on family friends	11.4	13.4	-2.0	(2.4)	24.9	30.6	-5.7	(4.9)
Expect to move to a new home	13.8	14.9	-1.0	(2.5)	20.2	24.7	-4.5	(4.6)
Health								
In general health is:								
Excellent	23.6	23.6	0.0	(3.0)	14.2	13.2	1.0	(3.7)
Very good	43.4	40.8	2.7	(3.5)	42.6	43.7	-1.1	(5.3)
Good	25.8	24.7	1.1	(3.1)	28.4	24.1	4.3	(4.7)
Fair	5.3	8.6	-3.3 *	(1.8)	9.7	13.2	-3.6	(3.4)
Poor	1.9	2.4	-0.5	(1.0)	5.1	5.7	-0.6	(2.4)
Life Satisfaction Score								
Extremely satisfied	21.9	16.1	5.7 **	(2.8)	11.2	17.1	-5.9	(3.7)
Satisfied	50.6	55.6	-5.0	(3.5)	41.6	40.0	1.6	(5.2)
Equally satisfied/dissatisfied	3.3	5.3	-2.0	(1.4)	4.5	4.0	0.5	(2.2)
Dissatisfied	19.7	18.0	1.7	(2.8)	30.9	29.7	1.2	(4.9)
Extremly dissatisfied	2.9	2.9	-0.1	(1.2)	10.7	7.4	3.2	(3.1)
Average score	17.7	17.5	0.2	(0.3)	15.5	16.2	-0.7	(0.5)
Sample size	**404**	**364**			**175**	**169**		

Sources: Calculations from the 54-month survey data.

Notes: Sample sizes vary for individual measures because of missing values. This may cause slight discrepancies in sums and differences. All analyses were only for those who responded to the 54-month survey. Two-tailed t-tests were applied to differences in outcomes between the program and control groups. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent. Rounding may cause slight discrepancies in sums and differences.

Appendix C

Regression-Adjusted Impact Estimates

This appendix presents regression-adjusted impact estimates for a range of outcomes discussed in this report. The first section reviews the basic approach and rationale for using regression-adjusted impacts and compares their value to unadjusted impacts. The second section summarizes some of the key differences between the two estimates and presents a range of regression-adjusted impact tables that correspond to the unadjusted estimates presented in this report.

Unadjusted vs. Adjusted Impact Estimates

This report presents "unadjusted" impacts of the Community Employment Innovation Project (CEIP) that were estimated by calculating the difference between the mean outcome levels of the program and control group. An alternative method, however, is to estimate a regression in which the outcome is modelled as a linear function of the respondents' research group and a range of socio-economic and demographic characteristics measured before random assignment. Although random assignment ensures that there are no systematic differences between program and control groups at baseline, small differences can arise, by chance, particularly in smaller samples. In addition, if sample attrition over the 54-month period affects program and control groups differently, it can lead to emerging differences in their baseline characteristics, resulting in biased impact estimates (non-response bias).[1] The regression "adjusts" the impact estimates to account for these baseline differences between program and control group members — whether they arose by chance during random assignment or developed later because of non-response bias.

In a random assignment study, both unadjusted and adjusted approaches yield valid estimates of the impacts. Nonetheless, there are advantages to using regression-adjusted estimates:

- Given that any observed baseline differences between program and control group members can be accounted for, the regression-adjusted impact estimates are, potentially, more accurate than the unadjusted mean differences in outcomes.

- Even in the absence of statistically significant program–control group differences at baseline, regression-adjustment can improve the statistical precision of impact estimates. Standard errors of the regression-adjusted impact estimates of the treatment may be lower (when correlation between the characteristics and the outcome is accounted for in the regression), which results in improved statistical power.

---

[1] Analysis of the non-response bias in the 54-month results is provided in Appendix A.

However, there are also some disadvantages to using regression-adjustment, which make the unadjusted impact estimates preferable:

- Unadjusted impact estimates are more widely understood.

- Adjusted impact estimates may be dependent on the functional form and regression method that is chosen. Generally, the outcome is modelled as a linear function of the treatment group status and baseline characteristics using Ordinary Least Squares (OLS). For "dummy" dependent variables, however, a Logit or Probit specification may be preferred, particularly when the outcome variable is highly skewed.[2] This makes the interpretation of adjusted-impacts more difficult, compared to the straightforward unadjusted estimates, which are differences in mean outcomes between the program and control group.

- For many outcomes, the improvement in statistical precision that is achieved through regression-adjustment is typically quite small in large-scale studies (Meyer, 1995), and precision may, in fact, decrease in smaller-sample studies if there are significant numbers of missing values among the regression covariates.

Adjusted Impact Estimates of CEIP

As discussed in Appendix A, random assignment ensured that systematic differences between program and control groups were not present at baseline, nor did systematic differences in baseline characteristics develop over the 54-month period because of non-response bias. Some small differences, however, were present at baseline and others developed, which justify the consideration of regression-adjusted impacts. Tables A.1 and A.2 of Appendix A presented baseline characteristics of Employment Insurance (EI) and Income Assistance (IA) sample members, respectively, who responded to the 54-month follow-up survey. This analysis revealed that the EI program group has a smaller proportion of women, is more likely to live in households without children, and are less likely to have a household income of $30,000 or more compared to the control group. EI program group members also appear to have smaller social networks, are more likely to have activity or health limitations, and a longer period of residence at their current address than their control group counterparts. Among IA sample members, the program group is more likely to have lived in Cape Breton their whole lives, but is also more open to moving in order to get a job compared to the control group. IA program group members are also more likely to live in

---

[2] For example, if a very large (or very small) proportion of the sample has a dependent variable equal to one, the predicted probabilities from OLS can be greater than one (or negative) resulting in biased estimates, which is not the case with the Probit or Logit models. To calculate regression-adjusted impacts in the context of a large-scale random assignment design, however, OLS is a reasonable approximation for most adjusted impacts. Given the large sample and the fact that the covariates in the adjusted-regression have very limited explanatory power over and above the treatment group variable (due to random assignment), there is little bias with a linear specification for most outcomes. Nonetheless, the adjusted impacts of CEIP were also estimated with Probit and Logit models for selected outcomes having dummy dependent variables, in order to confirm that the linear estimates were reasonable. In most cases, there is little difference between adjusted impact estimates using OLS, Probit, or Logit models. Furthermore, when they do differ, the Probit and Logit models result in impacts that are often closer to the unadjusted impact estimates. Only the linear, regression-adjusted impact estimates are presented in this appendix.

households without children and less likely to have a high school diploma than their control group counterparts are.

To account for these differences, adjusted impacts were estimated by regressing each outcome of interest on a treatment group variable and a range of socio-economic and demographic characteristics that were measured before random assignment. In addition to those characteristics where differences were observed, a range of other baseline variables were included in the regressions. In total, 18 characteristics (the independent variables) were regressed on each outcome observed at month 54 (the dependent variable), with both continuous and binary variables included, all of which were measured through the baseline survey, administered before random assignment:

- Treatment Group

- Gender

- Age

- Marital Status

- No children in household

- Youngest child in the household is under 5

- Total size of the household

- Respondent has less than high school diploma

- Activity limitations, or fair or poor health were reported

- In paid work at baseline

- Number of years worked at a paid job since the age of 16

- Has 10 or more contacts (social networks)

- Engaged in some formal volunteering

- Engaged in some informal volunteering

- Lived in Cape Breton all of life

- Lived at current residence more than five years

- Will move for work

- Will accept lower wage or work in different occupation or industry

- Household income less than $30,000 (EI), or less than $10,000 (IA)

Tables C.1–C.16 present the resulting adjusted impact estimates for selected outcomes in this report, with each corresponding to an earlier table of unadjusted impacts presented in chapters 3 to 5.

For the most part, there are relatively few differences between the adjusted and unadjusted impact estimates, with the sign of the adjusted impacts always corresponding to the unadjusted estimates, while the magnitude occasionally differs as do the standard errors.

In most cases, the difference is small and the level of statistical significance is the same. For a few outcomes, which have been footnoted throughout the text, however, the magnitude of the difference in impact between the adjusted and unadjusted estimates is nontrivial. Similarly, there are some differences in the level of significance of impact estimates, with some impacts gaining significance and others losing significance following regression adjustment.

Employment, Earnings, and Income (Tables C.2 and C.3)

There are few differences between adjusted and unadjusted impact estimates in the outcomes related to employment, earnings, and income reported in Chapter 3. After adjustment, CEIP had an impact on IA sample members being 5.4 percentage points more likely to receive wages that are $1–2 above minimum wage, which was not significant in the unadjusted results. Among EI sample members, CEIP increased the extent to which program group members worked part-time hours (less than 30 hours per week), even though the significant level of the impact estimates remain the same from the unadjusted results.

The adjustment process did not lead to any differences in CEIP's impacts on household or personal income. Minor changes in impacts on the source of household income for the EI and IA samples included small decreases in the extent to which program group members received IA income, and a somewhat larger impact on the proportion whose household received EI income. After adjustment, CEIP's negative impacts on EI sample members with a spouse working full-time are not significant.

With regard to the hardship indicators, CEIP's negative impacts on hardship in the IA sample are smaller in magnitude and less significant following adjustment. CEIP, however, has an impact on IA sample members reporting having difficulty meeting their mortgage obligations in the adjusted results. In the EI sample, the extent to which CEIP contributed to hardship in the program group has been lessened and its negative impact on being unable to get groceries almost every month is not significant after adjustment.

Table C.1   Impacts on Distribution of Wages and Hours at Month 50

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Hourly wage rate								
(% in each category)								
Not working	35.5	41.1	-5.6	(3.6)	51.5	48.2	3.3	(5.9)
Wage unreported	4.5	1.7	2.8 **	(1.3)	3.9	1.9	2.0	(2.0)
Less than minimum wage	0.8	0.6	0.3	(0.6)	2.3	5.9	-3.6	(2.4)
Up to $1 above minimum wage	4.5	4.3	0.2	(1.6)	8.7	10.3	-1.6	(3.5)
$1–2 above minimum wage	6.6	6.7	-0.1	(1.9)	10.4	4.9	5.4 *	(3.1)
$2–3 above minimum wage	6.5	8.5	-2.0	(2.0)	7.7	10.7	-3.0	(3.3)
$3–6 above minimum wage	18.3	14.5	3.8	(2.9)	10.5	11.1	-0.5	(3.7)
$6 or more above minimum wage	23.4	22.5	1.0	(3.1)	5.0	7.1	-2.1	(2.8)
Hours worked per week								
(% in each category)								
Not working	35.5	41.1	-5.6	(3.6)	51.5	48.2	3.3	(5.9)
Unreported	1.4	0.6	0.8	(0.8)	2.1	1.8	0.3	(1.6)
Up to 30	14.7	8.8	5.9 **	(2.5)	15.1	14.1	0.9	(4.1)
30	1.7	2.0	-0.2	(1.0)	2.2	4.1	-1.9	(2.1)
31–34	2.4	2.7	-0.3	(1.2)	1.3	1.2	0.1	(1.3)
35	5.8	3.2	2.6	(1.6)	4.9	4.0	1.0	(2.4)
36–39	4.4	4.9	-0.5	(1.6)	1.9	4.5	-2.6	(2.1)
40–44	24.0	24.5	-0.5	(3.3)	16.9	18.0	-1.2	(4.5)
45 or more	10.3	12.0	-1.8	(2.4)	3.6	4.0	-0.4	(2.2)
Sample size	**421**	**378**			**178**	**175**		

Sources: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month follow-up survey.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.2   Impacts on Personal and Household Income Prior to the 54-Month Interview

	EI Sample				IA Sample			
	Program	**Control**	**Impact**	**Standard Error**	**Program**	**Control**	**Impact**	**Standard Error**
Personal and family income ($)								
Individual income	22,826	20,636	2,190 **	(997.6)	14,596	13,575	1,020	(890.5)
Other household income	16,421	17,914	-1,492	(1554.7)	5,242	5,508	-266	(1320.8)
Total household incomea	38,861	38,414	448	(1702.2)	19,694	18,276	1,419	(1716.9)
Sources of household income (%)								
CPP/Old age pension/GIS	23.6	26.4	-2.9	(3.1)	16.2	19.6	-3.4	(4.4)
Workers' compensation or disability insurance	11.7	15.1	-3.4	(2.6)	4.5	5.3	-0.8	(2.6)
Investment income (interest, RRSP)	20.6	16.5	4.1	(2.9)	3.8	2.7	1.0	(2.1)
IA	5.9	10.6	-4.7 **	(2.1)	40.6	53.4	-12.8 **	(5.8)
EI	59.7	53.3	6.4 *	(3.8)	66.3	30.7	35.6 ***	(5.5)
Tax credits (HST, child tax)	63.6	66.6	-3.1	(3.3)	80.8	80.9	0.0	(4.4)
Other sources	7.9	10.5	-2.6	(2.1)	17.1	19.9	-2.9	(4.5)
No income from above sources	7.9	7.0	1.0	(2.0)	3.0	2.2	0.8	(1.9)
Marital status at the 54-month follow-up interview (%)								
Married or living common law	69.7	65.6	4.1	(2.7)	26.3	27.7	-1.4	(4.3)
Employment of spouse in past 12 months								
Had a spouse who worked (%)	48.3	48.6	-0.3	(3.4)	20.8	12.9	7.9 *	(4.1)
Number of months spouse worked	5.0	5.0	0.1	(0.4)	1.8	1.2	0.6	(0.4)
Had spouse that worked full-time (%)	41.6	41.8	-0.3	(3.4)	18.4	10.9	7.5 *	(3.9)
Had spouse that worked part-time (%)	6.5	5.9	0.6	(1.8)	1.5	1.7	-0.2	(1.4)
Sample size	**421**	**378**			**178**	**175**		

Sources: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month follow-up survey.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

a Household income is measured as the sum of the sample member's income and the income of all other members in that person's household.

Table C.3   Impacts on Hardship at the 54-Month Interview

	EI Sample				IA Sample			
	Program	**Control**	**Impact**	**Standard Error**	**Program**	**Control**	**Impact**	**Standard Error**
In the past six months, respondent's household income								
Met all or most expenses and financial need	87.3	87.8	-0.5	(2.5)	69.9	66.7	3.2	(5.5)
Met some	7.6	7.9	-0.3	(2.1)	14.6	22.9	-8.3 *	(4.7)
Met very little or none of the expenses	5.1	4.3	0.8	(1.6)	15.5	10.4	5.1	(4.0)
Have difficulty paying for								
Electricity	21.7	19.7	2.0	(3.1)	28.2	35.7	-7.5	(5.5)
Heat	23.6	22.8	0.8	(3.2)	29.5	33.0	-3.5	(5.5)
Telephone	15.0	16.9	-1.9	(2.8)	30.6	29.8	0.8	(5.6)
Rent	6.8	8.2	-1.4	(2.0)	16.7	18.7	-2.0	(4.7)
Mortgage	6.0	4.5	1.5	(1.7)	3.7	0.4	3.3 *	(1.7)
Municipal taxes	7.6	9.7	-2.1	(2.2)	6.1	3.6	2.5	(2.6)
Day-to-day expenses	18.1	15.7	2.5	(2.8)	34.9	38.0	-3.1	(5.7)
Have things not working at home	6.8	11.9	-5.2 **	(2.2)	15.4	15.7	-0.3	(4.2)
Too costly to fix	4.0	8.5	-4.5 **	(1.8)	9.7	6.9	2.8	(3.2)
No time to fix	0.6	1.7	-1.1	(0.8)	0.6	0.7	0.0	(0.9)
Landlord won't fix	0.9	0.2	0.6	(0.6)	1.6	3.5	-1.9	(1.8)
Other reason	0.9	1.3	-0.4	(0.8)	3.1	4.5	-1.3	(2.3)
Unable to get groceries or food	10.0	12.3	-2.3	(2.4)	30.4	36.9	-6.5	(5.5)
Almost every month	2.7	4.4	-1.7	(1.4)	8.5	8.0	0.6	(3.3)
Some months but not every	3.2	3.0	0.1	(1.3)	12.3	14.4	-2.1	(4.0)
Only once or twice	3.8	4.5	-0.7	(1.5)	8.9	13.9	-5.0	(3.7)
Have used food banks in the past six months	2.1	1.9	0.2	(1.1)	9.3	12.0	-2.7	(3.6)
Sample size	**404**	**364**			**175**	**169**		

Sources: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month follow-up survey.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Job Quality, Skills, Attitudes towards Work, and Mobility (Tables C.4–C.8)

CEIP's impacts on the occupation and skill-level of post-CEIP jobs remain largely unchanged after regression adjustment. There is a small difference between unadjusted and adjusted impact estimates on occupations in the social sciences, education, and government services among EI program group members, where the impact increased in magnitude from 4.2 to 5.0 percentage points. Among the IA sample, CEIP had a slightly larger impact on the proportion working in health occupations after adjustment, and program group members are 4.0 percentage points more likely to be working in the social sciences, education and government services sectors — an impact that is significant only in the regression-adjusted results.

Only slight differences were observed in the regression-adjusted impacts on working skills. Among the EI sample, adjustment lead to slightly larger impacts, however the direction and significance of each remains the same after adjustment. In the IA sample, regression adjustment contributed to fewer significant impacts. One difference worth noting,

however, is that CEIP's negative impact on adaptability is smaller in magnitude and no longer significant in the regression-adjusted results.

With regard to the impacts on respondents' attitudes towards work and transfer payments, the only noteworthy differences between the adjusted and unadjusted results is again in the IA sample, where CEIP has an even larger impact on the extent to which program group members report enjoying work. As well, program group members are 12.7 percentage points more likely to report that they agree strongly that they are happier when they have a job, a result that was not significant in the unadjusted results.

The extent to which CEIP reduced within-community mobility among program group members in the IA sample at month 54 is larger in magnitude (7.1 percentage points) and significant following regression adjustment. Its positive impact on IA sample members moving to other Cape Breton communities, however, is smaller in magnitude and no longer significant.

Table C.4   Impacts on Occupation Type of Main Job During Months 41–54

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Ever employed	83.2	82.1	1.2	(2.8)	69.2	66.1	3.1	(5.4)
Occupation type								
Business, finance, and administration	15.0	13.1	1.9	(2.6)	13.1	12.3	0.8	(3.8)
Natural and applied sciences	3.1	1.9	1.2	(1.2)	2.6	1.9	0.7	(1.7)
Health	3.9	7.2	-3.3 **	(1.7)	6.8	2.2	4.6 *	(2.4)
Social science, education, government service, and religion	8.0	3.1	5.0 ***	(1.7)	6.2	2.1	4.0 *	(2.3)
Arts, culture, recreation, and Sport	2.1	1.2	0.9	(1.0)	2.7	1.1	1.6	(1.6)
Sales and service	27.3	28.5	-1.3	(3.4)	27.6	32.7	-5.1	(5.4)
Trades, transport, and equipment operators	14.3	17.1	-2.8	(2.7)	2.7	5.5	-2.8	(2.3)
Primary industry	2.5	3.7	-1.2	(1.3)	2.3	0.8	1.5	(1.5)
Processing, manufacturing, and utilities	5.6	5.9	-0.3	(1.8)	5.2	6.2	-1.0	(2.7)
Sample size	**421**	**378**			**178**	**175**		

Sources: Calculations from the 54-month follow-up survey data.

Notes: Sample sizes vary for individual measures because of missing values. This may cause slight discrepancies in sums and differences. All analyses were only for those who responded to the 54-month follow-up survey. Two-tailed t-tests were applied to differences between the outcomes for the program and control groups. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent. Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.5   Impacts on Skill Level of Main Job During Months 41–54

	EI Sample				IA Sample			
Outcome	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Skill Level								
High-skilled								
Management or professional, or college required	27.9	21.4	6.5 **	(3.3)	24.3	15.2	9.1 **	(4.6)
Medium-skilled								
High school required	34.0	38.3	-4.3	(3.6)	30.1	30.2	-0.1	(5.3)
Low-skilled	20.0	22.1	-2.1	(3.1)	14.8	19.4	-4.6	(4.4)
Not working	16.8	17.9	-1.2	(2.8)	30.8	33.9	-3.1	(5.4)
Sample size	**421**	**378**			**178**	**175**		

Sources: Calculations from the 54-month follow-up survey data.

Notes: Sample sizes vary for individual measures because of missing values. This may cause slight discrepancies in sums and differences. All analyses were only for those who responded to the 54-month follow-up survey. Two-tailed t-tests were applied to differences between the outcomes for the program and control groups. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent. Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.6 Impacts on Working Skills at the 54-Month Interview

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
It really bugs me to see a problem that nobody is trying to solve								
Almost always/quite a bit like me	83.3	82.4	0.9	(2.9)	80.1	80.5	-0.4	(4.7)
Moderately like me	12.8	11.4	1.3	(2.5)	13.9	9.4	4.6	(3.8)
Occasionally/almost never like me	3.9	6.2	-2.3	(1.7)	5.9	10.1	-4.2	(3.2)
I prefer to learn with other people								
Almost always/quite a bit like me	73.5	69.6	3.9	(3.5)	70.9	69.1	1.7	(5.3)
Moderately like me	16.8	19.8	-3.1	(3.0)	18.5	19.6	-1.1	(4.5)
Occasionally/almost never like me	9.7	10.6	-0.9	(2.3)	10.7	11.3	-0.6	(3.7)
I follow through on things no matter what it takes								
Almost always/quite a bit like me	93.5	88.0	5.5 **	(2.2)	92.7	91.2	1.5	(3.2)
Moderately like me	5.3	8.9	-3.6 *	(1.9)	4.4	5.9	-1.4	(2.6)
Occasionally/almost never like me	1.2	3.1	-1.9 *	(1.1)	2.9	2.9	-0.1	(2.0)
I can't quit thinking about something until I am sure they I have done it very well								
Almost always/quite a bit like me	89.7	86.5	3.1	(2.5)	91.3	88.8	2.5	(3.6)
Moderately like me	7.8	10.0	-2.2	(2.2)	6.0	6.9	-0.9	(2.9)
Occasionally/almost never like me	2.5	3.5	-0.9	(1.3)	2.7	4.3	-1.6	(2.2)
I prefer to know what's in it for me before I spend a lot of effort learning something								
Almost always/quite a bit like me	40.0	42.9	-2.9	(3.7)	29.3	38.8	-9.6 *	(5.5)
Moderately like me	20.3	24.3	-4.1	(3.2)	18.5	24.5	-6.0	(4.9)
Occasionally/almost never like me	39.7	32.8	7.0 *	(3.7)	52.2	36.7	15.5 ***	(5.7)
I usually do something I enjoy rather than try something different								
Almost always/quite a bit like me	39.2	39.0	0.2	(3.7)	31.2	37.7	-6.5	(5.4)
Moderately like me	29.2	32.7	-3.4	(3.5)	29.6	29.7	-0.1	(5.4)
Occasionally/almost never like me	31.6	28.3	3.2	(3.5)	39.2	32.5	6.6	(5.7)
I make a detailed plan before I tackle a complex problem								
Almost always/quite a bit like me	66.3	63.7	2.6	(3.7)	54.3	64.6	-10.3 *	(5.8)
Moderately like me	21.6	20.5	1.1	(3.1)	21.1	17.6	3.5	(4.7)
Occasionally/almost never like me	12.1	15.7	-3.7	(2.7)	24.6	17.9	6.8	(4.9)
I understand new things by seeing how they fit with what I already know								
Almost always/quite a bit like me	84.7	81.4	3.4	(2.9)	84.0	79.9	4.2	(4.6)
Moderately like me	12.0	10.8	1.2	(2.5)	12.1	15.7	-3.6	(4.2)
Occasionally/almost never like me	3.2	7.8	-4.6 ***	(1.7)	3.9	4.5	-0.6	(2.4)
I know how to get things done in a system or an organization								
Almost always/quite a bit like me	89.7	84.9	4.7 *	(2.6)	83.2	82.7	0.5	(4.5)
Moderately like me	7.2	12.1	-4.9 **	(2.3)	11.9	12.6	-0.6	(3.9)
Occasionally/almost never like me	3.1	2.9	0.2	(1.3)	4.9	4.8	0.1	(2.5)
Sample size	**441**	**410**			**210**	**201**		

Sources: Calculations from the 54-month follow-up survey data.

Notes: Sample sizes vary for individual measures because of missing values. This may cause slight discrepancies in sums and differences. All analyses were only for those who responded to the 54-month follow-up survey. Two-tailed t-tests were applied to differences between the outcomes for the program and control groups. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent. Rounding and missing values may cause slight discrepancies in sums and differences. [a] Sample sizes for the program group are 470 for the EI sample and 237 for the IA sample.

Table C.7   Impacts on Attitudes Towards Work and Transfer Payments at the 54-Month Interview

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
I like going to work								
Agree strongly	37.7	33.8	4.0	(3.7)	36.4	24.3	12.1 **	(5.4)
Agree	58.2	60.5	-2.3	(3.8)	62.3	71.9	-9.6 *	(5.6)
Disagree	3.3	4.1	-0.8	(1.4)	0.7	3.8	-3.1 *	(1.8)
Disagree strongly	0.7	1.6	-0.9	(0.8)	0.6	0.0	0.6	(0.7)
When I have a job,								
I am a happier person								
Agree strongly	43.2	37.0	6.2 *	(3.8)	43.6	30.8	12.7 **	(5.6)
Agree	52.9	59.5	-6.5 *	(3.8)	54.7	65.8	-11.1 *	(5.7)
Disagree	3.8	2.5	1.3	(1.3)	1.9	2.6	-0.7	(1.8)
Disagree strongly	0.1	1.1	-1.0 *	(0.6)	-0.2	0.8	-0.9	(0.7)
My family supports me								
taking a job								
Agree strongly	45.1	39.8	5.3	(3.8)	40.0	36.4	3.6	(5.8)
Agree	52.8	56.2	-3.4	(3.8)	56.4	60.7	-4.3	(5.9)
Disagree	1.7	2.9	-1.1	(1.2)	3.2	1.5	1.7	(1.8)
Disagree strongly	0.3	1.1	-0.8	(0.7)	0.5	1.5	-1.0	(1.2)
It's wrong to stay on welfare								
if you are offered a job,								
even one you don't like								
Agree strongly	47.0	43.0	4.0	(3.9)	44.1	40.9	3.1	(5.9)
Agree	41.0	49.3	-8.3 **	(3.8)	46.9	44.0	2.9	(5.8)
Disagree	9.5	5.6	4.0 *	(2.1)	7.1	13.1	-6.0	(3.6)
Disagree strongly	2.5	2.1	0.4	(1.2)	1.9	2.0	-0.1	(1.7)
It's wrong to take Employment								
Insurance if you are offered a job,								
even one you don't like								
Agree strongly	31.1	31.2	0.0	(3.6)	30.6	30.8	-0.1	(5.4)
Agree	48.7	56.5	-7.8 **	(3.9)	55.2	52.4	2.7	(5.9)
Disagree	18.2	11.2	7.0 **	(2.8)	13.1	14.0	-0.8	(4.1)
Disagree strongly	2.0	1.2	0.8	(1.0)	1.1	2.8	-1.7	(1.6)
Sample size	**441**	**410**			**210**	**201**		

Sources: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month follow-up survey.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.8   Impacts on Mobility at the 54-Month Interview

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Respondents that moved (%)	14.3	13.0	1.4	(2.5)	21.8	25.1	-3.3	(4.8)
Within community	4.7	3.4	1.3	(1.5)	8.5	12.4	-3.9	(3.6)
To another community in								
Cape Breton	4.2	6.6	-2.3	(1.7)	7.8	4.3	3.5	(2.8)
Outside of Cape Breton	1.2	0.4	0.8	(0.7)	1.6	1.5	0.1	(1.4)
Moved back to Cape Breton	0.0	0.3	-0.3	(0.3)	0.0	0.0	0.0	.
Non-resident mover	0.9	0.5	0.4	(0.6)	1.3	0.6	0.7	(1.1)
Reasons for moving								
Work-related (own or partner's)	3.4	2.2	1.3	(1.3)	3.0	2.1	0.9	(1.8)
Family reason	2.8	2.3	0.5	(1.2)	4.4	2.6	1.8	(2.2)
Housing	4.6	5.0	-0.4	(1.6)	5.9	9.9	-4.0	(3.2)
Other	3.0	3.5	-0.4	(1.4)	7.9	10.5	-2.7	(3.4)
Sample size	421	378			178	175		

Sources: Calculations from the 54-month follow-up survey data.

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

All analyses were only for those who responded to the 54-month follow-up survey.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Social Capital and Volunteering (Tables C.9–C.16)

With respect to social networks discussed in Chapter 5, there are a few differences between adjusted and unadjusted impact estimates. CEIP's impacts on network size in the EI sample were no longer significant after regression adjustment. With regard to tie strength, the drop in proportion of acquaintances among the IA sample at month 54 is not significant in the regression-adjusted results. While EI program group members had a slightly higher tendency to maintain network members of the opposite sex as well as those from outside their immediate communities, both impacts were no longer significant after adjustment. Nonetheless, CEIP's impacts on the four-item composite measure of increasing social capital remained significant in the EI sample following regression adjustment.

With regard to the network usage, CEIP's impacts on receiving assistance with household activities in the EI sample are smaller in magnitude in the regression-adjusted results, as is the impact on receiving specialized advice, which is also not significant after adjustment. For the EI and IA samples, regression adjustment lead to slightly smaller impacts on the proportion that needed assistance from their contacts to look for a job, even though regression adjustment lead to increases in magnitude in CEIP's impacts on receiving assistance in the EI sample and on having obtained a job because of received assistance in the IA sample. Regression adjustment also contributed to larger impacts on the combined effect of working in months 43–54 and receiving job assistance from contacts in the EI sample — 6.5 percentage points in the adjusted results, compared to 5.6 percentage points in the unadjusted results. The positive, unadjusted impact observed in the IA sample, however, is slightly smaller and not significant after adjustment.

Volunteering outcomes reported in Chapter 5 were largely unaffected by regression adjustment. Among the IA sample, impacts on never having formally volunteered increased from -12.7 to -17.6 percentage points. As well, the IA sample's average hours of formal volunteering increased from 2.8 to 3.4 hours per month after adjustment.

Table C.9   Number of Contacts Who Can Provide Various Resources

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Total number of contacts								
Mean at baseline	10.6	10.1	0.6	(0.6)	8.9	9.3	-0.3	(0.5)
Mean at month 18	11.9	12.1	-0.2	(0.8)	12.2	12.6	-0.4	(1.4)
Mean at month 40	13.9	13.1	0.9	(0.9)	13.1	11.8	1.3	(1.6)
Mean at month 54	11.5	11.0	0.5	(0.8)	9.7	9.6	0.1	(0.9)
Mean change from baseline to month 54	1.3	0.8	0.5	(0.9)	0.8	0.2	0.6	(0.9)
Resources associated with bonding social capital								
Number of contacts who provide help with household chores								
Mean at baseline	5.7	5.5	0.2	(0.4)	4.1	3.9	0.2	(0.4)
Mean at month 18	7.6	6.9	0.7	(0.5)	6.4	6.6	-0.1	(0.7)
Mean at month 40	7.9	7.6	0.3	(0.6)	6.6	7.0	-0.4	(1.1)
Mean at month 54	6.5	5.8	0.6	(0.5)	4.9	5.5	-0.6	(0.5)
Mean change from baseline to month 54	0.7	0.3	0.4	(0.6)	0.7	1.6	-0.9	(0.6)
Number of contacts who provide emotional support								
Mean at baseline	5.6	5.3	0.3	(0.4)	5.2	5.4	-0.1	(0.4)
Mean at month 18	7.6	7.3	0.3	(0.6)	7.8	7.4	0.5	(1.0)
Mean at month 40	8.0	8.0	0.0	(0.6)	7.4	6.7	0.7	(1.2)
Mean at month 54	7.1	6.5	0.5	(0.6)	6.4	6.0	0.4	(0.7)
Mean change from baseline to month 54	1.5	1.3	0.2	(0.7)	1.2	0.6	0.6	(0.7)
Resources associated with bridging and linking social capital								
Number of contacts who provide specialized advice								
Mean at baseline	2.8	3.0	-0.2	(0.2)	2.9	2.8	0.1	(0.3)
Mean at month 18	3.9	4.2	-0.2	(0.3)	4.2	4.2	-0.1	(0.5)
Mean at month 40	4.9	4.0	0.9 **	(0.4)	3.8	4.0	-0.2	(0.8)
Mean at month 54	3.7	3.2	0.5	(0.4)	3.4	3.1	0.3	(0.4)
Mean change from baseline to month 54	0.8	0.2	0.6	(0.4)	0.5	0.3	0.1	(0.4)
Number of contacts who provide help finding a job								
Mean at baseline	4.1	4.1	0.0	(0.3)	3.7	3.0	0.7 **	(0.4)
Mean at month 18	6.0	5.9	0.1	(0.5)	5.4	6.7	-1.3	(0.9)
Mean at month 40	7.7	6.5	1.2 *	(0.7)	7.0	6.4	0.7	(1.1)
Mean at month 54	6.1	5.5	0.6	(0.6)	4.8	4.6	0.2	(0.5)
Mean change from baseline to month 54	2.0	1.3	0.7	(0.6)	1.0	1.6	-0.5	(0.6)
Sample size	**401**	**367**	**768**		**172**	**169**	**341**	

Sources: Calculations from the 54-month follow-up survey data.

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

Mean change is not always the difference between the 54-month mean and the mean at baseline, because changes are only calculated for those with no missing values.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.10 Structural Characteristics of Networks — Tie Strength and Network Density

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Tie strength								
Baseline								
Percentage family	52.1	51.6	0.6	(2.0)	54.7	51.7	3.0	(3.1)
Percentage friends	34.4	34.1	0.2	(1.7)	33.5	33.3	0.2	(2.8)
Percentage acquaintances	13.5	14.3	-0.8	(1.3)	11.7	14.9	-3.2	(2.2)
Month 18								
Percentage family	54.3	52.8	1.6	(2.0)	53.4	49.5	3.9	(3.2)
Percentage friends	35.0	37.5	-2.5	(1.8)	34.8	38.1	-3.3	(2.8)
Percentage acquaintances	10.7	9.7	0.9	(1.3)	11.8	12.4	-0.6	(2.3)
Month 40								
Percentage family	50.5	50.1	0.3	(2.3)	42.8	48.6	-5.8 *	(3.3)
Percentage friends	36.1	39.4	-3.3	(2.0)	39.7	39.2	0.4	(3.1)
Percentage acquaintances	13.5	10.5	2.9 *	(1.7)	17.6	12.2	5.4 *	(2.8)
Month 54								
Percentage family	50.4	48.8	1.6	(2.1)	49.8	54.1	-4.3	(3.0)
Percentage friends	39.0	40.4	-1.4	(1.9)	42.3	38.2	4.1	(3.0)
Percentage acquaintances	10.7	10.9	-0.2	(1.4)	7.8	7.7	0.2	(1.9)
Mean change in % of acquaintances from baseline to month 54	-2.7	-2.7	0.0	(1.9)	-4.2	-7.7	3.5	(2.9)
Network density - % of contacts who know each other								
Baseline								
All	37.4	35.0	2.5	(3.5)	50.0	50.3	-0.4	(5.7)
Most	37.4	41.0	-3.6	(3.7)	36.3	31.6	4.8	(5.5)
Some	22.0	21.2	0.8	(3.1)	13.1	14.2	-1.1	(3.9)
Few	1.3	1.5	-0.2	(0.9)	-0.3	2.2	-2.4 **	(1.2)
None	1.9	1.3	0.6	(1.0)	0.9	1.7	-0.8	(1.4)
Month 18								
All	39.7	41.2	-1.6	(3.9)	45.5	46.6	-1.1	(5.9)
Most	35.6	33.6	1.9	(3.8)	33.8	35.1	-1.3	(5.7)
Some	21.1	18.7	2.4	(3.2)	17.2	11.9	5.3	(4.2)
Few	2.3	4.5	-2.3	(1.4)	2.7	3.9	-1.2	(2.2)
None	1.4	1.9	-0.5	(1.0)	0.8	2.5	-1.7	(1.5)
Month 40								
All	34.2	38.4	-4.2	(3.9)	40.5	46.2	-5.6	(6.1)
Most	31.1	36.6	-5.6	(3.9)	27.1	33.1	-5.9	(5.7)
Some	26.6	19.2	7.4 **	(3.5)	25.8	14.1	11.7 **	(5.0)
Few	7.3	4.2	3.2	(2.0)	5.6	5.4	0.2	(2.9)
None	0.8	1.6	-0.8	(0.9)	1.0	1.2	-0.3	(1.3)
Month 54								
All	44.1	47.8	-3.6	(3.9)	56.2	54.4	1.9	(5.9)
Most	32.7	28.4	4.4	(3.6)	26.5	27.8	-1.3	(5.3)
Some	17.8	20.0	-2.2	(3.1)	12.9	14.9	-2.1	(4.1)
Few	4.0	3.2	0.8	(1.5)	4.3	2.3	2.0	(2.1)
None	1.4	0.7	0.7	(0.8)	0.0	0.6	-0.6	(0.7)
% for whom density *decreased* from baseline to month 54	25.9	24.9	1.1	(3.4)	23.7	30.1	-6.4	(5.4)
% for whom density *increased* from baseline to month 54	31.6	37.1	-5.6	(3.7)	27.3	29.2	-1.9	(5.4)
Sample size	**385**	**352**	**737**		**166**	**159**	**325**	

Sources: Calculations from the 54-month follow-up survey data.

Notes: Sample sizes vary for individual measures because of missing values. Mean change is not always the difference between the 54-month mean and the mean at baseline, because changes are only calculated for those with no missing values. Two-tailed t-tests were applied to differences between the outcomes for the program and control groups. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent. Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.11 Network Heterogeneity

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Characteristics of Contacts								
Proportion of Contacts that are								
same gender as you								
Baseline	60.3	59.4	0.9	(1.7)	62.6	63.3	-0.8	(2.6)
Month 18	60.7	63.3	-2.6	(1.7)	65.0	67.6	-2.6	(2.4)
Month 40	60.3	63.4	-3.1 *	(1.9)	69.5	68.4	1.1	(2.5)
Month 54	62.1	62.2	-0.1	(1.6)	66.7	63.2	3.5	(2.5)
Change from baseline to month 54	1.3	3.1	-1.8	(2.2)	4.5	-0.1	4.6	(3.2)
within 10 years of your age								
Baseline	38.9	39.6	-0.7	(2.2)	34.8	29.6	5.2	(3.2)
Month 18	63.5	59.8	3.7 *	(2.2)	59.8	55.0	4.8	(3.3)
Month 40	66.8	65.6	1.2	(2.4)	55.2	61.5	-6.3	(3.8)
Month 54	67.4	65.4	2.0	(2.3)	60.5	57.1	3.4	(3.4)
Change from baseline to month 54	27.8	25.3	2.5	(3.1)	25.1	26.4	-1.3	(4.4)
same level of education as you								
Baseline	35.0	37.1	-2.1	(2.2)	34.5	32.6	1.9	(3.2)
Month 18	45.6	45.2	0.4	(2.6)	42.6	40.5	2.0	(4.0)
Month 40	51.5	52.6	-1.1	(2.8)	39.7	46.6	-7.0	(4.4)
Month 54	49.0	48.3	0.6	(2.7)	46.4	46.7	-0.4	(3.9)
Change from baseline to month 54	12.5	11.0	1.5	(3.2)	10.2	13.0	-2.8	(4.6)
living within your community								
Baseline	65.9	65.6	0.4	(2.6)	74.5	79.4	-4.9	(3.9)
Month 18	68.5	67.3	1.3	(2.7)	71.3	73.3	-2.0	(3.8)
Month 40	67.9	73.6	-5.7 **	(2.7)	74.1	75.3	-1.2	(4.0)
Month 54	72.5	74.3	-1.7	(2.6)	70.6	74.8	-4.3	(3.9)
Change from baseline to month 54	7.0	8.1	-1.1	(3.4)	-3.4	-4.5	1.1	(4.7)
Number of contacts within and								
outside your community								
Living within your community								
Baseline	7.7	6.8	0.9	(0.6)	6.4	7.0	-0.6	(0.7)
Month 18	7.7	7.3	0.4	(0.6)	8.8	8.4	0.5	(1.1)
Month 40	9.1	9.7	-0.7	(0.8)	9.5	8.3	1.2	(1.4)
Month 54	7.4	7.4	0.0	(0.7)	6.2	6.6	-0.5	(0.7)
Change from baseline to month 54	-0.2	0.5	-0.6	(0.9)	-0.2	-0.4	0.2	(0.8)
Living somewhere else in Cape Breton								
Baseline	3.3	3.3	0.0	(0.4)	2.2	1.7	0.5	(0.5)
Month 18	2.9	3.2	-0.3	(0.5)	2.6	3.0	-0.4	(0.7)
Month 40	3.5	2.2	1.3 ***	(0.4)	2.9	2.5	0.3	(0.7)
Month 54	3.0	2.6	0.4	(0.4)	3.1	2.4	0.7	(0.6)
Change from baseline to month 54	-0.3	-0.7	0.4	(0.6)	0.9	0.8	0.1	(0.6)
Sample size	**401**	**367**	**768**		**172**	**169**	**341**	

Sources: Calculations from the 54-month follow-up survey data.

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

Mean change is not always the difference between the 54-month mean and the mean at baseline, because changes are only calculated for those with no missing values.

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.12 Composite Measures of Change from Baseline to Month 54

Percentage with a given level of change	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Composite measure A - Number of indicators of increasing bridging/linking social capital, out of a possible four (increases in advice contacts, job contacts, and proportion of acquaintances; decrease in network density)								
Zero	29.2	31.0	-1.7	(3.7)	37.9	35.1	2.8	(5.9)
One	32.8	38.8	-5.9	(3.9)	28.8	25.3	3.5	(5.5)
One or fewer indicators	*62.1*	*69.8*	*-7.7 ***	*(3.8)*	*66.7*	*60.3*	*6.4*	*(6.0)*
Two	23.2	16.2	7.1 **	(3.2)	21.0	23.9	-2.8	(5.2)
Three	11.8	10.9	0.9	(2.6)	11.7	12.8	-1.1	(4.0)
Four	2.9	3.2	-0.3	(1.4)	0.5	3.0	-2.4	(1.6)
Two or more indicators	*37.9*	*30.2*	*7.7 ***	*(3.8)*	*33.3*	*39.7*	*-6.4*	*(6.0)*
Mean	*1.3*	*1.2*	*0.1*	*(0.1)*	*1.1*	*1.2*	*-0.2*	*(0.1)*
Composite measure B - Number of indicators of increasing bridging/linking social capital, out of a possible five (the four listed above for composite measure A, plus an increase in proportion of contacts from other communities)								
Zero	21.0	22.9	-1.8	(3.4)	25.0	26.8	-1.8	(5.4)
One	32.5	37.2	-4.7	(4.0)	31.2	21.3	9.9 *	(5.6)
One or fewer indicators	*53.5*	*60.1*	*-6.6*	*(4.1)*	*56.2*	*48.1*	*8.1*	*(6.3)*
Two	24.3	20.1	4.2	(3.5)	25.1	23.1	2.0	(5.4)
Three	15.0	12.3	2.7	(2.8)	12.0	20.2	-8.2 *	(4.5)
Four	6.3	5.7	0.7	(2.0)	6.0	7.1	-1.1	(3.1)
Five	0.9	1.8	-0.9	(1.0)	0.7	1.5	-0.8	(1.3)
Two or more indicators	*46.5*	*39.9*	*6.6*	*(4.1)*	*43.8*	*51.9*	*-8.1*	*(6.3)*
Mean	*1.6*	*1.5*	*0.1*	*(0.1)*	*1.4*	*1.6*	*-0.2*	*(0.2)*
Sample size	**374**	**331**	**705**		**170**	**174**	**344**	

Sources: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.13 Network Usage

Percentage with a given level of network usage	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Household activities								
Needed assistance from contacts	37.7	45.0	-7.4 **	(3.6)	49.7	45.5	4.3	(5.4)
Got assistance	34.2	42.1	-7.9 **	(3.5)	45.5	43.4	2.2	(5.4)
Emotional support								
Needed assistance from contacts	39.1	40.5	-1.5	(3.6)	54.7	48.0	6.8	(5.7)
Got assistance	36.3	38.7	-2.4	(3.5)	49.2	46.3	2.9	(5.7)
Specialized advice								
Needed assistance from contacts	23.9	25.7	-1.7	(3.3)	24.7	27.7	-2.9	(5.2)
Got assistance	19.9	22.8	-2.9	(3.1)	19.7	24.7	-5.0	(4.9)
Looking for a job								
Needed assistance from contacts	21.6	15.4	6.1 **	(3.0)	33.9	25.0	8.9 *	(5.4)
Got assistance	16.2	9.8	6.4 **	(2.6)	27.9	20.6	7.4	(5.0)
Obtained job as a result of assistance received	10.4	5.1	5.3 **	(2.1)	16.9	7.7	9.2 **	(3.8)
Sample size								

Sources: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.14 Relationship Between Employment and Network Use During Months 43–54

	EI Sample			IA Sample		
	Program	**Control**	**Impact**	**Program**	**Control**	**Impact**
Employment in months 43–54						
— Observed percentage						
Employed full-time at least 9 months	37.2	42.2	-5.0	24.1	37.2	-13.1 **
Employed full-time less than 9 months	62.8	57.8	5.0	75.9	62.8	13.1 **
Job search assistance and employment						
— Observed percentage						
Got job search assistance	16.7	10.2	6.5 **	28.5	20.8	7.7
Employed full-time at least 9 months	3.6	1.7	1.9	3.9	2.1	1.9
Employed full-time less than 9 months	13.2	8.3	4.9 **	23.0	18.2	4.9
Did not get job search assistance	83.3	89.8	-6.5 **	71.5	79.2	-7.7
Employed full-time at least 9 months	34.5	40.4	-6.0	20.8	34.6	-13.8 **
Employed full-time less than 9 months	48.7	49.6	-0.9	52.2	45.2	7.1
Sample size	**390**	**353**		**152**	**147**	

Sources: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.15 Impacts on Formal Volunteering with Groups or Organizations

	EI Sample				IA Sample			
	Program	Control	Impact	Standard Error	Program	Control	Impact	Standard Error
Frequency of formal volunteering								
How often did you volunteer in last 12 months								
Everyday	2.1	2.7	-0.6	(1.2)	1.3	1.3	0.0	(1.3)
A few times a week	10.1	6.1	4.0 *	(2.1)	10.8	7.8	2.9	(3.3)
About once a week	10.5	9.8	0.7	(2.3)	8.9	7.1	1.8	(3.2)
About once a month	10.1	8.8	1.3	(2.2)	12.1	7.9	4.2	(3.5)
Less than once a month	14.0	8.4	5.5 **	(2.4)	13.1	4.3	8.8 ***	(3.3)
At least once in the last 12 months	53.2	64.1	-10.9 ***	(3.5)	53.9	71.5	-17.6 ***	(5.2)
Types of unpaid formal volunteering								
Canvassing, campaigning, fundraising	27.3	20.5	6.8 **	(3.1)	24.6	17.4	7.2	(4.5)
Member of board or committee	19.0	12.7	6.3 **	(2.7)	12.7	7.6	5.1	(3.4)
Providing info or helping educate public	16.4	10.5	5.9 **	(2.6)	13.0	9.9	3.1	(3.6)
Organizing or supervising activities	27.6	21.9	5.7 *	(3.1)	27.6	15.0	12.6 ***	(4.4)
Teaching or coaching for an organization	16.2	8.4	7.8 ***	(2.4)	12.9	5.6	7.2 **	(3.3)
Office or administrative work	11.2	7.9	3.3	(2.2)	12.1	7.0	5.1	(3.3)
Providing care, support, or counselling	12.8	10.8	2.1	(2.5)	15.8	12.1	3.7	(3.9)
Collecting, serving, or delivering food	18.5	12.4	6.1 **	(2.7)	18.6	12.6	5.9	(4.2)
Volunteer driver for organization	13.0	8.0	5.0 **	(2.3)	12.0	6.5	5.5	(3.3)
Other	17.3	12.7	4.6 *	(2.7)	18.4	10.8	7.6 *	(4.0)
Hours of formal volunteering								
Average hours per month	7.2	5.4	1.8	(1.1)	7.9	4.6	3.4 *	(1.7)
% of sample that volunteered								
Less than 5 hours per month	14.8	14.2	0.6	(2.7)	17.4	9.9	7.5 *	(4.0)
5–15 hours per month	14.3	11.2	3.1	(2.5)	13.1	7.8	5.3	(3.5)
More than 15 hours per month	15.5	9.0	6.5 ***	(2.5)	12.9	9.9	3.0	(3.7)
Did not volunteer	55.4	65.7	-10.3 ***	(3.5)	56.6	72.5	-15.8 ***	(5.2)
Change hours volunteered in last 12 months								
Increased	9.3	8.5	0.8	(2.1)	6.8	6.5	0.3	(2.9)
Stayed the same	79.1	85.3	-6.2 **	(2.9)	80.9	87.3	-6.4	(4.1)
Decreased	11.6	6.2	5.4 **	(2.2)	12.3	6.2	6.1 *	(3.3)
Number of organizations								
Average number of organizations volunteered for	0.9	0.6	0.3 ***	(0.1)	0.9	0.7	0.2	(0.2)
% of sample that volunteered for								
One organization	19.6	18.0	1.6	(3.0)	25.2	11.1	14.1 ***	(4.4)
Two to three organizations	21.8	14.9	6.9 **	(2.8)	16.7	11.9	4.8	(4.0)
Four or more organizations	5.2	2.4	2.8 *	(1.4)	3.8	5.0	-1.2	(2.4)
Did not volunteer	53.4	64.7	-11.3 ***	(3.5)	54.3	71.9	-17.6 ***	(5.2)
Sample size	**421**	**375**			**176**	**174**		

Sources: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Table C.16 Relationship Between Volunteering and Social Capital

	EI Sample			IA Sample		
	Program	**Control**	**Impact**	**Program**	**Control**	**Impact**
Change in formal volunteering						
from baseline to month 54						
Volunteer at both baseline and month 54	32.8	26.1	6.7 **	31.5	19.9	11.5 ***
Volunteer at month 54 only	14.0	9.9	4.2 *	14.6	8.5	6.1 *
Did not volunteer at either baseline or month 54	31.5	35.7	-4.2 *	35.1	41.2	-6.1 *
Volunteer at baseline only	21.7	28.4	-6.7 **	18.8	30.4	-11.5 ***
Change in volunteering and development of						
multiple indicators of enhanced social capital						
Up to one indicator of enhaced social capital	62.1	69.8	-7.7 **	66.7	60.3	6.4
Volunteer at both baseline and month 54	19.9	18.1	1.8	21.4	13.0	8.4 **
Volunteer at month 54 only	8.6	5.7	2.9	6.7	7.3	-0.7
Did not volunteer at either baseline or month 54	20.7	25.9	-5.1 *	24.9	23.5	1.4
Volunteer at baseline only	12.8	20.1	-7.3 ***	13.7	16.5	-2.8
Two or more indicators of enhanced social capital	37.9	30.2	7.7 **	33.3	39.7	-6.4
Volunteer at both baseline and month 54	14.0	9.1	4.9 **	10.9	8.1	2.8
Volunteer at month 54 only	6.3	4.8	1.5	9.3	2.0	7.3 ***
Did not volunteer at either baseline or month 54	9.2	8.4	0.8	8.2	16.3	-8.1 **
Volunteer at baseline only	8.4	7.9	0.5	4.9	13.3	-8.4 **
Sample size	**366**	**329**		**158**	**155**	

Sources: Calculations from the 54-month follow-up survey data.

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

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

Rounding and missing values may cause slight discrepancies in sums and differences.

Appendix D

Subgroup Impacts

The 54-month impact results in this report demonstrate the average effects of the Community Employment Innovation Project (CEIP) on Employment Insurance (EI) and Income Assistance (IA) program group members. The question naturally arises whether or not these impacts were distributed evenly across each research sample or whether they tended to be concentrated among certain subgroups. A related question is whether any lack of significant impacts on other outcomes is characteristic of all individuals within each sample or whether certain subgroups were affected even when, on average, most program group members were not. In order to answer these questions, differences in impacts across a series of subgroups have been evaluated.

Subgroup Analysis

In order to maintain the experimental nature of the analysis, subgroups must be defined based on characteristics that were measured before random assignment. Several categories of subgroups have been defined based on measures from the baseline survey. These include demographic characteristics (gender and age), family structure (marital status, household size, children in the household), education (high school diploma or equivalent), employment and income (work experience since the age of 16, annual income at baseline), barriers to employment (physical or emotional problems restricting activity), social networks (size and density of baseline networks), volunteering (formal or informal volunteering at baseline), attachment (lived at current residence for more than five years, lived in Cape Breton for entire life), mobility (will move for work), and an openness to different work or wages (will accept work in a different occupation, or at lower wages). Two subgroups were created within each of the above categories (with the exception of the age of respondents, which has three subgroups). The choice and number of subgroups within each category was constrained by the size of the 54-month research sample particularly among IA respondents[1].

Tables D.1–D.16 present differences in the impacts of CEIP on selected outcomes across the subgroups described above. The impacts on each subgroup are calculated as the difference in mean outcome between program and control group members who have that characteristic at the time of enrolment. For brevity, the program group mean is not presented in these tables. The control group mean is presented in the second column along with the impacts (program–control group difference) in the third column. Similar to the full sample

---

[1] With the smaller IA sample size, the analysis was limited in its ability to define subgroups in order to ensure that no one group would have too few sample members, which would lead to higher standard errors, and very little statistical power. Among the IA sample, the smallest subgroup results from the category based on marital status, where 64 respondents of the 54-month survey were married or common-law at the time of enrolment in the study.

results, two-tailed t-tests were applied to differences between the outcomes for the program and control groups.

However, in order to determine whether these impacts were larger for certain subgroups than for others, an additional statistical test is required as random differences could occur. Q-tests were applied to differences among subgroups in the estimated impacts. For each outcome, the results of the test are shown in the columns next to the standard errors. The abbreviation "n.s." (not significant) indicates that the variation in estimated impacts across the subgroups is not statistically significant (i.e. the observed subgroup differences could easily be due to chance and should not be regarded as evidence that impacts actually differed between the subgroups). Daggers indicate that the variation is statistically significant, meaning that the conclusion that there was a real difference between subgroups in the impacts of CEIP can be made with reasonable confidence. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent.

Differences in the Impacts of CEIP Across Subgroups

Employment (Tables D.1 and D.2)

Similar to the full sample results, there are no post-program impacts on employment and earnings for most subgroups identified through baseline characteristics. Two exceptions were observed among EI sample members, where older program group members (40 and older) and those who were married or in common-law relationships at baseline experienced slightly lower post-program employment rates compared to their younger and single counterparts. Older workers and dual-income individuals may have had the means to be more discerning in their job search, resulting in temporarily lower employment levels in the year after CEIP. This was likely a short-lived result as there were no differences in impacts on longer-term receipt of EI benefits through month 72 among EI sample members (observed through administrative records; see below). Among IA sample members, there were no subgroup differences in impacts on post-CEIP employment and earnings.

Table D.1   Impacts on Full-Time Employment, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	442	75.4	-4.5	(4.3)	112	52.0	9.3	(9.5)
Female	356	73.6	-1.2	(4.7)	241	49.6	-3.1	(6.5)
Age of respondent at baseline				†				n.s.
Up to 30	141	83.8	-3.0	(6.5)	106	51.0	-0.1	(9.8)
30–39	187	77.0	8.0	(5.7)	109	58.9	-2.3	(9.6)
40 and older	470	70.7	-7.4 *	(4.4)	138	42.7	5.9	(8.5)
Family structure								
Marital status at baseline				††				n.s.
Married or living common law	501	75.7	-9.1 **	(4.0)	64	48.2	3.2	(12.9)
Single, separated, or divorced	296	72.2	7.0	(5.0)	285	51.0	1.2	(5.9)
Children in the household at baseline				n.s.				n.s.
One or more	351	79.3	-6.7	(4.6)	234	53.5	-2.1	(6.6)
None	447	70.2	0.5	(4.4)	118	41.7	9.8	(9.4)
Education								
Had high school diploma or equivalent				n.s.				n.s.
Yes	551	74.7	-0.2	(3.7)	218	52.2	2.2	(6.8)
No	239	74.1	-10.0 *	(6.0)	133	46.7	2.7	(8.8)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	153	74.0	4.8	(6.9)	123	46.3	0.1	(9.1)
Employed 10 or more years (6 or more for IA)	618	74.9	-5.0	(3.6)	217	54.4	1.0	(6.8)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	316	72.3	1.4	(5.0)	198	44.9	3.1	(7.1)
$20,000 or more ($10,000 or more for IA)	480	75.9	-6.2	(4.1)	155	57.1	-0.7	(8.0)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	240	60.0	2.9	(6.4)	129	41.7	0.4	(8.8)
No	558	79.8	-4.0	(3.5)	224	54.8	3.0	(6.7)
Social networks								
Number of contacts				n.s.				n.s.
Up to 10 contacts at baseline	477	73.2	-0.5	(4.1)	235	47.5	4.7	(6.5)
10 or more contacts at baseline	319	76.2	-7.2	(5.0)	117	57.1	-6.3	(9.3)
Network density				n.s.				n.s.
All contacts know each other	285	72.7	-2.0	(5.4)	174	48.9	-1.2	(7.6)
Some contacts do not know each other	509	75.6	-3.4	(3.9)	175	52.9	3.7	(7.6)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	397	73.5	-2.8	(4.5)	170	50.0	-3.9	(7.7)
No	401	75.7	-3.4	(4.4)	183	50.6	5.4	(7.4)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Table D.2   Impacts on Earnings, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	442	14,960	-1,604	(1435)	112	7,762	110	(1885)
Female	356	13,188	-431	(1307)	241	8,295	-2,169 *	(1120)
Age of respondent at baseline				†				n.s.
Up to 30	141	14,192	4,058	(2659)	106	7,213	1,303	(1854)
30–39	187	15,550	-411	(1982)	109	9,549	-3,051 *	(1666)
40 and older	470	13,511	-2,735 **	(1212)	138	7,681	-2,169	(1531)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	501	15,119	-1,952	(1281)	64	8,196	-419	(2406)
Single, separated, or divorced	296	12,164	852	(1517)	285	8,188	-1,592	(1072)
Children in the household at baseline				n.s.				n.s.
One or more	351	15,162	-1,323	(1491)	234	9,074	-2,323 *	(1203)
None	447	13,149	-545	(1310)	118	5,677	970	(1658)
Education								
Had high school diploma or equivalent				n.s.				n.s.
Yes	551	14,678	-528	(1196)	218	8,548	-1,154	(1243)
No	239	12,870	-2,369	(1710)	133	7,365	-1,379	(1570)
Employment and income								
Work experience since the age of 16				n.s.				†
Employed up to 10 years (up to 5 years for IA)	153	12,910	2,472	(2449)	123	6,196	1,059	(1602)
Employed 10 or more years (6 or more for IA)	618	14,503	-1,900 *	(1099)	217	9,305	-2,705 **	(1270)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	316	11,550	-343	(1397)	198	7,337	-1,270	(1196)
$20,000 or more ($10,000 or more for IA)	480	15,630	-1,272	(1335)	155	9,167	-1,579	(1583)
Barriers to employment								
Reported at least one health limitation that				n.s.				n.s.
Yes	240	12,165	-2,330	(1691)	129	7,792	-2,833 *	(1466)
No	558	14,805	-66	(1193)	224	8,325	-468	(1264)
Social networks								
Number of contacts				n.s.				†
Up to 10 contacts at baseline	477	13,728	-1,239	(1293)	235	7,034	-266	(1104)
10 or more contacts at baseline	319	14,593	-546	(1519)	117	10,623	-3,955 **	(1871)
Network density				n.s.				n.s.
All contacts know each other	285	13,149	-1,235	(1659)	174	7,514	-1,781	(1281)
Some contacts do not know each other	509	14,680	-809	(1227)	175	8,985	-1,145	(1463)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	397	15,110	-1,892	(1543)	170	8,257	-2,367 *	(1329)
No	401	13,015	-8	(1222)	183	8,015	-624	(1411)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Household Income (Tables D.3 and D.4)

Although CEIP continued to have a small significant increase in personal income of EI program group members in the year following the program, this was offset by a small reduction in the income of other household members such that there were no statistically significant impacts on the household income. This was a consistent result throughout the EI sample with no differences in impacts across subgroups.

Among IA sample members, the large increases in household income during the CEIP eligibility were not sustained in the year following. The one exception was among IA households without children at baseline, where sustained increases in income were observed in the year following CEIP.

Table D.3 Impacts on Household Income, by Subgroups

	EI Sample				IA Sample				
	Sample Size	Control Group	Impact	Standard Error		Sample Size	Control Group	Impact		Standard Error
Gender and age										
Gender of respondent				n.s.						n.s.
Male	317	38,857.1	-133.8	(2405.9)		62	13,281.5	5,604.2	*	(3058.2)
Female	259	35,614.8	-1,001.9	(2405.6)		168	17,303.1	1,482.1		(1704.7)
Age of respondent at baseline				n.s.						n.s.
Up to 30	99	38,340.4	351.9	(4779.9)		72	17,005.6	3,550.0	*	(1919.3)
30–39	143	35,164.2	1,296.4	(3156.3)		71	18,744.0	1,183.3		(3189.3)
40 and older	334	37,779.2	-923.1	(2201.5)		87	13,487.5	3,214.6		(2465.2)
Family structure										
Marital status at baseline				n.s.						n.s.
Married or living common law	357	41,207.6	1,002.6	(2104.5)		40	20,600.0	2,775.0		(4457.1)
Single, separated, or divorced	218	30,255.2	-1,025.7	(2606.2)		187	15,663.6	2,131.9		(1549.6)
Children in the household at baseline				n.s.						†††
One or more	257	39,054.3	1,160.6	(2657.7)		158	17,796.2	-107.3		(1736.8)
None	319	35,525.2	-694.1	(2198.0)		71	11,910.7	8,880.0	***	(2875.4)
Single-parent status				n.s.						n.s.
Yes	70	28,229.7	2,194.5	(4577.1)		123	16,941.9	165.8		(1927.9)
No	505	38,723.9	-858.1	(1820.1)		103	15,383.3	5,239.6	**	(2442.3)
Education										
Had high school diploma or equivalent				n.s.						n.s.
Yes	396	39,815.5	-944.2	(2088.8)		142	16,902.2	2,814.7		(1792.3)
No	173	31,134.6	1,528.5	(2794.0)		87	15,202.7	2,717.3		(2672.8)
Employment and income										
Work experience since the age of 16				n.s.						n.s.
Employed up to 10 years (up to 5 years for IA)	106	33,519.2	-1,139.6	(3851.8)		81	15,368.7	3,164.7	*	(1752.1)
Employed 10 or more years (6 or more for IA)	447	38,451.9	157.3	(1949.7)		140	17,036.5	2,533.2		(2195.7)
Annual income at baseline				n.s.						n.s.
Up to $20,000 (up to $10,000 for IA)	238	27,514.2	35.1	(2259.1)		124	13,515.5	3,605.7	**	(1737.7)
$20,000 or more ($10,000 or more for IA)	337	43,577.2	677.7	(2151.9)		106	19,287.0	1,765.0		(2440.3)
Barriers to employment										
restricts activity				n.s.						n.s.
Yes	179	36,946.7	-2,191.9	(2892.7)		79	15,475.6	987.6		(2387.7)
No	397	37,331.6	916.4	(2104.2)		151	16,842.1	3,119.5		(1891.5)
Social networks										
Number of contacts				n.s.						n.s.
Up to 10 contacts at baseline	359	35,378.2	740.5	(2165.7)		152	16,430.0	2,578.2		(1820.5)
10 or more contacts at baseline	217	39,794.6	-889.9	(2768.9)		78	16,171.4	2,316.9		(2643.7)
Network density				n.s.						n.s.
All contacts know each other	209	35,891.3	779.6	(2795.7)		115	15,535.1	4,411.3	**	(1717.6)
Some contacts do not know each other	363	38,225.4	-864.4	(2171.6)		112	17,266.7	760.9		(2494.6)
Previous EI/IA experience										
Frequent user of EI/IA				n.s.						n.s.
Yes (12 or more months for EI, 20 or more months for IA)	291	36,942.6	921.8	(2386.1)		112	16,578.9	147.6		(2111.2)
No	285	37,570.8	-1,192.1	(2460.0)		118	16,068.6	4,274.7	**	(2129.3)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Table D.4   Impacts on Income of Other Household Members, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	271	15,830.0	-1,319.7	(2041.6)	57	4,658.4	1,924.6	(2448.5)
Female	243	20,384.6	-2,658.7	(2289.9)	154	4,768.4	8.9	(1430.6)
Age of respondent at baseline				n.s.				n.s.
Up to 30	91	21,492.2	-6,267.7	(4320.7)	67	3,014.3	633.9	(1356.7)
30–39	132	17,527.7	-924.9	(2618.0)	64	6,585.8	-393.1	(2716.7)
40 and older	291	17,544.1	-1,788.6	(2015.1)	80	4,732.4	1,208.4	(2124.0)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	309	21,213.0	-1,694.8	(1928.1)	33	12,257.1	-2,842.7	(4706.1)
Single, separated, or divorced	204	13,574.4	-2,862.6	(2338.5)	175	3,581.5	945.6	(1137.7)
Children in the household at baseline				n.s.				†
One or more	229	18,979.3	-459.5	(2408.2)	141	4,947.7	-1,208.3	(1469.4)
None	285	17,565.4	-3,583.8 *	(1950.1)	69	4,177.1	3,746.2	(2259.7)
Single-parent status				n.s.				n.s.
Yes	65	10,147.9	155.1	(3819.3)	112	3,396.4	-189.3	(1354.2)
No	448	19,608.3	-2,982.5 *	(1640.2)	95	6,914.0	535.7	(2184.5)
Education								
Had high school diploma or equivalent				††				n.s.
Yes	352	21,199.6	-4,557.8 **	(1985.8)	128	5,151.2	94.6	(1560.4)
No	155	11,528.6	2,467.4	(2044.6)	82	3,958.3	1,578.1	(2057.2)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	96	18,473.2	-4,932.4	(3808.2)	74	3,546.2	320.6	(1360.3)
Employed 10 or more years (6 or more for IA)	400	18,235.4	-1,507.0	(1716.7)	128	5,572.5	861.9	(1848.2)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	218	11,868.7	-2,728.7	(2094.6)	119	2,693.9	1,149.8	(1093.2)
$20,000 or more ($10,000 or more for IA)	295	22,848.2	-1,901.1	(1982.5)	92	7,083.1	405.7	(2379.5)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	157	17,569.9	-2,703.6	(2567.0)	73	5,373.3	-1,718.8	(1904.5)
No	357	18,498.0	-2,123.8	(1890.4)	138	4,369.3	1,740.7	(1588.5)
Social networks								
Number of contacts				n.s.				n.s.
Up to 10 contacts at baseline	320	16,048.5	-253.6	(1831.6)	141	4,601.8	493.4	(1410.4)
10 or more contacts at baseline	194	21,174.8	-5,139.8 *	(2691.1)	70	5,062.5	666.4	(2418.7)
Network density				n.s.				†††
All contacts know each other	192	15,062.8	637.7	(2308.6)	107	3,172.5	3,917.9 ***	(1344.8)
Some contacts do not know each other	320	20,199.6	-4,213.4 **	(2010.5)	101	6,683.0	-2,800.5	(2098.5)
Previous EI/IA experience								
Frequent user of EI/IA				†				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	265	16,891.3	4.2	(2008.9)	101	4,544.3	-289.6	(1600.6)
No	249	20,048.4	-5,069.4 **	(2337.0)	110	4,986.4	1,064.7	(1883.1)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Low Income and Severity of Poverty (Tables D.5 and D.6)

Given the lack of significant impacts on household income among EI sample members, it is not surprising that there were no accompanying effects on the incidence of low-incomes, as measured by the proportion with household incomes below Statistics Canada's low income cut-offs (LICO). There were sustained reductions in the severity of poverty, however, as measured by the percentage with household income below the 75-per-cent level of LICO among at least one subgroup in the EI sample. Among lone parent households at baseline, there was a sustained 20-percentage-point reduction in program group households with income below 75 per cent of LICO in the year following the program.

Among IA sample households, there were some sustained reductions in the percentage with income below 100 per cent of LICO and at the more severe levels of poverty, below 75 per cent of LICO. Men, those without children, and those with very dense social networks at baseline experienced sustained reductions in the incidence of low-incomes of 20–30 percentage points in the year following CEIP.

Table D.5   Impacts on Percentage with Household Income Less than LICO, by Subgroups

	EI Sample					IA Sample				
	Sample Size	Control Group	Impact	Standard Error		Sample Size	Control Group	Impact		Standard Error
Gender and age										
Gender of respondent					n.s.					†
Male	276	18.3	4.1	(5.0)		57	88.0	-25.5	**	(11.5)
Female	242	27.8	-0.2	(5.8)		156	80.0	-1.1		(6.5)
Age of respondent at baseline					n.s.					n.s.
Up to 30	89	31.0	-5.4	(9.6)		70	80.0	-8.6		(10.4)
30–39	130	26.2	1.3	(7.9)		63	81.8	-11.8		(10.8)
40 and older	299	19.6	3.4	(4.8)		80	83.8	-4.7		(8.9)
Family structure										
Marital status at baseline					n.s.					n.s.
Married or living common law	317	15.3	-0.4	(4.1)		35	78.6	-16.7		(16.2)
Single, separated, or divorced	200	36.7	2.4	(6.9)		175	82.2	-5.8		(6.1)
Children in the household at baseline					n.s.					†††
One or more	232	22.6	1.3	(5.6)		142	79.2	5.4		(6.5)
None	286	23.8	1.2	(5.1)		70	89.3	-32.1	***	(10.7)
Single-parent status					n.s.					†††
Yes	64	48.5	-3.3	(12.7)		112	79.7	7.8		(7.2)
No	453	19.3	2.6	(3.8)		97	85.0	-23.6	**	(9.1)
Education										
Had high school diploma or equivalent					n.s.					n.s.
Yes	357	19.2	1.9	(4.3)		129	76.8	-1.8		(7.6)
No	154	32.4	-1.1	(7.6)		83	91.7	-19.3	**	(8.6)
Employment and income										
Work experience since the age of 16					n.s.					n.s.
Employed up to 10 years (up to 5 years for IA)	95	37.5	-5.6	(9.9)		76	91.2	-12.6		(8.4)
Employed 10 or more years (6 or more for IA)	405	19.3	2.3	(4.0)		128	77.6	-8.8		(7.8)
Annual income at baseline					n.s.					n.s.
Up to $20,000 (up to $10,000 for IA)	217	41.4	4.4	(6.8)		120	85.7	-7.6		(7.1)
$20,000 or more ($10,000 or more for IA)	300	10.6	-1.7	(3.4)		93	77.6	-9.4		(9.3)
Barriers to employment										
Reported at least one health limitation that restricts activity					n.s.					n.s.
Yes	161	22.1	8.1	(7.1)		75	82.1	1.3		(8.9)
No	357	23.7	-2.0	(4.5)		138	81.8	-12.4	*	(7.3)
Social networks										
Number of contacts					n.s.					n.s.
Up to 10 contacts at baseline	324	27.1	1.1	(5.0)		142	86.3	-12.4	*	(6.7)
10 or more contacts at baseline	194	17.8	-0.6	(5.5)		71	71.9	2.5		(10.7)
Network density					n.s.					††
All contacts know each other	194	23.3	3.6	(6.3)		109	89.5	-20.2	***	(7.5)
Some contacts do not know each other	322	22.9	0.2	(4.7)		101	72.3	5.4		(8.7)
Previous EI/IA experience										
Frequent user of EI/IA					n.s.					n.s.
Yes (12 or more months for EI, 20 or more months for IA)	270	23.7	-1.6	(5.1)		102	82.8	-0.9		(7.7)
No	248	22.6	4.2	(5.6)		111	80.9	-12.1		(8.4)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Table D.6 Impacts on Percentage with Household Income Less than 75% of LICO, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	443	44.9	-8.5 *	(4.7)	112	88.0	-20.3 **	(7.9)
Female	356	37.4	0.6	(5.2)	241	72.8	-4.7	(5.9)
Age of respondent at baseline				n.s.				n.s.
Up to 30	141	48.5	-12.9	(8.3)	106	72.6	-7.1	(9.1)
30–39	187	33.3	-1.3	(6.9)	109	76.8	-5.1	(8.4)
40 and older	471	42.2	-2.6	(4.5)	138	80.9	-13.7 *	(7.4)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	502	39.8	-2.5	(4.4)	64	81.5	-16.6	(11.4)
Single, separated, or divorced	296	44.4	-7.6	(5.7)	285	76.2	-8.1	(5.3)
Children in the household at baseline				n.s.				†
One or more	351	41.3	-6.5	(5.2)	234	76.4	-2.6	(5.7)
None	448	41.2	-2.7	(4.7)	118	79.2	-20.6 **	(8.7)
Single-parent status				†				†
Yes	89	51.0	-21.0 **	(10.4)	182	76.2	-0.9	(6.5)
No	709	39.9	-2.1	(3.7)	166	78.3	-17.4 **	(7.3)
Education								
Had high school diploma or equivalent				n.s.				n.s.
Yes	552	40.2	-5.3	(4.1)	218	71.3	-4.3	(6.3)
No	239	44.4	-1.7	(6.5)	133	88.3	-19.8 ***	(7.1)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	153	45.2	-2.7	(8.1)	123	81.5	-13.4 *	(7.9)
Employed 10 or more years (6 or more for IA)	619	40.2	-5.2	(3.9)	217	75.4	-8.5	(6.1)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	316	40.4	0.2	(5.6)	198	82.7	-13.7 **	(6.0)
$20,000 or more ($10,000 or more for IA)	481	41.8	-7.4 *	(4.4)	155	70.1	-3.5	(7.5)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	241	38.6	0.0	(6.4)	129	80.0	-4.6	(7.4)
No	558	42.2	-5.9	(4.1)	224	75.7	-12.4 **	(6.1)
Social networks								
Number of contacts				n.s.				n.s.
Up to 10 contacts at baseline	477	43.2	-8.3 *	(4.5)	235	77.1	-7.9	(5.8)
10 or more contacts at baseline	320	38.8	1.2	(5.5)	117	76.8	-11.2	(8.4)
Network density				n.s.				n.s.
All contacts know each other	285	41.4	-6.4	(5.8)	174	76.1	-8.7	(6.8)
Some contacts do not know each other	510	41.3	-3.3	(4.3)	175	77.7	-9.9	(6.8)
Previous EI/IA experience								
Frequent user of EI/IA				†				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	398	35.0	1.3	(4.8)	170	79.4	-5.0	(6.5)
No	401	48.1	-10.3 **	(4.9)	183	74.7	-11.7 *	(6.9)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Transfer Receipt (Tables D.7 and D.8)

While CEIP reduced reliance on EI benefits substantially throughout the course of the project, receipt increased significantly in the year following the program (months 41–52), as CEIP employment was EI insurable. The increase was uniform throughout the sample with little difference in impacts on EI receipt across subgroups during this period. In the longer term (months 61–72), however, there was a small, sustained reduction in EI receipt among older workers (40 and older), the only statistically significant difference in impacts on EI receipt in either sample.

CEIP decreased receipt of IA benefits throughout the CEIP eligibility and continued to do so in the year following. Among the EI sample, the decrease in IA benefit receipt was larger and sustained among those who were single, with low incomes, and smaller social networks at baseline. Among the IA sample, the decrease in IA benefit receipt was larger among those without a high school diploma.

Table D.7 Impacts on Total EI Payments, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	443	3,354.0	-344.2	(435.5)	112	1,219.8	575.0	(519.8)
Female	356	1,892.1	-132.1	(335.0)	241	1,341.0	434.2	(385.9)
Age of respondent at baseline				†				n.s.
Up to 30	141	2,664.5	137.1	(711.5)	106	1,893.6	-172.3	(621.7)
30–39	187	1,918.2	894.0	(569.5)	109	1,071.4	861.7	(558.4)
40 and older	471	2,931.2	-657.4 *	(373.3)	138	1,059.4	655.9	(453.7)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	502	2,825.7	-167.4	(367.8)	64	1,194.7	1050.5	(805.3)
Single, separated, or divorced	296	2,339.5	-107.5	(457.8)	285	1,255.5	361.0	(329.0)
Children in the household at baseline				n.s.				n.s.
One or more	351	2,630.2	225.9	(438.1)	234	1,437.2	500.5	(408.7)
None	448	2,667.9	-425.4	(379.9)	118	960.2	524.3	(453.6)
Education								
Had high school diploma or equivalent				n.s.				n.s.
Yes	552	2,624.0	-157.9	(345.0)	218	1,160.8	529.1	(392.7)
No	239	2,738.5	-110.0	(529.4)	133	1,585.5	283.7	(509.2)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	153	2,373.8	-307.2	(601.6)	123	1,261.2	104.4	(501.1)
Employed 10 or more years (6 or more for IA)	619	2,739.1	-164.7	(330.4)	217	1,288.9	795.6 *	(407.2)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	316	2,049.8	101.8	(408.8)	198	1,209.8	166.3	(394.0)
$20,000 or more ($10,000 or more for IA)	481	3,007.2	-267.2	(391.3)	155	1,429.3	873.1 *	(489.2)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	241	2,578.5	-366.7	(543.3)	129	1,383.6	236.8	(569.1)
No	558	2,676.2	-42.8	(338.3)	224	1,266.1	618.2 *	(363.4)
Social networks								
Number of contacts				n.s.				n.s.
Up to 10 contacts at baseline	477	2,709.6	-291.9	(367.3)	235	1,398.2	452.8	(396.3)
10 or more contacts at baseline	320	2,573.3	57.6	(463.7)	117	1,136.3	513.5	(490.7)
Network density				n.s.				n.s.
All contacts know each other	285	2,807.9	-148.2	(475.1)	174	1,443.1	656.1	(483.6)
Some contacts do not know each other	510	2,573.0	-169.7	(362.0)	175	1,195.5	248.6	(392.0)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	398	2,960.7	-223.6	(417.4)	170	1,188.2	557.7	(436.1)
No	401	2,312.0	-41.6	(392.6)	183	1,437.4	372.8	(443.3)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Table D.8 Impacts on Total IA Payments, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	443	271.8	-198.9 **	(82.3)	112	3,870.1	-2,711.2 ***	(538.3)
Female	355	254.7	-109.8	(111.5)	241	3,082.2	-1,683.1 ***	(408.9)
Age of respondent at baseline				n.s.				n.s.
Up to 30	141	506.6	-441.7 **	(184.2)	106	3,790.7	-1,988.2 ***	(654.9)
30–39	186	415.6	-189.3	(191.3)	109	3,066.8	-2,131.2 ***	(556.4)
40 and older	471	130.9	-67.0	(64.3)	138	3,142.7	-1,922.6 ***	(503.9)
Family structure								
Marital status at baseline				†††				†
Married or living common law	501	51.6	0.4	(38.8)	64	4,055.8	-3,179.6 ***	(821.2)
Single, separated, or divorced	296	652.9	-470.0 ***	(165.5)	285	3,130.7	-1,691.3 ***	(358.9)
Children in the household at baseline				n.s.				n.s.
One or more	351	278.7	-137.0	(114.7)	234	3,289.3	-1,824.2 ***	(425.2)
None	447	250.0	-174.3 **	(79.9)	118	3,354.8	-2,249.6 ***	(512.5)
Education								
Had high school diploma or equivalent				n.s.				†††
Yes	551	227.1	-168.1 **	(72.5)	218	2,762.5	-1,369.3 ***	(425.5)
No	239	331.1	-130.2	(147.9)	133	4,351.5	-3,130.1 ***	(501.1)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	152	370.6	-295.9	(180.2)	123	4,061.2	-2,332.9 ***	(603.9)
Employed 10 or more years (6 or more for IA)	619	233.0	-125.3 *	(74.0)	217	2,895.8	-1,851.7 ***	(390.1)
Annual income at baseline				††				n.s.
Up to $20,000 (up to $10,000 for IA)	315	518.8	-384.4 ***	(136.4)	198	3,442.1	-1,836.6 ***	(445.6)
$20,000 or more ($10,000 or more for IA)	481	112.9	-32.1	(65.7)	155	3,135.7	-2,192.3 ***	(479.2)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	241	315.4	-220.5	(134.0)	129	3,314.4	-2,052.1 ***	(525.3)
No	557	244.7	-138.1 *	(77.5)	224	3,303.6	-1,954.6 ***	(419.5)
Social networks								
Number of contacts				†				n.s.
Up to 10 contacts at baseline	476	399.3	-256.6 **	(105.3)	235	3,568.2	-1,990.0 ***	(430.8)
10 or more contacts at baseline	320	89.3	-53.5	(59.1)	117	2,735.9	-1,924.8 ***	(462.6)
Network density				n.s.				n.s.
All contacts know each other	285	441.8	-280.7 **	(136.1)	174	3,491.7	-2,174.4 ***	(481.1)
Some contacts do not know each other	509	174.1	-105.9	(72.6)	175	3,032.4	-1,703.0 ***	(450.0)
Previous EI/IA experience								
Frequent user of EI/IA				††				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	397	88.3	-18.2	(51.6)	170	3,360.4	-2,375.5 ***	(449.4)
No	401	453.5	-321.1 ***	(123.0)	183	3,248.4	-1,675.3 ***	(476.3)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Social Capital (Table D.9)

With respect to social networks, CEIP had sustained impacts on the number of job contacts among EI program group members in the year following the program. A significant subgroup difference was observed in this impact, where only those with a high school diploma at baseline experienced the increase (1.6 contacts on average). Among IA program group members, even though there were no significant impacts in the full sample, a few key subgroup impacts were observed. Men and those without children at baseline experienced sustained positive increases in the number of job contacts in the year following CEIP (1.7 and 1.8 contacts, respectively).

Table D.9   Impacts on Total Contacts Who Can Help Finding a Job, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				†
Male	423	5.7	0.6	(0.9)	110	4.4	1.7 *	(1.0)
Female	351	5.0	1.1 *	(0.6)	237	4.4	-0.4	(0.5)
Age of respondent at baseline				n.s.				n.s.
Up to 30	140	7.3	1.4	(2.1)	102	4.5	0.2	(0.9)
30–39	184	6.1	0.4	(1.1)	109	4.4	0.5	(0.9)
40 and older	450	4.4	0.9 *	(0.5)	136	4.4	0.2	(0.8)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	483	5.1	0.7	(0.7)	63	4.5	-0.9	(0.9)
Single, separated, or divorced	290	5.9	1.0	(1.0)	280	4.4	0.6	(0.6)
Children in the household at baseline				n.s.				††
One or more	344	5.9	0.6	(0.9)	229	4.5	-0.6	(0.6)
None	430	4.9	1.1	(0.7)	117	4.2	1.8 *	(1.0)
Education								
Had high school diploma or equivalent				††				n.s.
Yes	537	5.0	1.6 **	(0.6)	213	4.8	0.0	(0.7)
No	230	6.5	-1.1	(1.2)	132	3.6	1.1	(0.7)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	150	5.7	2.8	(1.9)	120	4.3	0.9	(1.0)
Employed 10 or more years (6 or more for IA)	599	5.2	0.4	(0.5)	215	4.6	-0.2	(0.5)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	306	5.5	1.6	(1.0)	196	4.0	0.9	(0.7)
$20,000 or more ($10,000 or more for IA)	466	5.3	0.3	(0.7)	151	5.0	-0.4	(0.7)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	229	5.3	1.3	(1.2)	127	3.6	1.3 *	(0.7)
No	545	5.4	0.7	(0.6)	220	4.9	-0.2	(0.6)
Social networks								
Number of contacts				n.s.				†
Up to 10 contacts at baseline	460	4.6	0.3	(0.7)	230	3.7	0.9	(0.6)
10 or more contacts at baseline	312	6.4	2.1 **	(1.0)	116	5.9	-1.0	(0.9)
Network density				n.s.				n.s.
All contacts know each other	275	5.2	0.5	(1.1)	171	3.8	0.7	(0.6)
Some contacts do not know each other	496	5.3	1.2 **	(0.6)	172	5.1	-0.1	(0.8)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	382	5.4	0.4	(0.7)	165	4.2	0.1	(0.7)
No	392	5.3	1.2	(0.9)	182	4.6	0.4	(0.7)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Transferable Working Skills (Tables D.10 and D.11)

Differences in impacts on working skills were assessed along a number of additional subgroups based on demographic characteristics measured at enrolment. Although a few differences were found, most were small and only significant at the 10-per-cent level, and were sensitive to regression adjustment of the impacts. Two differences in subgroup impacts that were large, statistically significant and of some policy relevance include the effects on problem solving and information processing. Among IA program group members, the negative impacts of CEIP on problem solving were experienced solely by women (no impacts on problem solving were observed among men). Among the EI program group, positive impacts on information processing were felt largely by older workers (40 and older).

Table D.10 Impacts on Working Skills, by Subgroups — Problem Solver

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				†
Male	438	14.1	-2.3	(3.2)	111	24.0	-6.0	(7.8)
Female	352	16.9	-2.5	(3.9)	238	17.9	9.9 *	(5.4)
Age of respondent at baseline				n.s.				n.s.
Up to 30	141	19.1	-4.1	(6.4)	103	20.0	12.1	(8.7)
30–39	185	12.9	6.1	(5.5)	109	19.6	-6.4	(7.2)
40 and older	464	15.2	-5.5 *	(3.1)	137	19.4	7.7	(7.3)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	495	16.4	-3.9	(3.2)	63	11.1	11.1	(9.7)
Single, separated, or divorced	294	13.0	0.5	(4.0)	282	21.4	4.2	(5.1)
Children in the household at baseline				n.s.				n.s.
One or more	347	14.3	-2.7	(3.6)	230	18.4	4.5	(5.4)
None	443	16.4	-2.7	(3.4)	118	22.9	2.8	(8.1)
Single-parent status				n.s.				n.s.
Yes	89	10.2	-5.2	(5.8)	179	20.4	7.2	(6.4)
No	700	15.9	-2.3	(2.7)	165	18.8	3.0	(6.4)
Education								
Had high school diploma or equivalent				††				n.s.
Yes	545	17.8	-6.6 **	(3.0)	215	16.8	8.7	(5.6)
No	237	10.3	6.6	(4.5)	132	25.0	-2.8	(7.5)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	153	19.2	-5.4	(6.0)	120	23.1	4.9	(8.1)
Employed 10 or more years (6 or more for IA)	610	14.6	-1.5	(2.8)	216	15.8	6.8	(5.4)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	312	17.4	-1.9	(4.2)	197	18.6	6.4	(5.9)
$20,000 or more ($10,000 or more for IA)	476	14.2	-3.6	(3.0)	152	21.1	2.6	(6.8)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	237	18.4	-4.0	(4.9)	128	23.7	-2.0	(7.5)
No	553	14.3	-2.2	(2.9)	221	17.5	8.6	(5.5)
Social networks								
Number of contacts				n.s.				n.s.
Up to 10 contacts at baseline	470	14.5	-0.4	(3.3)	231	23.3	1.1	(5.6)
10 or more contacts at baseline	318	16.6	-6.2	(3.8)	117	12.5	12.1 *	(7.2)
Network density				n.s.				†
All contacts know each other	281	15.3	-1.9	(4.2)	172	21.6	-2.5	(6.2)
Some contacts do not know each other	505	15.6	-3.0	(3.1)	173	16.9	13.1 **	(6.4)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	393	17.1	-3.1	(3.7)	167	20.0	3.4	(6.4)
No	397	13.6	-1.7	(3.4)	182	19.3	6.0	(6.2)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Table D.11 Impacts on Working Skills, by Subgroups — Information Processing

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				†
Male	436	6.8	-4.4 **	(2.0)	110	8.2	-4.9	(4.4)
Female	351	7.3	-2.7	(2.5)	238	2.4	4.5 *	(2.7)
Age of respondent at baseline				††				n.s.
Up to 30	140	2.9	4.0	(3.7)	102	6.1	5.2	(5.7)
30–39	185	5.9	-2.9	(3.0)	109	3.6	2.1	(4.0)
40 and older	462	8.8	-6.4 ***	(2.1)	137	3.0	-1.6	(2.5)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	493	6.8	-4.0 **	(1.9)	63	0.0	8.3	(5.4)
Single, separated, or divorced	293	7.6	-3.3	(2.8)	281	4.9	0.3	(2.6)
Children in the household at baseline				n.s.				n.s.
One or more	345	5.8	-3.4	(2.1)	230	3.2	3.5	(2.8)
None	442	8.2	-4.2 *	(2.3)	117	6.4	-3.5	(3.8)
Single-parent status				n.s.				n.s.
Yes	89	4.1	-1.6	(3.9)	179	3.9	2.7	(3.3)
No	697	7.5	-4.1 **	(1.7)	164	4.4	-0.3	(3.2)
Education								
Had high school diploma or equivalent				n.s.				n.s.
Yes	544	7.4	-4.2 **	(1.9)	214	3.6	2.3	(2.9)
No	235	6.5	-2.6	(2.9)	132	5.0	0.6	(4.0)
Employment and income								
Work experience since the age of 16				†				n.s.
Employed up to 10 years (up to 5 years for IA)	152	5.5	3.4	(4.2)	119	5.9	1.5	(4.7)
Employed 10 or more years (6 or more for IA)	608	7.7	-5.5 ***	(1.7)	216	3.5	0.4	(2.6)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	311	8.0	-5.1 **	(2.5)	197	4.1	1.9	(3.1)
$20,000 or more ($10,000 or more for IA)	474	6.5	-2.8	(2.0)	151	4.0	1.3	(3.4)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	236	12.2	-6.5 *	(3.7)	127	5.2	0.6	(4.1)
No	551	5.2	-3.0 *	(1.6)	221	3.5	2.1	(2.8)
Social networks								
Number of contacts				n.s.				n.s.
Up to 10 contacts at baseline	469	6.8	-3.0	(2.1)	231	5.2	0.9	(3.1)
10 or more contacts at baseline	316	7.4	-4.8 *	(2.5)	116	1.8	3.1	(3.4)
Network density				n.s.				n.s.
All contacts know each other	279	5.7	-1.8	(2.6)	172	3.4	3.7	(3.4)
Some contacts do not know each other	504	7.4	-4.3 **	(2.0)	172	3.7	0.8	(3.0)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	391	8.3	-6.3 ***	(2.2)	167	3.3	3.2	(3.3)
No	396	5.7	-1.1	(2.2)	181	4.9	0.2	(3.3)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Mobility (Tables D.12 and D.13)

Although no impacts on residential mobility were found in the year following CEIP within the full sample, a few small subgroup differences were observed. Among EI program group members, those with smaller social networks at baseline (less than 10 contacts) were slightly more likely to move outside of Cape Breton, a 2-percentage-point increase. Among the IA sample, program group members with higher income at baseline were more likely to move to another community within Cape Breton in the year following CEIP, a 12-percentage-point increase.

Table D.12 Impacts on Mobility to Another Community in Cape Breton, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	429	7.9	-2.5	(2.4)	107	4.4	3.9	(4.9)
Female	350	7.2	-1.3	(2.7)	231	5.9	4.8	(3.6)
Age of respondent at baseline				n.s.				n.s.
Up to 30	136	19.4	-6.4	(6.3)	99	8.5	10.7	(7.0)
30–39	182	7.1	1.0	(4.0)	106	3.7	4.0	(4.5)
40 and older	461	4.1	-1.6	(1.7)	133	4.7	-0.3	(3.6)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	494	5.8	-2.3	(1.9)	62	3.9	4.5	(6.4)
Single, separated, or divorced	284	10.8	-1.7	(3.6)	272	5.8	4.7	(3.3)
Children in the household at baseline				n.s.				n.s.
One or more	342	6.8	-1.4	(2.6)	224	5.0	7.7 **	(3.7)
None	437	8.2	-2.4	(2.4)	113	6.8	-1.0	(4.7)
Education								
Had high school diploma or equivalent				n.s.				†
Yes	540	7.3	-1.1	(2.2)	209	7.4	0.5	(3.7)
No	232	8.5	-3.7	(3.3)	127	1.8	11.1 **	(4.7)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	147	17.8	-5.7	(5.9)	117	7.8	7.3	(6.1)
Employed 10 or more years (6 or more for IA)	606	4.5	-0.4	(1.7)	209	4.7	2.2	(3.2)
Annual income at baseline				n.s.				†††
Up to $20,000 (up to $10,000 for IA)	306	10.1	-4.7	(3.0)	186	8.8	-2.5	(3.9)
$20,000 or more ($10,000 or more for IA)	471	6.0	-0.2	(2.2)	152	1.4	12.8 ***	(4.3)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	237	6.0	1.3	(3.3)	126	6.7	5.5	(5.3)
No	542	8.1	-3.3	(2.1)	212	4.8	3.7	(3.4)
Social networks								
Number of contacts				n.s.				n.s.
Up to 10 contacts at baseline	463	6.8	-2.1	(2.2)	225	6.3	5.1	(3.8)
10 or more contacts at baseline	314	8.5	-1.2	(3.1)	112	3.8	3.0	(4.3)
Network density				n.s.				n.s.
All contacts know each other	278	6.4	-5.0	(2.2)	169	7.1	0.1	(4.0)
Some contacts do not know each other	497	8.3	0.0	(2.5)	165	3.9	8.8 **	(4.3)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	388	7.2	-2.6	(2.4)	164	5.7	-0.4	(3.6)
No	391	7.9	-1.4	(2.6)	174	5.2	8.2 *	(4.5)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Table D.13 Impacts on Mobility Outside Cape Breton, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	429	0.5	1.2	(1.0)	107	0.0	3.3	(2.7)
Female	350	0.0	0.6	(0.6)	231	1.7	-0.8	(1.5)
Age of respondent at baseline				n.s.				n.s.
Up to 30	136	1.5	0.0	(2.1)	99	2.1	-0.2	(2.9)
30–39	182	0.0	1.0	(1.1)	106	1.9	0.1	(2.7)
40 and older	461	0.0	1.2 *	(0.8)	133	0.0	1.5	(1.5)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	494	0.0	1.6 *	(0.8)	62	0.0	2.8	(3.3)
Single, separated, or divorced	284	0.8	-0.1	(1.0)	272	1.5	0.0	(1.5)
Children in the household at baseline				n.s.				n.s.
One or more	342	0.0	0.6	(0.6)	224	1.7	-0.7	(1.6)
None	437	0.5	1.1	(1.0)	113	0.0	2.9	(2.6)
Education								
Had high school diploma or equivalent								
Yes	540	0.4	0.7	(0.7) n.s.	209	1.9	1.1	(2.1)
No	232	0.0	1.6	(1.2)	127	0.0	0.0	.
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	147	1.4	0.0	(1.9)	117	2.0	-0.5	(2.4)
Employed 10 or more years (6 or more for IA)	606	0.0	1.3 *	(0.7)	209	0.9	1.0	(1.7)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	306	0.0	0.6	(0.7)	186	1.1	1.0	(1.9)
$20,000 or more ($10,000 or more for IA)	471	0.4	1.2	(0.9)	152	1.4	-0.1	(1.9)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	237	0.0	1.5	(1.2)	126	1.7	-1.7	(1.6)
No	542	0.4	0.7	(0.7)	212	1.0	1.9	(1.9)
Social networks								
Number of contacts				††				n.s.
Up to 10 contacts at baseline	463	0.0	2.0 **	(1.0)	225	1.8	-0.1	(1.8)
10 or more contacts at baseline	314	0.6	-0.6	(0.6)	112	0.0	1.7	(1.8)
Network density				n.s.				n.s.
All contacts know each other	278	0.0	0.7	(0.7)	169	0.0	2.4	(1.7)
Some contacts do not know each other	497	0.4	1.2	(0.9)	165	1.3	-0.1	(1.7)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	388	0.0	1.0	(0.7)	164	2.3	0.4	(2.4)
No	391	0.6	0.8	(1.0)	174	0.0	1.0	(1.2)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Volunteering (Tables D.14 and D.15)

CEIP had large and sustained impacts on formal volunteering in the year following the program among the EI and IA samples, even though important subgroup differences were observed in this impact. Among EI program group members, this positive increase in the incidence of formal volunteering was largely experienced by women, a 15-percentage-point increase; no significant impacts among men. Among IA program group members, the positive increase was largely among those who were single and those who had children. A 25-percentage-point increase was observed in lone parents reporting that they volunteered at some point in the year following CEIP.

Table D.14 Impacts on Formal Volunteering, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				†				n.s.
Male	440	67.4	-4.2	(4.6)	111	78.0	-10.8	(8.6)
Female	356	57.7	-15.7 ***	(5.3)	239	66.9	-14.8 **	(6.3)
Age of respondent at baseline				n.s.				††
Up to 30	141	57.4	4.3	(8.3)	103	68.0	5.6	(9.0)
30–39	187	64.4	-18.4 **	(7.2)	109	75.0	-27.8 ***	(9.0)
40 and older	468	63.6	-8.0 *	(4.5)	138	67.7	-14.8 *	(8.3)
Family structure								
Marital status at baseline				n.s.				†
Married or living common law	499	57.7	-7.7 *	(4.5)	63	59.3	7.4	(12.4)
Single, separated, or divorced	296	71.4	-10.1 *	(5.5)	283	71.9	-17.9 ***	(5.7)
Children in the household at baseline				n.s.				n.s.
One or more	348	56.8	-9.7 *	(5.4)	231	69.8	-15.6 **	(6.3)
None	448	67.8	-8.4 *	(4.6)	118	70.8	-9.4	(9.0)
Single-parent status				n.s.				††
Yes	89	63.3	-8.3	(10.5)	180	72.1	-24.8 ***	(7.1)
No	706	62.5	-8.1 **	(3.7)	165	66.7	-3.1	(7.6)
Education								
Had high school diploma or equivalent				n.s.				n.s.
Yes	549	58.6	-6.1	(4.3)	216	64.9	-14.9 **	(6.7)
No	239	73.2	-14.4 **	(6.1)	132	80.0	-13.3 *	(7.8)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	153	65.8	-2.0	(7.8)	121	81.1	-20.8 **	(8.3)
Employed 10 or more years (6 or more for IA)	616	62.1	-10.7 ***	(4.0)	216	64.9	-10.0	(6.7)
Annual income at baseline				n.s.				n.s.
Up to $20,000 (up to $10,000 for IA)	316	68.8	-11.1 **	(5.5)	198	74.5	-14.5 **	(6.6)
$20,000 or more ($10,000 or more for IA)	478	59.0	-6.9	(4.6)	152	64.5	-10.5	(8.0)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	240	62.0	-7.0	(6.5)	129	71.7	-18.0 **	(8.5)
No	556	62.9	-8.8 **	(4.2)	221	69.3	-9.5	(6.4)
Social networks								
Number of contacts				n.s.				†††
Up to 10 contacts at baseline	474	63.8	-5.5	(4.5)	232	70.1	-1.4	(6.1)
10 or more contacts at baseline	320	61.2	-14.1 **	(5.5)	117	69.6	-33.6 ***	(8.8)
Network density				n.s.				†††
All contacts know each other	283	65.1	-5.2	(5.8)	172	69.3	0.9	(7.1)
Some contacts do not know each other	509	61.0	-10.0 **	(4.4)	174	70.2	-25.8 ***	(7.3)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	397	65.3	-6.6	(4.9)	168	73.6	-19.1 ***	(7.3)
No	399	59.8	-9.3 *	(5.0)	182	66.3	-6.7	(7.2)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Table D.15 Impacts on Informal Volunteering, by Subgroups

	EI Sample				IA Sample			
	Sample Size	Control Group	Impact	Standard Error	Sample Size	Control Group	Impact	Standard Error
Gender and age								
Gender of respondent				n.s.				n.s.
Male	436	24.0	-3.5	(4.0)	111	24.0	8.8	(8.7)
Female	354	28.7	-4.5	(4.7)	239	27.4	-6.6	(5.6)
Age of respondent at baseline				n.s.				n.s.
Up to 30	141	16.2	5.7	(6.7)	103	24.0	-3.3	(8.3)
30–39	186	29.9	-7.7	(6.4)	109	32.1	-13.3	(8.4)
40 and older	463	28.0	-5.9	(4.0)	138	23.5	9.3	(7.7)
Family structure								
Marital status at baseline				n.s.				n.s.
Married or living common law	493	26.4	-2.7	(3.9)	63	18.5	6.5	(10.7)
Single, separated, or divorced	296	26.3	-6.7	(4.9)	283	28.1	-4.0	(5.2)
Children in the household at baseline				†				n.s.
One or more	346	22.2	1.4	(4.5)	231	23.8	-4.8	(5.5)
None	444	30.0	-8.9 **	(4.1)	118	33.3	1.0	(9.0)
Single-parent status				n.s.				n.s.
Yes	89	16.3	1.2	(8.1)	180	24.0	-9.6	(6.0)
No	700	27.9	-5.3	(3.3)	165	30.4	1.9	(7.4)
Education								
Had high school diploma or equivalent				n.s.				n.s.
Yes	545	24.9	-5.2	(3.6)	216	27.2	-1.7	(6.0)
No	237	27.8	0.1	(5.9)	132	25.0	-1.4	(7.6)
Employment and income								
Work experience since the age of 16				n.s.				n.s.
Employed up to 10 years (up to 5 years for IA)	152	21.9	0.9	(6.8)	121	26.4	-2.9	(8.0)
Employed 10 or more years (6 or more for IA)	612	27.1	-4.6	(3.5)	216	26.3	1.1	(6.1)
Annual income at baseline				n.s.				††
Up to $20,000 (up to $10,000 for IA)	314	29.8	-6.1	(5.0)	198	31.6	-10.6 *	(6.2)
$20,000 or more ($10,000 or more for IA)	474	24.1	-3.1	(3.9)	152	19.7	10.5	(7.0)
Barriers to employment								
Reported at least one health limitation that restricts activity				n.s.				n.s.
Yes	238	27.0	0.5	(5.9)	129	33.3	-5.8	(8.2)
No	552	26.0	-6.7 *	(3.6)	221	22.8	0.6	(5.7)
Social networks								
Number of contacts				n.s.				n.s.
Up to 10 contacts at baseline	470	29.2	-3.9	(4.1)	232	31.6	-4.7	(6.0)
10 or more contacts at baseline	318	22.6	-6.3	(4.5)	117	16.1	5.2	(7.3)
Network density				n.s.				n.s.
All contacts know each other	280	28.8	-1.7	(5.4)	172	26.1	-2.3	(6.6)
Some contacts do not know each other	506	24.9	-6.1 *	(3.7)	174	27.4	-1.8	(6.7)
Previous EI/IA experience								
Frequent user of EI/IA				n.s.				n.s.
Yes (12 or more months for EI, 20 or more months for IA)	393	32.5	-8.9 *	(4.5)	168	23.1	-1.0	(6.5)
No	397	19.6	1.1	(4.1)	182	30.1	-2.9	(6.8)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

High-Skilled Employment (Table D.16)

Although CEIP had no sustained impacts on employment rates at the 54-month follow-up, the percentage of program group members who were working in higher-skilled jobs increased in the EI and IA samples. The result was particularly striking among IA program group members with a 10-percentage-point increase in those working in high-skilled jobs in the post-CEIP period compared to the control group. Important differences in these impacts across key subgroups were observed. In particular, lone parent IA program group members were 17 percentage points more likely to be working in high-skilled jobs than their control group counterparts are in the post-CEIP period. Impacts also appear larger for women, those with fewer employment barriers, and those with a longer work history, even though these differences fail to reach statistical significance.

Table D.16 Impacts on High-Skill Employment During Months 41–54, by Subgroups

	EI Sample				IA Sample				
	Sample Size	Control Group	Impact	Standard Error		Sample Size	Control Group	Impact	Standard Error
Gender and age									
Gender of respondent					n.s.					n.s.
Male	443	24.0	4.0	(4.2)		112	20.0	1.0		(7.8)
Female	356	18.7	8.3 *	(4.4)		241	12.0	13.0	***	(4.9)
Age of respondent at baseline					††					n.s.
Up to 30	141	26.5	3.7	(7.7)		106	19.6	5.9		(8.2)
30–39	187	13.8	20.2 ***	(6.2)		109	16.1	8.5		(7.7)
40 and older	471	22.9	1.3	(3.9)		138	8.8	12.6	**	(6.1)
Family structure									
Marital status at baseline					n.s.					n.s.
Married or living common law	502	21.7	6.6 *	(3.9)		64	18.5	3.1		(10.3)
Single, separated, or divorced	296	21.1	5.3	(5.0)		285	13.6	11.0	**	(4.6)
Children in the household at baseline					n.s.					n.s.
One or more	351	21.2	8.4 *	(4.6)		234	13.4	11.9	**	(5.1)
None	448	21.6	4.5	(4.1)		118	16.7	3.3		(7.4)
Single-parent status					n.s.					†
Yes	89	18.4	16.6 *	(9.3)		182	11.4	17.1	***	(5.7)
No	709	22.0	4.8	(3.2)		166	18.8	0.8		(6.3)
Education									
Had high school diploma or equivalent					n.s.					n.s.
Yes	552	22.6	7.2 *	(3.7)		218	14.8	10.5	*	(5.4)
No	239	19.4	2.7	(5.3)		133	13.3	7.2		(6.6)
Employment and income									
Work experience since the age of 16					n.s.					n.s.
Employed up to 10 years (up to 5 years for IA)	153	28.8	-3.8	(7.2)		123	13.0	8.8		(7.0)
Employed 10 or more years (6 or more for IA)	619	19.9	8.2 **	(3.4)		217	14.9	11.3	**	(5.4)
Annual income at baseline					n.s.					n.s.
Up to $20,000 (up to $10,000 for IA)	316	19.2	6.0	(4.7)		198	14.3	9.7	*	(5.6)
$20,000 or more ($10,000 or more for IA)	481	22.8	6.7 *	(4.0)		155	14.3	8.8		(6.3)
Barriers to employment									
Reported at least one health limitation that restricts activity					n.s.					n.s.
Yes	241	13.9	9.7 *	(5.2)		129	16.7	3.6		(6.9)
No	558	24.2	5.4	(3.8)		224	13.0	12.6	**	(5.2)
Social networks									
Number of contacts					n.s.					n.s.
Up to 10 contacts at baseline	477	20.2	5.6	(3.9)		235	14.4	7.8		(5.0)
10 or more contacts at baseline	320	23.0	7.9	(5.0)		117	14.3	11.9		(7.5)
Network density					n.s.					n.s.
All contacts know each other	285	21.1	5.0	(5.1)		174	13.6	9.6		(5.9)
Some contacts do not know each other	510	21.9	6.7 *	(3.9)		175	15.3	9.2		(6.0)
Previous EI/IA experience									
Frequent user of EI/IA					n.s.					n.s.
Yes (12 or more months for EI, 20 or more months for IA)	398	21.8	2.1	(4.2)		170	13.0	6.2		(5.6)
No	401	21.0	9.9 **	(4.4)		183	15.7	11.3	*	(6.1)

Sources: Calculations from the baseline and 54-month follow-up survey data.

Notes: The subgroups are defined according to characteristics at the time of enrolment in the study. Persons answering "don't know" to a particular question that contributed to defining a subgroup are excluded from the analysis of that subgroup.

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

Q-tests were applied to differences among subgroups in estimated impacts. Statistical significance levels are indicated as: † = 10 per cent; †† = 5 per cent; ††† = 1 per cent. The abbreviation "n.s." indicates that the variation in impacts among the subgroups is not statistically significant.

Rounding may cause slight discrepancies in sums and differences.

Appendix E

Cost-Benefit Analysis — Technical Details and Sensitivity

Technical Details

Time Value

Benefits and costs incurred at different points of time are discounted to their present value at the end of the enrolment quarter using the following formula:

$$PV_e(X_t) = X_t \exp(-r(t-e)/4) \tag{1}$$

where e is the quarter of enrolment, X_t is the benefit or cost incurred at quarter t, and r is the annual discount rate.

For variables such as the various administration costs of the Community Employment Innovation Project (CEIP), value of volunteering, value of social capital and value of hardship reduction, unit values are known, as are the benefits and costs incurred over a period. If these benefits and costs spread out evenly over the period under consideration, the present value of a cost-benefit item is equal to the product of the non-discounted total over the period and a present value factor:

$$PVF(p,f) = \frac{\exp(-rp)-1}{[\exp(-rp/f)-1]f} \tag{2}$$

where p is the number of years the cost and benefits are incurred, f is the frequency of incurrence, and r is the annual discount rate.

Earnings, Income, and Tax Imputation

Total income of an individual is calculated as the sum of individual's reported non-CEIP employment earnings in the follow-up surveys, Employment Insurance (EI) and Income Assistance (IA) benefit receipt extracted from administrative data, and CEIP earnings and fringe benefits extracted from CEIP's Project Management Information System (PMIS) data. Only available information within 54 months since enrolment is used in constructing annual income for tax and premiums imputations. For years with less than 12 months of observations, projected annual income is assumed proportional to the income of available months. Average tax payments, tax credits, transfer payments, and premiums per month are imputed based on relevant regulations and the annual income or projected annual income.

Similarly, for individuals with less than 54 months of observations, their earnings, income, tax payments, tax credits, transfer payments and premiums paid over the 54-month period are assumed to be proportional to the average monthly value based on the available months of observations.

Since tax payments and tax credits are affected by household composition and spousal income, annual household composition and spousal income are imputed based on information available in the follow-up surveys. Each calendar year's household composition and marital status are imputed from the closest follow-up surveys. Spousal income, or that of an adult dependent if the participant is not married, is estimated using regression adjusted means of real other household income in the 18-month survey. The estimated income from spouse or adult dependent is assigned based on the research sample, research group, participant's gender, presence of a spouse or adult dependent, and spouse's employment status in the closest survey to the tax year. Table E.1 presents the regression-adjusted income of spouse or adult dependents.

Table E.1   Regression-Adjusted Income of Spouse and Adult Dependent

	EI Sample		IA Sample	
	Program	Control	Program	Control
Married or living common-law				
Male participant's spouse				
Working	15,089.63	16,480.06	7,836.17	9,963.90
Not working	5,735.31	3,026.42	3,727.33	3,513.80
Information missing	13,223.26	13,510.23	5,996.41	4,898.92
Female participant's spouse				
Working	18,022.55	24,685.08	11,527.50	9,025.71
Not working	15,801.35	10,552.21	2,525.51	2,679.17
Information missing	17,457.39	21,955.89	9,066.17	6,891.77
With one adult dependent				
Male	12,598.88	14,913.03	10,374.81	10,653.84
Female	12,738.38	11,631.63	6,388.45	2,994.89

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

Notes: All estimates are in constant 2002 dollars.

Gross domestic product (GDP) deflators were used to adjust for inflation.

Spousal Earnings

Spousal earnings are imputed using the household income of other relatives in the follow-up survey. The difference of regression adjusted average household income of other relatives between those with a working spouse working and those without one is used as spousal earnings. It is estimated that a working spouse of a male participant from the EI sample earned on average $15,090 per year while a spouse of a female participant earned $18,023 per year. Among the IA sample, a working spouse of a male participant earned only $7,836 per year while a spouse of a female participant earned $11,528 per year.

Volunteering

The hourly value of a participant's volunteering work is the average hourly value of the types of volunteering a participant did. A matching occupation under Human Resources and Social Development Canada's (HRSDC) NOC is assigned to each type of volunteering. Table E.2 summarizes the corresponding occupations and their values using 2006–2007 average market wages from the Labour Market Information Web site of HRSDC. For

responses with volunteering work types that are unlisted or are missing information, the lowest average wage of all available occupations at $7.60 per hour (in 2006–2007 dollars) is assigned as the value. Non-participant volunteering in CEIP communities is also assigned a $7.60 per hour (in 2006–2007 dollars) value.

Table E.2   Hourly Value of Volunteering Using Market Wage

Type of Volunteering	Matching Occupation	NOC	Wages	
			2006–2007	Real
Canvassing, campaigning, or fundraising	Recreation program directors	0513	18.26	16.13
Serving as an unpaid member of a board or committee	Managers in social services	0314	22.40	19.79
Providing information, educating public, or lobbying	Social workers	4152	23.31	20.59
Organizing or supervising activities for an organization	Social workers	4152	23.31	20.59
Consulting, or doing executive, office, or administrative work	Administrative officers	1221	17.50	15.46
Teaching or coaching for an organization	Program leaders and instructors	5254	9.25	8.17
Providing care or support, counselling, and friendly visiting	Community and social service workers	4212	14.28	12.61
Collecting, serving, or delivering food or other goods	Delivery and courier service drivers	7414	9.00	7.95
Driving on behalf of an organization	Chauffeurs	7413	11.69	10.33
Others/unknown			7.60	6.71

Source: Nova Scotia average wages are collected from the Labour Market Information Web site of HRSDC.
Notes: Real wages are in constant 2002 dollars.
            GDP deflators were used to adjust for inflation.

Value of Social Network and Hardship Reduction

The cost-benefit analysis utilizes an empirical model similar to Helliwell and Huang (2005) to place a dollar value on CEIP's impacts on social network and hardship reduction. Helliwell and Huang estimated the perceived value of social capital, measured as trust in the workplace, by making use of a life satisfaction equation as a direct utility function. Essentially, the approach makes use of the relationship between a variable of interest and life satisfaction, by comparing this with the measured effect that income has on life satisfaction. This is operationalized in a regression of life satisfaction on income, the variable of interest, and a range of covariates.   The ratio of the coefficients of the variable of interest, such as social capital, and the respondent's log income is an estimate of the relative value of the particular variable to income.

CEIP's follow-up surveys do not include the precise set of variables used in Helliwell and Huang (2005) while others are constructed somewhat differently. For instance, life satisfaction is measured in CEIP surveys on a five-point scale rather than the ten-point scale in the analysis described above. Similarly, ordered Probit regressions used for the analysis in CEIP have a slightly different set of covariates. Because some of the measurements are only available in the 40- and 54-month follow-up surveys, data from these two surveys is combined to form the pooled sample of 1,448 respondents. Indicators of research sample and surveys are also included in the estimation to capture any uniform systematic difference in life satisfaction. Table E.3 presents the estimates of the ordered Probit of life satisfaction.

Table E.3   Ordered Probit of Life Satisfaction Scale

Variables	Coef.		S.E.
Number of contacts (spec. advice)	0.010		(0.008)
Number of contacts (job)	0.012	***	(0.004)
Difficulties in paying for day-to-day expenses	-0.332	***	(0.076)
Difficulties in paying for groceries	-0.376	***	(0.087)
Log real personal income	0.174	***	(0.061)
Log real household income	-0.063		(0.125)
Percentage of LICO			
Less than 50%	0.072		(0.194)
50–75%	-0.223	*	(0.129)
75–100%	-0.101		(0.108)
150–175%	-0.002		(0.119)
175–200%	0.012		(0.138)
200% and more	0.125		(0.128)
Employed full-time	0.167		(0.126)
Employed part-time	-0.167		(0.189)
Work hours			
Part-time	0.002		(0.002)
Full-time (less than 303 hours per month)	0.000		(0.001)
Full-time (303 hours per month and more)	0.000		(0.001)
Health Status Scale (0–1)	0.831	***	(0.131)
Formal volunteering	0.155		(0.095)
Hours of formal volunteering	-0.001		(0.002)
Number of volunteering organizations	-0.015		(0.036)
Informal volunteering	-0.061		(0.067)
Male	-0.140	**	(0.068)
Age			
25–34	-0.417	*	(0.232)
35–44	-0.684	***	(0.234)
45–54	-0.659	***	(0.237)
55 and above	-0.627	**	(0.249)
Married or living common law	0.380	***	(0.086)
Separated, divorced, or widowed	0.018		(0.094)
Education level			
High school	-0.077		(0.067)
College or trade diploma	-0.090		(0.062)
Bachelor's degree and above	-0.071		(0.167)
40-month survey sample	-0.087		(0.062)
EI sample	-0.069	*	(0.040)
Cut point for 5	-2.364	*	(1.242)
Cut point for 4	-0.438		(1.241)
Cut point for 3	-0.153		(1.241)
Cut point for 2	1.169		(1.242)
Sample size	1,448		

Sources: Calculations from the baseline, 40-, and 54-month follow-up survey data.

Notes: All incomes are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

Two-tailed t-tests were applied to the estimated coefficients. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

Drawing on the coefficients of the Probit regressions, the formulas to calculate the relative value of each intangible variable of interest to the cost-benefit study are:

Social networks - contacts that can provide help in finding a job:

$$\text{Relative value of social network (job)} = \frac{\text{coef. of number of contacts (job)}}{\text{coef. of log personal income}} \times 100\% . \quad (3)$$

Therefore,

$$\text{Relative value of social network (job)} = \frac{0.0124}{0.1738} \times 100\% = 7.1346\%$$

This percentage is applied to the personal income of the sample and to the estimate of the relevant impact in order to obtain its value. For instance, the mean real annual personal income of EI sample members was $19,174.77. Therefore, the mean CEIP impact on job contacts at the 40-month interview was worth an estimated $1,600 (i.e. the impact of 1.17 multiplied by the relative value of social networks of 0.071346 multiplied by the annual personal income of $19,174.77). Similarly, with the values of the mean impacts from the 18-month, 40-month and 54-month surveys, the present value of CEIP's impacts on job contacts of EI sample members throughout the eligibility is calculated to be $2,214 (as shown in Table 7.11).

Reductions in hardship – difficulties meeting day-to-day expenses; obtaining groceries:

$$\text{Relative value of hardship (day-to-day expenses)} = \frac{-0.3315}{0.1738} \times 100\% = -190.736\%$$

$$\text{Relative value of hardship (groceries)} = \frac{-0.3758}{0.1738} \times 100\% = -216.226\%$$

Similarly, this percentage is applied to the mean real annual personal income of IA sample members and the estimated impact on hardship. The reduction in the percentage of sample members who experienced difficulties in meeting day-to-day expenses is estimated to be worth $3,379 per year (i.e. the impact of 0.144 multiplied by the relative value of hardship at 1.90736, multiplied by the annual personal income of IA sample members of $12,303.19). Assuming the reduction in hardship was only happening within the program period, the present value of CEIP's impacts on hardship reduction of IA sample members is calculated to be $9,428 (as shown in Table 7.11).

Notice that all of the estimates arising from the Probit regression are statistically significant at the 1-per-cent level. However, the ratios of estimated coefficients are usually sensitive to small changes in the estimates. As a result, the estimated relative values may not be as robust to specifications as that of the estimated coefficients.

Sensitivity Analysis

Discount Rates

Since benefits and costs that are incurred in the more distant future are worth less than those in the immediate future, when cost or benefit producing events happen at different time throughout the program, a change of discount rate may change the net present value of the benefits of the program. Therefore, the choice of discount rate may affect the conclusion of a cost-benefit analysis of social program. This is evident in public infrastructure construction programs, of which there are higher initial construction costs and the realization of benefits spreads throughout a long period after the construction. For those programs, a higher discount rate will lower the present value of the benefit stream by a larger amount than it will the costs.

Treasury Board recommends the usage of a 10-per-cent annual discount rate with a sensitivity analysis over a range of values to examine the effect of the discount rate. Interest rates, however, were much higher during the late 1990s, the period during which Treasury Board's recommendation is based on, so the cost-benefit analysis of CEIP uses a more appropriate 5-per-cent annual social discount rate. Nevertheless, some programs like CEIP, with the most significant benefits and costs incurring within the same short period, will not be greatly affected by the choice of discount rate. Tables E.4 and E.5 show the benefits, costs, and cost-effectiveness of CEIP under different discount rates (from 2.5 to 15 per cent per year). Although the net benefit to the society decreases slightly with a higher discount rate, the benefit per dollar in government expenditure does not vary greatly, remaining within $0.02 of the other estimates.

**Table E.4   Total Cost–Benefit Estimates per EI Program Group Member During
Months 1–54, by Discount Rates**

	Present values of impacts ($)					
Annual discount rate (%)	**2.5**	**5**	**7.5**	**10**	**12.5**	**15**
Benefit and cost to individuals						
CEIP earnings	28,080	27,040	26,050	25,108	24,212	23,357
Non-CEIP earnings	-16,571	-15,899	-15,262	-14,657	-14,083	-13,539
Fringe benefits	3,058	2,945	2,837	2,735	2,638	2,545
Transfer payment received	-7,039	-6,840	-6,648	-6,463	-6,284	-6,112
Taxes and premiums paid	-1,759	-1,685	-1,614	-1,547	-1,483	-1,423
Net benefit to individuals	*5,768*	*5,561*	*5,364*	*5,176*	*4,998*	*4,829*
Benefit to community organizations						
Value of CEIP jobs	19,154	18,398	17,680	16,997	16,347	15,729
Participant volunteering	1,892	1,799	1,713	1,631	1,555	1,484
Community volunteering	1,080	1,023	971	922	877	834
Net benefit to community	*22,126*	*21,221*	*20,363*	*19,550*	*18,779*	*18,048*
Revenue and expenditure of governments						
CEIP earnings	-28,080	-27,040	-26,050	-25,108	-24,212	-23,357
Fringe benefits	-3,058	-2,945	-2,837	-2,735	-2,638	-2,545
Transfer payment received	7,039	6,840	6,648	6,463	6,284	6,112
Taxes and premiums paid	1,759	1,685	1,614	1,547	1,483	1,423
Premiums employers paid	-1,092	-1,037	-986	-938	-892	-850
CEIP administrative cost	-3,959	-3,844	-3,734	-3,630	-3,530	-3,435
EI and IA administrative cost	101	98	95	92	89	86
Net revenue to governments	*-27,290*	*-26,244*	*-25,251*	*-24,309*	*-23,415*	*-22,566*
Net benefit to society	***605***	***538***	***476***	***418***	***362***	***311***
Benefits per dollar of cost to government						
To participants	0.21	0.21	0.21	0.21	0.21	0.21
To communities	0.81	0.81	0.81	0.80	0.80	0.80
To society	1.02	1.02	1.02	1.02	1.02	1.01

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey, three waves of the community survey, and administrative data.
Notes: All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

Rounding may cause slight discrepancies in sums and differences.

Table E.5 Total Cost–Benefit Estimates per IA Program Group Member During Months 1–54, by Discount Rates

	Present values of impacts ($)					
Annual discount rate (%)	**2.5**	**5**	**7.5**	**10**	**12.5**	**15**
Benefit and cost to individuals						
CEIP earnings	31,883	30,698	29,570	28,496	27,475	26,501
Non-CEIP earnings	-11,534	-10,974	-10,449	-9,955	-9,492	-9,057
Fringe benefits	3,786	3,646	3,512	3,384	3,263	3,147
Transfer payment received	-12,274	-11,836	-11,418	-11,019	-10,639	-10,275
Taxes and premiums paid	-3,727	-3,559	-3,400	-3,249	-3,107	-2,972
Spousal Earnings	2,152	2,035	1,927	1,825	1,731	1,643
Net benefit to individuals	*10,286*	*10,009*	*9,741*	*9,482*	*9,231*	*8,988*
Benefit to community organizations						
Value of CEIP jobs	20,840	20,024	19,249	18,512	17,812	17,145
Participant volunteering	1,474	1,381	1,294	1,214	1,140	1,071
Community volunteering	1,080	1,023	971	922	877	834
Net benefit to community	*23,394*	*22,428*	*21,514*	*20,648*	*19,828*	*19,051*
Revenue and expenditure of governments						
CEIP earnings	-31,883	-30,698	-29,570	-28,496	-27,475	-26,501
Fringe benefits	-3,786	-3,646	-3,512	-3,384	-3,263	-3,147
Transfer payment received	12,274	11,836	11,418	11,019	10,639	10,275
Taxes and premiums paid	3,727	3,559	3,400	3,249	3,107	2,972
Premiums employers paid	-677	-638	-601	-567	-535	-505
CEIP administrative cost	-4,402	-4,274	-4,152	-4,036	-3,926	-3,820
EI and IA administrative cost	491	471	451	432	415	398
Net revenue to governments	*-24,256*	*-23,390*	*-22,566*	*-21,783*	*-21,038*	*-20,329*
Net benefit to society	***9,424***	***9,048***	***8,689***	***8,348***	***8,022***	***7,711***
Benefits per dollar of cost to government						
To participants	0.42	0.43	0.43	0.44	0.44	0.44
To communities	0.96	0.96	0.95	0.95	0.94	0.94
To society	1.39	1.39	1.39	1.38	1.38	1.38

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey, three waves of the community survey, and administrative data.

Notes: All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

Rounding may cause slight discrepancies in sums and differences.

Valuation of CEIP Jobs

Valuation by market replacement cost is usually based on the mean or median market value of an equivalent product. The benchmark model of CEIP's cost-benefit analysis, however, assumes that an hour's work of a CEIP job is equivalent to the 10th percentile of the wage distribution of the same two-digit occupation in NOC.

Many CEIP participants, particularly those from the EI sample, have transferable skills that may be directly applicable to CEIP jobs. Since participants were assigned carefully to CEIP jobs based on their skill sets and the job requirements, there is an expectation that some participants would otherwise receive higher than the 10th percentile of their occupational wage distributions. Tables E.6 and E.7 present the summary of benefits and costs with valuations of CEIP jobs at the 10th, 25th and 50th percentiles of the occupational wage distributions. It should be noted that the combined earnings and fringe benefits are $29,985 and $34,343 for the EI and IA sample members, respectively, assuming a 5-per-cent annual discount rate. Even valuing CEIP jobs at the median wages, the average productivities are still lower than the earnings and fringe benefits a participant received from CEIP. Using the 25th percentile (with a 5 per cent discount rate), the benefits to society per dollar of government expenditure improves from around $1.02 to $1.17 among the EI sample, and $1.39 to $1.56 among the IA sample. The benefits to society per dollar in government expenditure increase even further to $1.45 and $1.91 among the EI and IA samples, respectively, when CEIP jobs are valued at the median.

Table E.6   Alternative Valuation of CEIP Jobs (EI Sample)

Annual discount rate (%)	Present values of impacts ($)					
	2.5	5	7.5	10	12.5	15
Net benefit to individuals	5,768	5,561	5,364	5,176	4,998	4,829
Net revenue to governments	-27,290	-26,244	-25,251	-24,309	-23,415	-22,566
Benefit to community (before CEIP jobs)	2,972	2,823	2,684	2,554	2,432	2,319
Value of CEIP jobs						
Value at the 10th percentile of market wages	19,154	18,398	17,680	16,997	16,347	15,729
Value at the 25th percentile of market wages	23,209	22,294	21,424	20,596	19,810	19,062
Value at the median wages	31,006	29,785	28,623	27,519	26,470	25,471
Net benefit to community						
Value at the 10th percentile of market wages	22,126	21,221	20,363	19,550	18,779	18,048
Value at the 25th percentile of market wages	26,181	25,116	24,107	23,150	22,242	21,380
Value at the median wages	33,978	32,607	31,307	30,073	28,902	27,789
Net benefit to society						
CEIP jobs valued at the 10th percentile	605	538	476	418	362	311
CEIP jobs valued at the 25th percentile	4,660	4,434	4,220	4,017	3,825	3,643
CEIP jobs valued at the median	12,457	11,925	11,420	10,940	10,485	10,052
Benefits per dollar of cost to Government						
To individuals	0.21	0.21	0.21	0.21	0.21	0.21
To communities						
CEIP jobs valued at the 10th percentile	0.81	0.81	0.81	0.80	0.80	0.80
CEIP jobs valued at the 25th percentile	0.96	0.96	0.95	0.95	0.95	0.95
CEIP jobs valued at the median	1.25	1.24	1.24	1.24	1.23	1.23
To society						
CEIP jobs valued at the 10th percentile	1.02	1.02	1.02	1.02	1.02	1.01
CEIP jobs valued at the 25th percentile	1.17	1.17	1.17	1.17	1.16	1.16
CEIP jobs valued at the median	1.46	1.45	1.45	1.45	1.45	1.45

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey, three waves of the community survey, and administrative data.

Notes: All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

Rounding may cause slight discrepancies in sums and differences.

Table E.7 Alternative Valuation of CEIP Jobs (IA Sample)

	Present values of impacts ($)					
Annual discount rate (%)	**2.5**	**5**	**7.5**	**10**	**12.5**	**15**
Net benefit to individuals	10,286	10,009	9,741	9,482	9,231	8,988
Net revenue to governments	-24,256	-23,390	-22,566	-21,783	-21,038	-20,329
Benefit to community (before CEIP jobs)	2,554	2,404	2,265	2,136	2,017	1,906
Value of CEIP jobs						
Value at the 10th percentile of market wages	20,840	20,024	19,249	18,512	17,812	17,145
Value at the 25th percentile of market wages	25,083	24,103	23,171	22,286	21,444	20,642
Value at the median wages	33,472	32,174	30,939	29,765	28,649	27,586
Net benefit to community						
Value at the 10th percentile of market wages	23,394	22,428	21,514	20,648	19,828	19,051
Value at the 25th percentile of market wages	27,637	26,507	25,436	24,422	23,460	22,548
Value at the median wages	36,027	34,578	33,204	31,902	30,666	29,492
Net benefit to society						
CEIP jobs valued at the 10th percentile	9,424	9,048	8,689	8,348	8,022	7,711
CEIP jobs valued at the 25th percentile	13,667	13,127	12,612	12,121	11,654	11,208
CEIP jobs valued at the median	22,056	21,197	20,380	19,601	18,859	18,152
Benefits per dollar of cost to government						
To Individuals	0.42	0.43	0.43	0.44	0.44	0.44
To Communities						
CEIP jobs valued at the 10th percentile	0.96	0.96	0.95	0.95	0.94	0.94
CEIP jobs valued at the 25th percentile	1.14	1.13	1.13	1.12	1.12	1.11
CEIP jobs valued at the median	1.49	1.48	1.47	1.46	1.46	1.45
To Society						
CEIP jobs valued at the 10th percentile	1.39	1.39	1.39	1.38	1.38	1.38
CEIP jobs valued at the 25th percentile	1.56	1.56	1.56	1.56	1.55	1.55
CEIP jobs valued at the median	1.91	1.91	1.90	1.90	1.90	1.89

Sources: Calculations from the 18-, 40-, and 54-month follow-up survey, three waves of the community survey, and administrative data.

Notes: All estimates are in constant 2002 dollars.

GDP deflators were used to adjust for inflation.

Rounding may cause slight discrepancies in sums and differences.

Encouraging Work and Supporting Communities:
Final Results of the Community Employment Innovation Project

Value of Community Effects

Using data from the three waves of community survey, the community effects study found that people in the program communities gained 1 to 2.5 contacts in bonding and bridging social capital in the 5 years following the start of CEIP. There was also evidence of increase in linking social capital: there were 1–3.5-percentage-point increases in the proportion of respondents who reported knowing a non-relative lawyer. In terms of social cohesion, there were 1.8–2.5-percentage-point increases in the proportion that reported trusting a stranger would return a lost wallet. These are all evidences of possible improvement of the communities because of CEIP.

In Wave 3 of the community survey, respondents were asked about their life satisfaction on a scale of 1 to 10. The life satisfaction scale enables the estimation of the community effect value using an adopted Helliwell and Huang model. Table E.8 presents the ordered Probit estimates of the model using Wave 3 data.

Table E.8   Ordered Probit of Life Satisfaction Scale (Community Effects)

Variables	Coef.		S.E.
Male	-0.116	***	(0.045)
Married or living common-law	0.205	***	(0.059)
Age			
25–29	-0.301	***	(0.105)
30–44	-0.492	***	(0.087)
45–54	-0.499	***	(0.090)
55 and older	-0.201	**	(0.099)
Education			
High school diploma	0.008		(0.057)
Between high school diploma and Bachelor's degree	0.000		(0.044)
Bachelor's degree and above	-0.053		(0.057)
Church goer	-0.038		(0.054)
Number of people in household			
2	-0.086		(0.085)
3	-0.130		(0.094)
4	-0.227	**	(0.110)
5 or more	-0.297	**	(0.123)
Number of children in household			
1	0.045		(0.066)
2	0.243	***	(0.085)
3 or more	0.301	**	(0.122)
Health status			
Fair	0.389	***	(0.120)
Good	0.581	***	(0.115)
Very good	0.761	***	(0.117)
Excellent	0.972	***	(0.123)
Feeling rushed			
At least once a month	-0.266	***	(0.094)
At least once a week	-0.161	**	(0.082)
Several times a week	-0.369	***	(0.076)
Daily	-0.461	***	(0.077)
Activity limitation	-0.089		(0.057)
Fairly satisfied with the community	0.581	***	(0.105)
Very satisfied with the community	1.044	***	(0.106)
Employed	0.063		(0.055)
Log personal income	0.031		(0.042)
Log household income	0.094	*	(0.048)
Number of family members and friends	-0.001		(0.001)
Total bonding and bridging links	0.002	**	(0.001)
Know a non-relative lawyer	0.130	***	(0.042)
Ever volunteered	0.071		(0.044)
Talk to neighbour daily	0.115	***	(0.044)
Neighbours always help each other if asked	0.149	***	(0.046)
Trust the police	0.318	*	(0.176)
Trust a stranger	0.096	*	(0.054)
Cut point for 10	-2.737	***	(0.269)
Cut point for 9	-2.244	***	(0.268)
Cut point for 8	-1.266	***	(0.267)
Cut point for 7	-0.670	**	(0.267)
Cut point for 6	-0.327		(0.267)
Cut point for 5	0.184		(0.267)
Cut point for 4	0.392		(0.269)
Cut point for 3	0.538	**	(0.270)
Cut point for 2	0.747	***	(0.273)
Sample size	2,858		

Source: Calculations from Wave 3 of the community survey.

Notes: Two-tailed t-tests were applied to the estimated coefficients. Statistical significance levels are indicated as: * = 10 per cent; ** = 5 per cent; *** = 1 per cent.

These estimates are consistent with the expectation of factors affecting one's utility or life satisfaction. There are 22,240 households in the program communities and the average household income (in 2002 dollars) was $36,543, according to the 2001 Census. The estimates in this table suggest that:

- Each additional link in bonding and bridging social capital is equivalent to a 2.5 per-cent increase in household income, or $905 per year, per household.

- A percentage-point increase in the proportion that knows a non-relative lawyer is equivalent to a 1.4 per-cent increase in household income, or $506 per year, per household.

- A percentage-point increase in the proportion that trusts that a stranger would return a lost wallet is equivalent to a 1 per-cent increase in household income, or $375 per year, per household.

Assuming that these values are applicable to every household in the program communities, the present value of the increased bonding and bridging social capital is $3,831 per household over the 54 months. The present value of the increased linking social capital with non-relative lawyers is $3,808 per household, while the present value of the increase in trust of strangers is $2,401 per household. To the 22,240 households in the program communities, the value of community effects per program group member is $293,416.

When compared to the value of social networks estimated from the participant impact study (about $2,200 for an additional job contact), the estimated value of additional social contacts for individual households seems reasonable at about $3,800 for improved bonding and bridging contacts. However, the difficulty arises in the application of these values to the estimated effects of CEIP at a community-level. Assuming that the average effects apply equally to all households in program communities leads to what would appear to be an unreasonable value for the effects of CEIP on social capital and cohesion – one that is ten times larger than the value of CEIP jobs. In reality, it is highly likely that the values are lower for some households in the program communities who may not have experienced any increased social capital or cohesion because of CEIP. Furthermore, it is unlikely that there is a linear relationship in the value of additional contacts or higher trust. Certainly for some households that experienced larger than average increases in networks or trust, they may not derive as much value from them as the average would imply. Further research is required to consider these kinds of distributional issues in the valuation of community effects, before a reliable value can be estimated. This is beyond the scope of the current cost-benefit analysis.

References

Borzaga, C. (1999). Social enterprises: A local tool for welfare-to-work policies. In Organization for Economic Co-operation and Development, *The local dimension of welfare-to-work: An international survey*. Paris: Author.

Bowles, S., Gintis, H., & Osborne, M. (2000). *The determinants of individual earnings: Skills, preferences, and schooling*. Amherst, MA: University of Massachusetts.

Brock, T., Doolittle, F., Fellerath, V., & Wiseman, M. (1997). *Creating new hope: Implementation of a program to reduce poverty and reform welfare*. New York: Manpower Research and Demonstration Corporation.

Connell, J. P., & Kubisch, A. C. (1998). Applying a theory of change approach to the evaluation of comprehensive community initiatives: Progress, prospects and problems. In K. Fulbright-Anderson, A. C. Kubisch, & J. P. Connell (Eds.), *New approaches to evaluating community initiatives: Theory, measurement and analysis*. Washington: The Aspen Institute.

Conference of Religious of Ireland. (1998). *Part-time job opportunities: Final report 1994–1997*. Dublin: Justice Commission, Author.

Ford, R., Gyarmati, D., Foley, K., & Tattrie., D. (2003). *Can work incentives pay for themselves? Final report on the self-sufficiency project for welfare applicants*. Ottawa: Social Research and Demonstration Corporation.

Gardner Pinfold Consulting Economists Limited. (1992). *A Review of the benefit–cost analysis of the Northumberland Strait crossing project*. Halifax: Author.

Granovetter, M. (1974). *Getting a job: A study of contacts and careers*. Chicago: University of Chicago Press.

Greenwood, J., Nicholson, C., Gyarmati, D., Kyte, D., MacInnis, M., & Ford, R. (2003). *The community employment innovation project: Design and implementation*. Ottawa: Social Research and Demonstration Corporation.

Gyarmati, D., & Kyte, D. (2003). Social capital, network formation and the community employment innovation project. *Horizons, 6*(3). Ottawa : Policy Research Initiative.

Gyarmati, D., de Raaf, S., Nicholson, C., Kyte, D., & MacInnis, M. (2006). *Testing a community-based jobs strategy for the unemployed: Early impacts of the community employment innovation project*. Ottawa: Social Research and Demonstration Corporation.

Gyarmati, D., de Raaf, S., Nicholson, C., Palameta, B., Hui, T., & MacInnis, M. (2007). *Improving skills, networks, and livelihoods through community-based work: Three-year impact of the community employment innovation project*. Ottawa: Social Research and Demonstration Corporation.

Gyarmati, D., de Raaf, S., Palameta, P., Nicholson, C., Hui, S., Kyte, D., & MacInnis, M. (2008). *Engaging communities in support of local development: Measuring the effects of the community employment innovation project on communities*. Ottawa: Social Research and Demonstration Corporation.

Hall, M., Lasby, D., Gumulka, G., & Tryon, C. (2006). *Caring Canadians, involved Canadians: Highlights from the 2004 Canada survey of giving, volunteering, and participating*. Ottawa: Statistics Canada.

Hamdad, M. (2003). *Valuing households' unpaid work in Canada, 1992 and 1998: Trends and sources of change*. Ottawa: Statistics Canada.

Helliwell, J., & Huang., H. (2005). *How's the job? Well-being and social capital in the workplace*. Cambridge: National Bureau of Economic Research.

Holzer, H. (2002). *Can work experience programs work for welfare recipients?* Washington: The Brookings Institution.

Hughes, W. (1981). *Benefit–cost analysis for RDIA Projects*. Moncton: Department of Regional Economic Expansion.

Human Resources and Social Development Canada. (2006). What is the essential skills research project? Retrieved January 25, 2008, from srv108.services.gc.ca/english/general/what_are_ES_profiles_e.pdf

Johnson, C. (1997). Towards a new generation of community jobs programs. In *Corporation for Enterprise Development: 1997 entrepreneurial economy review.* Washington: Corporation for Enterprise Development.

Johnson, C. (2003). *A model of social capital formation*. Ottawa: Social Research and Demonstration Corporation.

Karpi, T. (2001). Good friends in bad times: Social networks and job search among unemployed in Sweden. *Acta Sociologica, 44*, 157–170.

Lévesque, B., & Ninacs, W. (1997). *The social economy in Canada: The Quebec experience*. Document prepared for the Colloque sur les stratégies locales d'emploi et l'économie sociale, Montreal, June 18–19.

Levesque, M., & White, D. (1999). Le concept de capital social et ses usages. *Lien social et politiques, 41*, 23–33.

McGregor, A., Clark, S., Ferguson, Z., & Scullion, J. (1997). *The social economy and economic inclusion in lowland Scotland*. Glasgow: Community Enterprise in Strathclyde.

McLaughlin, M. (1992). *Employability skills profile: What are employers looking for?* Ottawa: Conference Board of Canada.

Meyer, B. D. (1995). Policy lessons from the U.S. unemployment insurance experiments. *Journal of Economic Literature, 33*, 91–131.

Miles, C., and Grummon, P. (1996). *Working: Assessing skills, habits, and style inventory*. Clearwater, FL: H & H Publishing Company.

Mohr, L. B. (1995). *Impact analysis for program evaluation* (2nd ed.). Thousand Oaks, CA: Sage Publications.

Molina, F., & Howard, C. (2003). *Lessons and implications for future community employment initiatives*. New York: Manpower Research and Demonstration Corporation.

Ninacs, W. A. (2002). *A review of the theory and practice of social economy*. Ottawa: Social Research and Demonstration Corporation.

Oates, T. (1992). Core skills and transfer: Aiming high. *Education and Training Technology International, 29*(3), 227–239.

Organization for Economic Co-operation and Development. (1989). *Employment outlook*. Paris: Author.

Organization for Economic Co-operation and Development. (1990). *Labour market policies for the 1990s*. Paris: Author.

Orr, L. L. (1999). Social experiments: Evaluating public programs with experimental methods. Thousand Oaks, CA: Sage Publications.

Perry, S. E., & Lewis, M. (1994). *Reinventing the local economy*. Vernon: Centre for Community Enterprise.

Policy Research Initiative. (2003). *Social capital: Building on a network-based approach*. Ottawa: Policy Research Initiative.

Policy Research Initiative. (2005). *What we need to know about the social economy: A guide for policy research*. Ottawa: Policy Research Initiative.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon and Schuster.

Putnam, R. D. (2001). Social capital measurement and consequences. *Isuma, 2*(1).

Quarter, J., Mook, L., & Richmond, B. J. (2002). *What volunteers contribute: Calculating and communicating value-added*. Toronto: Canadian Centre for Philanthropy.

Ross, D. (1994). *How to estimate the economic contribution of volunteer work*. Ottawa: Department of Canadian Heritage.

Roy, A. S., & Wong, G. (1998). *Direct job creation programs: Evaluation lessons*. Ottawa: Human Resources Development Canada.

Sherwood, K. (1999). *Designing and administering a wage-paying community service employment program under TANF*. New York: Manpower Research and Demonstration Corporation.

Sperber, L., & Bloom, D. (2002). *An analysis of Vermont's community service employment program.* New York: Manpower Research and Demonstration Corporation.

Statistics Canada. (2006). *2001 Community Profiles*. Retrieved April 5, 2006, from
     www12.statcan.ca/English/profil01/CP01/index.cfm?lang=E

Weiss, C. H. (1995). Nothing as practical as good theory: Exploring theory-based evaluation
     for comprehensive community initiatives for children and families. In J. P. Connell,
     A. C. Kubisch, L. B. Schorr, & C. H. Weiss (Eds.) *New approaches to evaluating
     community initiatives: Concepts, methods and contexts.* Washington: The Aspen
     Institute.

Wellman, B. (1979). The community question: The intimate networks of East Yorkers.
     American Journal of Sociology, 84, 1201–31.

Woolcock, M. (2001). The place of social capital in understanding social and economic
     outcomes. *Isuma, 2*(1).

Zhao, Y. (2002). Measuring the social capital of laid-off Chinese workers. *Current
     Sociology, 50*, 555–571

Publications on SRDC Projects

SRDC reports are published in English and French. SRDC working papers are published in the language of the author only.

Community Employment Innovation Project (CEIP)

Encouraging Work and Supporting Communities: Final Results of the Community Employment Innovation Project, by David Gyarmati, Shawn de Raaf, Boris Palameta, Claudia Nicholson, and Taylor Shek-Wai Hui (November 2008).

Engaging Communities in Support of Local Development: Measuring the Effects of the Community Employment Innovation Project on Communities, by David Gyarmati, Shawn de Raaf, Boris Palameta, Claudia Nicholson, Taylor Shek-Wai Hui, Darrell Kyte, and Melanie MacInnis (May 2008).

Improving Skills, Networks, and Livelihoods through Community-Based Work: Three-Year Impacts of the Community Employment Innovation Project, by David Gyarmati, Shawn de Raaf, Claudia Nicholson, Boris Palameta, Taylor Shek-Wai Hui, and Melanie MacInnis (November 2007).

Testing a Community-Based Jobs Strategy for the Unemployed: Early Impacts of the Community Employment Innovation Project, by David Gyarmati, Shawn de Raaf, Claudia Nicholson, Darrell Kyte, and Melanie MacInnis (November 2006).

The Community Employment Innovation Project: Design and Implementation, by John Greenwood, Claudia Nicholson, David Gyarmati, Darrell Kyte, Melanie MacInnis, and Reuben Ford (December 2003).

A Model of Social Capital Formation (working paper 03-01 published in English only), by Cathleen Johnson (January 2003).

A Review of the Theory and Practice of Social Economy/Économie Sociale in Canada (working paper 02-02 published in English only), by William A. Ninacs with assistance from Michael Toye (August 2002).

Self-Sufficiency Project (SSP)

Making Work Pay Symposium (March 2006).

Human Capital and Search Behaviour (working paper 06-10 published in English only), by Audra Bowlus, Lance Lochner, Christopher Robinson, and Yahong Zhang (March 2006).

The Effect of the Self-Sufficiency Project on Children (working paper 06-09 published in English only), by Piotr Wilk, Michael H. Boyle, Martin D. Dooley, and Ellen Lipman (March 2006).

Educational Upgrading and its Consequences Among Welfare Recipients: Empirical Evidence From the Self-Sufficiency Project (working paper 06-08 published in English only), by Chris Riddell and W. Craig Riddell (March 2006).

An Analysis of the Impact of SSP on Wages (working paper 06-07 published in English only), by Jeffrey Zabel, Saul Schwartz, and Stephen Donald (March 2006).

An Econometric Analysis of the Incremental Impact of SSP Plus (working paper 06-06 published in English only), by Jeffrey Zabel, Saul Schwartz, and Stephen Donald (March 2006).

The Effects of Human Capital and Earnings Supplements on Income Assistance Dependence in Canada (working paper 06-05 published in English only), by Jorgen Hansen (March 2006).

Evaluating Search and Matching Models Using Experimental Data (working paper 06-04 published in English only), by Jeremy Lise, Shannon Seitz, and Jeffrey Smith (March 2006).

Understanding the Dynamic Effects of the Self-Sufficiency Project Applicant Study (working paper 06-03 published in English only), by David Card and Dean R. Hyslop (February 2006).

The Value of Non-market Time Lost During the Self-Sufficiency Project (working paper 06-02 published in English only), by David H. Greenberg and Philip K. Robins (February 2006).

Distributional Impacts of the Self-Sufficiency Project (working paper 06-01 published in English only), by Marianne P. Bitler, Jonah B. Gelbach, and Hilary W. Hoynes (February 2006).

Estimating the Effects of a Time-Limited Earnings Subsidy for Welfare-Leavers (working paper 05-02 published in English only), by David Card and Dean R. Hyslop (February 2005).

Can Work Alter Welfare Recipients' Beliefs? (working paper 05-01 published in English only), by Peter Gottschalk (February 2005).

Out-of-School Time-Use During Middle Childhood in a Low-Income Sample: Do Combinations of Activities Affect Achievement and Behaviour? (working paper 04-06 published in English only), by Pamela Morris and Ariel Kalil (July 2004).

An Econometric Analysis of the Impact of the Self-Sufficiency Project on Unemployment and Employment Durations (working paper 04-05 published in English only), by Jeffrey Zabel, Saul Schwartz, and Stephen Donald (July 2004).

Sustaining: Making the Transition From Welfare to Work (working paper 04-03 published in English only), by Wendy Bancroft (July 2004).

New Evidence From the Self-Sufficiency Project on the Potential of Earnings Supplements to Increase Labour Force Attachment Among Welfare Recipients (working paper 04-02 published in English only), by Kelly Foley (February 2004).

Employment, Earnings Supplements, and Mental Health: A Controlled Experiment (working paper 04-01 published in English only), by Pierre Cremieux, Paul Greenberg, Ronald Kessler, Philip Merrigan, and Marc Van Audenrode (February 2004).

Equilibrium Policy Experiments and the Evaluation of Social Programs (working paper 03-06 published in English only), by Jeremy Lise, Shannon Seitz, and Jeffrey Smith (October 2003).

Assessing the Impact of Non-response on the Treatment Effect in the Canadian Self-Sufficiency Project (working paper 03-05 published in English only), by Thierry Kamionka and Guy Lacroix (October 2003).

Can Work Incentives Pay for Themselves? Final Report on the Self-Sufficiency Project for Welfare Applicants, by Reuben Ford, David Gyarmati, Kelly Foley, and Doug Tattrie, with Liza Jimenez (October 2003).

Do Earnings Subsidies Affect Job Choice? The Impact of SSP Supplement Payments on Wage Growth (working paper 03-02 published in English only), by Helen Connolly and Peter Gottschalk (January 2003).

Leaving Welfare for a Job: How Did SSP Affect the Kinds of Jobs Welfare Recipients Were Willing to Accept? (working paper 02-03 published in English only), by Kelly Foley and Saul Schwartz (August 2002).

Making Work Pay: Final Report on the Self-Sufficiency Project for Long-Term Welfare Recipients, by Charles Michalopoulos, Doug Tattrie, Cynthia Miller, Philip K. Robins, Pamela Morris, David Gyarmati, Cindy Redcross, Kelly Foley, and Reuben Ford (July 2002).

When Financial Incentives Pay For Themselves: Interim Findings From the Self-Sufficiency Project's Applicant Study, by Charles Michalopoulos and Tracey Hoy (November 2001).

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

Measuring Wage Growth Among Former Welfare Recipients (working paper 01-02 published in English only), by David Card, Charles Michalopoulos, and Philip K. Robins (July 2001).

How an Earnings Supplement Can Affect the Marital Behaviour of Welfare Recipients: Evidence from the Self-Sufficiency Project (working paper 01-01 published in English only), by Kristen Harknett and Lisa A. Gennetian (May 2001).

The Self-Sufficiency Project at 36 Months: Effects of a Financial Work Incentive on Employment and Income, by Charles Michalopoulos, David Card, Lisa A. Gennetian, Kristen Harknett, and Philip K. Robins (June 2000).

The Self-Sufficiency Project at 36 Months: Effects on Children of a Program that Increased Parental Employment and Income, by Pamela Morris and Charles Michalopoulos (June 2000).

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

When Financial Work Incentives Pay for Themselves: Early Findings from the Self-Sufficiency Project's Applicant Study, by Charles Michalopoulos, Philip K. Robins, and David Card (May 1999).

When Financial Incentives Encourage Work: Complete 18-Month Findings from the Self-Sufficiency Project, by Winston Lin, Philip K. Robins, David Card, Kristen Harknett, and Susanna Lui-Gurr, with Elsie C. Pan, Tod Mijanovich, Gail Quets, and Patrick Villeneuve (September 1998).

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

How Important Are "Entry Effects" in Financial Incentive Programs for Welfare Recipients? Experimental Evidence from the Self-Sufficiency Project (working paper 97-01-E; also available in French), by David Card, Philip K. Robins, and Winston Lin (August 1997).

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

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

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

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

Making Work Pay Better Than Welfare: An Early Look at the Self-Sufficiency Project, by Susanna Lui-Gurr, Sheila Currie Vernon, and Tod Mijanovich (October 1994).

Earnings Supplement Project (ESP)

Employment Insurance and Family Response to Unemployment: Canadian Evidence from the SLID (working paper 04-04 published in English only), by Rick Audas and Ted McDonald (May 2004).

Understanding Employment Insurance Claim Patterns: Final Report of the Earnings Supplement Project, by Shawn de Raaf, Anne Motte, and Carole Vincent (March 2004).

The Dynamics of Reliance on EI Benefits: Evidence From the SLID (working paper 03-08 published in English only), by Shawn de Raaf, Anne Motte, and Carole Vincent (December 2003).

Who Benefits From Unemployment Insurance in Canada: Regions, Industries, or Individual Firms? (working paper 03-07 published in English only), by Miles Corak and Wen-Hao Chen (November 2003).

Seasonal Employment and Reliance on Employment Insurance: Evidence From the SLID (working paper 03-04 published in English only), by Shawn de Raaf, Costa Kapsalis, and Carole Vincent (June 2003).

Employment Insurance and Geographic Mobility: Evidence From the SLID (working paper 03-03 published in English only), by Rick Audas and James Ted McDonald (April 2003).

The Impact of the Allowable Earnings Provision on EI Dependency: The Earnings Supplement Project (working paper 02-05 published in English only), by David Gray and Shawn de Raaf (November 2002).

The Frequent Use of Unemployment Insurance in Canada: The Earnings Supplement Project, by Saul Schwartz, Wendy Bancroft, David Gyarmati, and Claudia Nicholson (March 2001).

Essays on the Repeat Use of Unemployment Insurance: The Earnings Supplement Project, edited by Saul Schwartz and Abdurrahman Aydemir (March 2001).

Testing a Re-employment Incentive for Displaced Workers: The Earnings Supplement Project, by Howard Bloom, Saul Schwartz, Susanna Gurr, and Suk-Won Lee (May 1999).

A Financial Incentive to Encourage Employment among Repeat Users of Employment Insurance: The Earnings Supplement Project, by Doug Tattrie (May 1999).

Implementing the Earnings Supplement Project: A Test of a Re-employment Incentive, by Howard Bloom, Barbara Fink, Susanna Lui-Gurr, Wendy Bancroft, and Doug Tattrie (October 1997).

learn$ave

Learning to Save, Saving to Learn: Early Impacts of the learn$ave *Individual Development Accounts Project*; by Norm Leckie, Michael Dowie, and Chad Gyorfi-Dyke (January 2008).

Design and Implementation of a Program to Help the Poor Save: The learn$ave *Project*, by Paul Kingwell, Michael Dowie, Barbara Holler, Carole Vincent, David Gyarmati, and Hongmei Cao (August 2005).

Helping People Help Themselves: An Early Look at learn$ave, by Paul Kingwell, Michael Dowie, and Barbara Holler, with Liza Jimenez (May 2004).

Economic experiments

Fostering Adult Education: A Laboratory Experiment on the Efficient Use of Loans, Grants, and Saving Incentives (working paper 03-09 published in English only), by Cathleen Johnson, Claude Montmarquette, and Catherine Eckel (December 2003).

Will the Working Poor Invest in Human Capital? A Laboratory Experiment (working paper 02-01 published in English only), by Catherine Eckel, Cathleen Johnson, and Claude Montmarquette (February 2002).

Other studies

A Literature Review of Experience-Rating Employment Insurance in Canada (working paper 05-03 published in English only), by Shawn de Raaf, Anne Motte, and Carole Vincent (May 2005).

The Disability Supports Feasibility Study: Final Report, by Doug Tattrie, Colin Stuart, Roy Hanes, Reuben Ford, and David Gyarmati (June 2003).

How Random Must Random Assignment Be in Random Assignment Experiments? (technical paper 03-01 published in English only), by Paul Gustafson (February 2003).

Preparing for Tomorrow's Social Policy Agenda: New Priorities for Policy Research and Development That Emerge From an Examination of the Economic Well-Being of the Working-Age Population (working paper 02-04 published in English only), by Peter Hicks (November 2002).

The Jobs Partnership Program Pilot: Pathways, Pitfalls, and Progress in the First Year (process research report published in English only), by Wendy Bancroft, Susanna Gurr, and David Gyarmati (October 2001).

BladeRunners and Picasso Café: A Case Study Evaluation of Two Work-Based Training Programs for Disadvantaged Youth, by Sheila Currie, Kelly Foley, Saul Schwartz, and Musu Taylor-Lewis (March 2001).

Transitions: *Programs to Encourage British Columbia Students to Stay in School* (working paper 99-01 published in English only), by Reuben Ford, Susanna Gurr, Robert J. Ivry, and Musu Taylor-Lewis (June 1999).

Social Research and Demonstration Corporation

55 Murray Street, Suite 400
Ottawa, Ontario K1N 5M3
Tel.: 613-237-4311
Fax: 613-237-5045
E-mail: info@srdc.org

100 West Pender Street, Suite 300
Vancouver, British Columbia V6B 1R8
Tel.: 604-601-4070
Fax: 604-601-4080
E-mail: info@srdc.org

www.srdc.org