



Horizontal Evaluation of the Labour Market Development Agreements

Final report

November 8, 2022

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Table of contents

List of tables	iii
List of charts	v
List of abbreviations	vi
Executive summary	vii
Management response and action plan	xv
1. Introduction	1
2. Labour Market Development Agreements	2
2.1 Employment benefits	3
2.2 Support measures	4
2.3 Eligible participants covered in this study	4
3. Methodology	6
3.1 Incremental impacts analysis	6
3.2 Factors accounted for in the cost-benefit analysis	8
3.3 Strengths and limitations of the studies	9
3.4 Overview of the studies summarized in this report	10
4. Evaluation findings	12
4.1 Profile of participants	12
4.2 Incremental impacts for active and former EI claimants	13
4.3 Incremental impacts by subgroups of participants	17
4.4 Heterogeneity of treatment effect study	33
4.5 Cost-benefit analysis	34
5. Supplemental studies	37
5.1 Self-Employment	37
5.2 Job Creation Partnerships	41
5.3 Labour Market Partnerships	44
5.4 Research and Innovation	47
5.5 Skills Development-Apprentices	49
6. Conclusions and recommendations	52
6.1 Summary of findings	52
6.2 Recommendations	53
7. References	54
Appendix A. Heterogeneity of treatment effects study findings for active EI claimants in Skills Development	55
Appendix B. List of 9 studies included in this national synthesis report	61

List of tables

Table i. Share of LMDA funding and average cost per Action Plan Equivalent per participant across Canada, for 2010 to 2012 period'	viii
Table ii. Number of years for the benefits to exceed program costs	xi
Table 1. LMDA devolution dates and total expenditures between 2018 and 2021.	2
Table 2. Share of LMDA funding and average cost per Action Plan Equivalent per participant across Canada'	5
Table 3. Profile of active and former EI claimant participants in EBSMs across Canada in 2010 to 2012..	12
Table 4. Employment and earning levels, and use of SA in the year before participation in EBSMs	13
Table 5. Profile of female active and former EI claimant participants in EBSMs across Canada in 2010 to 2012	17
Table 6. Incremental impacts for female participants (annual average).....	18
Table 7. Profile of male active and former EI claimant participants in EBSMs across Canada in 2010 to 2012	19
Table 8. Incremental impacts for male participants (annual average)	20
Table 9. Profile of youth active and former EI claimant participants in EBSMs across Canada in 2010 to 2012	21
Table 10. Incremental impacts for youth participants (annual average)	22
Table 11. Profile of older worker active and former EI claimant participants in EBSMs across Canada in 2010 to 2012	23
Table 12. Incremental impacts for older worker participants (annual average)	25
Table 13. Profile of Indigenous active and former EI claimant participants in EBSMs across Canada in 2010 to 2012	26
Table 14. Incremental impacts for Indigenous participants (annual average)	27
Table 15. Profile of persons with disabilities active and former EI claimant participants in EBSMs across Canada in 2010 to 2012	28
Table 16. Incremental impacts for persons with disabilities (annual average)	29
Table 17. Profile of recent immigrant active and former EI claimant participants in EBSMs across Canada in 2010 to 2012	30
Table 18. Incremental impacts for recent immigrants (annual average)	31
Table 19. Profile of visible minority active and former EI claimant participants in EBSMs across Canada in 2010 to 2012	31
Table 20. Incremental impacts for visible minority participants (annual average)	33
Table 21. Cost-benefit results for active and former EI claimant participants	34
Table 22. Profile of active and former EI claimant participants in Skills Development -Apprentices programs across Canada in 2010 to 2012	49

Table A 1. Selected sociodemographic characteristics of participants 56
Table A 2. Annual average post-program incremental impacts for Skills Development active claimants . 57

List of charts

Chart i. Change in probability of being employed in participants relative to non-participants (annual average)ix

Chart ii. Employment earnings of participants relative to non-participants (annual average) x

Chart iii. Change in dependence on government income support (annual average)..... x

Chart 1. Change in probability of being employed in participants relative to non-participants (annual average).....14

Chart 2. Employment earnings of participants relative to non-participants (annual average) 14

Chart 3. Change in the use of EI benefits (annual average)..... 15

Chart 4. Change in the use of SA benefits (annual average) 16

Chart 5. Change in dependence on government income support (annual average) 16

Chart 6. Average earnings for active claimant participants in Skills Development-Apprentices 50

Chart 7. Average earnings for former claimant participants in Skills Development-Apprentices 51

Chart A 1. Individualized average treatment effects by subgroups 57

Chart A 2. Estimates of Group Average Treatment Effects for incidence of employment by subgroup.... 58

Chart A 3. Estimates of Group Average Treatment Effects for employment earnings by subgroup..... 59

Chart A 4. Estimates of Group Average Treatment Effects for dependence on government income supports by subgroup 60

List of abbreviations

ATE	Average Treatment Effect
ATET	Average Treatment Effect on Treated
EAS	Employment Assistance Services
EBSM	Employment Benefits and Support Measures
EI	Employment Insurance
ESDC	Employment and Social Development Canada
GATE	Group Average Treatment Effect
IATE	Individualized Average Treatment Effect
JCP	Job Creation Partnerships
LMDA	Labour Market Development Agreements
SA	Social Assistance
SD	Skills Development
TWS	Targeted Wage Subsidies

Executive summary

The Labour Market Development Agreements (LMDAs) are bilateral agreements between Canada and each province and territory for the design and delivery of Employment Benefits and Support Measures (EBSMs).

The objective of EBSMs is to assist individuals to obtain or keep employment through various active employment programs, including training or employment assistance services. Successful delivery of EBSMs is expected to result in participants receiving needed services, a quick return to work, and savings to the Employment Insurance (EI) account.

Programs and services delivered by provinces and territories have to correspond to the EBSM categories defined under the EI Act. The following is a short description of the EBSMs examined in the evaluation:

- **Skills Development (SD)** helps participants obtain employment skills by giving them financial assistance in order to attend classroom training.
- **Targeted Wage Subsidies (TWS)** help participants obtain on-the-job work experience by providing employers with a wage subsidy.
- **Self-Employment** provides financial assistance and business planning advice to participants to help them start their own business.
- **Job Creation Partnerships (JCP)** provide participants with opportunities to gain work experience that will lead to ongoing employment. Employment opportunities are provided by projects that contribute to developing the community and the local economy.
- **Employment Assistance Services (EAS)** such as counselling, job search skills, job placement services, provision of labour market information and case management.
- **Labour Market Partnerships** seek to deal with labour force adjustments and meet human resources requirements by enabling employers,

Evaluation objectives

Building on the success of previous LMDA evaluation cycles, the aim of this evaluation is to fill in knowledge gaps about the effectiveness, efficiency, as well as design and delivery of EBSMs across Canada.

The LMDA investment

In fiscal year 2020 to 2021, Canada transferred nearly \$2.5 billion (including nearly \$186.6 million in administration funds) to provinces and territories.

Evaluation methodology

The findings in this report are drawn from 9 separate evaluation studies. These studies examine issues related to program effectiveness, efficiency, and design and delivery. A mix of qualitative and quantitative methods are used, including:

- Incremental impact analysis for participants who began an intervention between 2010 and 2012
- Outcome analysis
- Cost-benefit analysis (including savings to health care)
- Key informant interviews with 287 provincial/territorial representatives, service providers, agreement holders and key stakeholders
- Provincial/territorial questionnaires
- A national survey of 2,023 self-employment participants
- Document and literature reviews

employee or employer associations, community groups, and communities to work together to develop or implement strategies.

- **Research and Innovation** initiatives seek to identify better ways of helping people prepare for, return to or keep employment, and be productive participants in the labour force.

For the purposes of this evaluation, incremental impacts are estimated for 2 types of participants:

- **Active EI claimants** are participants who started an EBSM intervention while collecting EI benefits.
- **Former EI claimants** are participants who started an EBSM intervention up to 3 years after the end of their EI benefits.¹

Table i provides an overview of the share of funding allocated to EBSMs and the average cost per participant. The average cost per participant is calculated based on the 2010 to 2012 data from the EI Monitoring and Assessment Reports. The 2010 to 2012 period corresponds with the cohort of participants selected for incremental impacts and cost-benefit analysis in the LMDA evaluation.

Table i. Share of LMDA funding and average cost per Action Plan Equivalent per participant across Canada, for 2010 to 2012 period^{2,3}

Employment Benefits and Support Measures	Average share of funding	Average cost active claimants	Average cost – former claimants
Skills Development	52%	\$10,193	\$10,052
Employment Assistance Services	30%	\$826	\$826
Labour Market Partnerships	7%	N/A	N/A
Self-Employment	6%	\$15,551	\$15,833
Targeted Wage Subsidies	3%	\$7,538	\$7,384
Job Creation Partnerships	2%	\$11,750	\$10,940
Research and Innovation	<1%	N/A	N/A
Total	100%	N/A	N/A

Sources: EI Monitoring and Assessment Reports for fiscal years 2010 to 2011 and 2011 to 2012.

Compared to the 2010 to 2012 period, the LMDA budget allocation varied for few programs and services in 2020 to 2021. For example, investments in SD decreased from 52% to 39%. As well, investments in Research and Innovation increased from less than 1% to 10% of total allocation.

¹ Former claimants can be underemployed and unable to requalify for EI, out of the labour force for various reasons or on social assistance.

² The average cost for SD includes the cost of delivering SD regular and SD-Apprentices. It is not possible to estimate the cost of delivering SD regular alone because expenditure information is not available for SD regular and SD-Apprentices separately.

³ Labour Market Partnerships and Research and Innovation do not typically have participant specific interventions.

Key findings

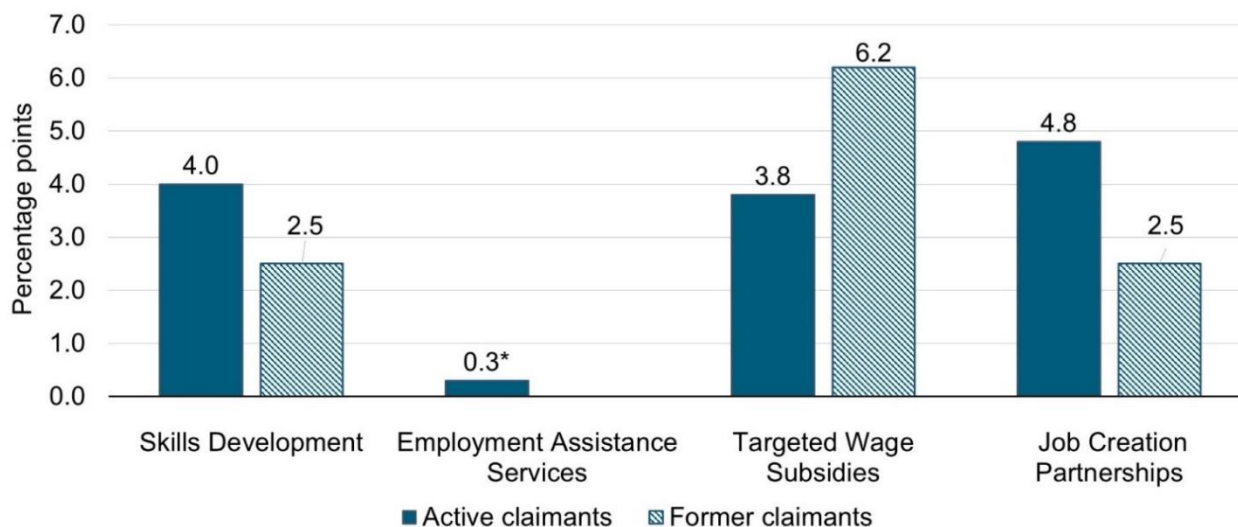
Between 2010 and 2012, nearly 609,000 participants began participating in LMDA programs and services across Canada.

Effectiveness and efficiency of EBSMs

Overall, incremental impacts demonstrate that participation in most EBSMs improves labour market attachment and reduces dependence on government income supports compared to similar non-participants. These results are consistent with those found for earlier cohorts of participants as part of the previous evaluation cycle. A subgroup analysis shows that with some exceptions, SD and TWS interventions also benefit most subgroups of participants. EAS alone was found to improve the labour market attachment for female, Indigenous and recent immigrant participants, and decrease their use of EI. As well, for most interventions, the social benefits of participating in EBSMs exceed the initial investment costs over time.

Chart i presents the incremental impacts on the incidence of employment for active and former claimants by EBSM. The estimates can be interpreted as change in the probability of being employed following participation. For example, participation in SD increases the probability of being employed by 4 percentage points for active EI claimants relative to non-participants.

Chart i. Change in probability of being employed in participants relative to non-participants (annual average)

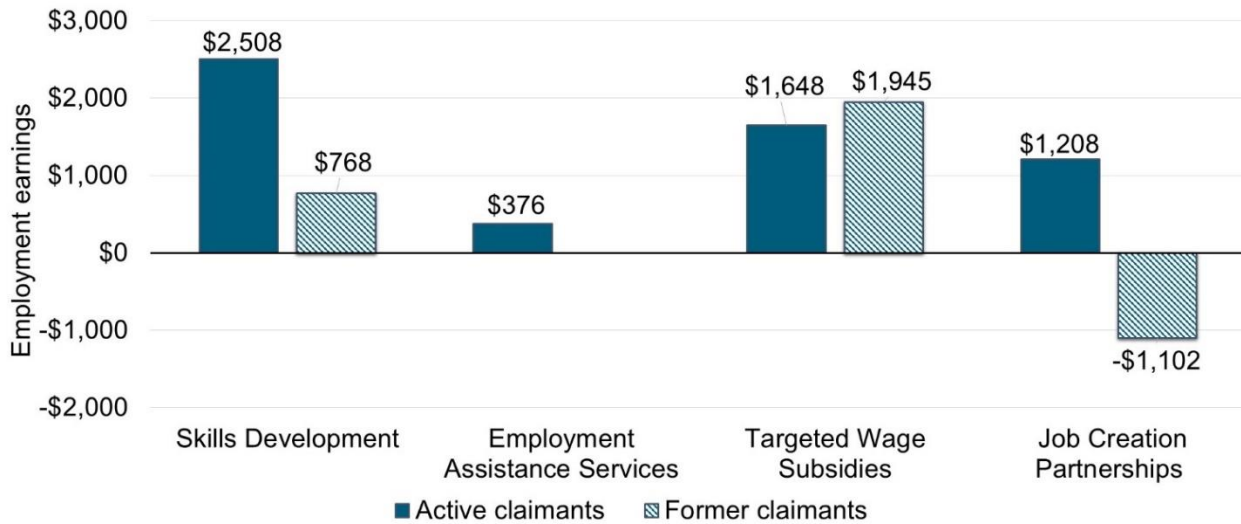


*The impact is non-statistically significant, however, it is still valid in terms of informing the direction of the impact (negative or positive).

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Chart ii presents the annual average increase in employment earnings for active and former claimants over the post-participation period.

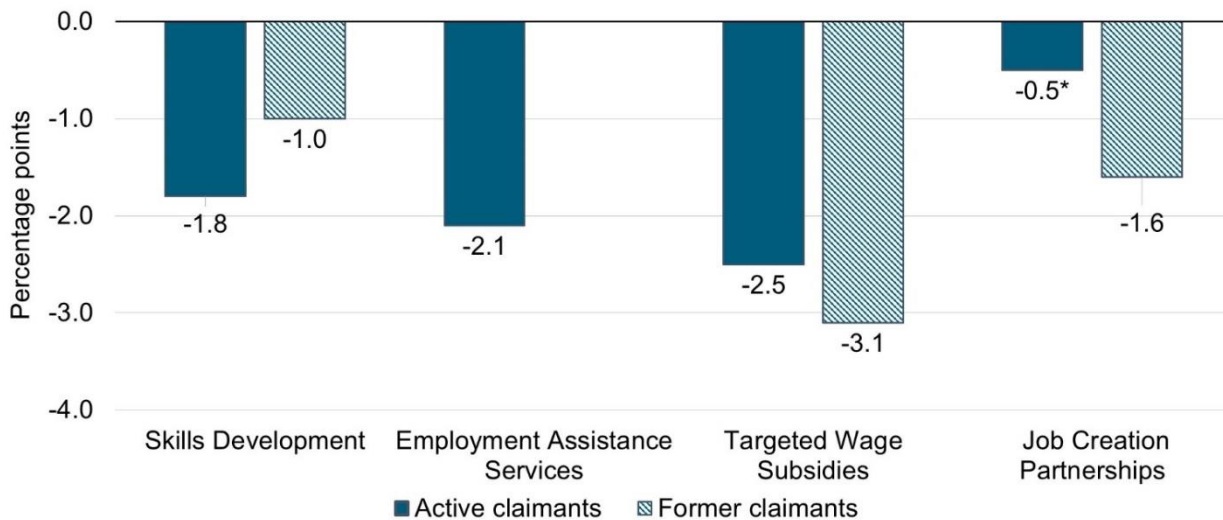
Chart ii. Employment earnings of participants relative to non-participants (annual average)



Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

As shown in Chart iii, overall active and former claimants reduce their dependence on government income supports.

Chart iii. Change in dependence on government income support (annual average)



*The impact is non-statistically significant, however, it is still valid in terms of informing the direction of the impact (negative or positive).

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Table ii presents the number of years required for the social benefits to exceed program costs. Social benefits to participation exceed initial investment costs over a period ranging from less than a year to 18.5 years.

Table ii. Number of years for the benefits to exceed program costs

Category	SD active claimants (10 years post- program)	SD youth active claimants (10 years post- program)	TWS active claimants (5 years post- program)	JCP active claimants (5 years post- program)	EAS active claimants (5 years post- program)	SD former claimants (10 years post- program)	TWS former claimants (5 years post- program)
Payback period (years after end of participation)	8.3	5.4	5.2	16.1	7.7	18.5	0.7

Supplemental studies

A series of supplemental studies address information gaps previously identified in LMDA evaluations regarding the design and delivery, challenges and lessons learned for Self-Employment, JCP, Labour Market Partnerships, and Research and Innovation.

Most of these interventions are not suitable for incremental impact analysis. For example, Labour Market Partnerships and Research and Innovation do not collect participant information. As a result, a mix of qualitative and quantitative methods are used to examine these EBSMs in detail. Key considerations are included to help guide future program and policy discussions.

Self-Employment study

The evaluation found that the Self-Employment program aims to assist participants in creating employment for themselves by providing them with a range of services.

Based on a survey, it was found that 2 to 4 years after program participation:

- Participants increased their employment level by 15 percentage points from 59% in the year before participation to 74% at the time of survey. The increase is mainly due to an increase in the percentage of self-employed participants.
- Nearly 50% of survey respondents launched a self-employment business and it was still in operation.
- Half of self-employment businesses were launched in other services⁴; professional, scientific and technical services; as well as in construction and retail trade.
- 73% of respondents said that they were financially about the same or better off after the program.
- 70% of respondents said that their household net worth was about the same or higher after the program.

⁴ Services include establishments such as repairing, maintenance of motor vehicles, machinery and equipment; providing personal care services, funeral services, laundry services and pet care services.

The survey did examine the contribution of the program to the success of self-employment businesses. At least 81% of survey respondents who launched a self-employment business rated the following services and training as very or somewhat important to the business launch, operation and success:

- Assistance with business plan development
- One-on-one mentoring / advice or counselling supports
- Discussion on risks and challenges of self-employment
- Assessment of entrepreneurial readiness
- Living allowance during participation and financial assistance with business start-up costs
- Information about and assistance to access capital
- Training on budgeting, financial management, marketing, business operation and sales

Job Creation Partnership (JCP) study

The design and delivery of JCP allows provinces and territories to address a variety of barriers to employment experienced by their citizens (such as, lack of work experience). Provinces and territories can use the program to address various labour market needs by targeting sub-groups of individuals, professions or economic sectors in demand and communities.

In addition to gaining work experience, key informants expect participants to develop work-related skills and to enhance their career development, job search abilities, and to improve their personal well-being. Project holders can benefit from the program through increased capacity, implementing their projects, and increasing their presence within local communities.

For employers that provide work experience to trained participants, benefits are mostly associated with gaining a source of trained employees. At the community level, projects support the local economy and provide new assets (such as, restored buildings or hiking trails) or services (such as, support for newcomers).

Labour Market Partnerships study

The Labour Market Partnerships program(s) aim to assist employers, communities and/or industries to address their labour force adjustments and human resource needs. Funded projects target current and/or forecasted skills and/or labour shortages. These projects also target specific unemployed populations (for example, women, youth, Indigenous peoples, newcomers, persons with disabilities and the self-employed).

All participating provinces and territories confirm that program officials carried out activities to support the formation and maintenance of partnerships. Provincial and territorial departments and key informants explained that partners' expertise, network and financial contribution are all essential to project implementation and success.

Research and Innovation study

The Research and Innovation support measure provides funding to provinces and territories for research and demonstration projects. These projects aim to identify better ways of helping individuals prepare for, return to, or keep employment and to be productive in the labour force.

The document review reveals that Research and Innovation projects encompassed a variety of activities including:

- Developing and/or testing new approaches to improve employment outcomes for clients with some projects also focusing on persons with disabilities, youth, Indigenous, and other demographic groups
- Strengthening service delivery
- Improving learning and post-secondary education with a focus on expanding online course delivery
- Funding for cost-sharing of internships, temporary work placements, or training
- Delivering career fairs or career/employment information presentations
- Research

Provincial/territorial questionnaires reveal factors contributing to successful testing and identification of innovative approaches, including:

- Project holders:
 - Employing experienced staff
 - Possessing organizational structure and financial reporting capacity
 - Having strong commitment from partners
 - Providing detailed cost estimates as part of their project proposals
- Projects that have:
 - A clear plan with measurable outcomes
 - Continuous project application intake to address on-going and emerging labour market issues

Skills Development-Apprentices study

The objective of the program is to help apprentices become skilled tradespeople and to increase their labour market attachment. Program participants have generally chosen a career and are already attached to the labour market. The apprenticeship process involves on-the-job learning and technical training in a classroom setting.

The evaluation found that active EI claimants increased their average earnings from \$19,325 in the fifth year pre-program to \$56,131 in the fifth year after the program start year. Former EI claimants increased their average earnings from \$21,772 in the fifth year pre-program to \$58,158 in the fifth year after the program start year. After participating in the program, both active and former claimants also decreased their dependence on government income supports.

Recommendations

Since 2012, 15 qualitative and quantitative studies addressed issues and questions related to EBSM design, delivery and effectiveness:

- The quantitative studies successfully assessed the effectiveness and efficiency of EBSMs by producing incremental impacts and cost-benefit analysis.

- The qualitative studies help to contextualize the findings from the quantitative studies and to identify specific challenges, lessons learned and best practices associated with the design and delivery of EBSMs. Each study included key considerations for program and policy development or recommendations.

In addition, the recently completed evaluation of the Workforce Development Agreements complements the LMDA qualitative studies. This comprehensive evaluation provided unique insights into challenges and lessons learned to assist persons with disabilities, immigrants and those further removed from the labour market.

Most results from this evaluation stem from the conduct of advance causal analysis whereby impacts found could be attributed to a specific EBSM. These analyses are predicated on having access to high quality administrative records, thereby confirming the importance of the capacity to leverage and integrate relevant administrative data.

From these main findings, 2 key recommendations emerge:

Recommendation #1: ESDC and provinces/territories are encouraged to share and discuss lessons learned, best practices and challenges associated with the design and delivery of EI-funded provincial/territorial programming. Discussions are encouraged at the bilateral or multilateral levels as well as with service delivery network if necessary.

Recommendation #2: ESDC and provinces/territories are encouraged to pursue efforts to maintain and strengthen data collection provisions in support of reporting, performance measurement and data-driven evaluations at the national and provincial/territorial levels. To that regard, ESDC should:

- Continue to prioritize data integrity, including validating data uploads and documenting changes over time
- Explore ways of accessing data on social assistance, unsuccessful EI applicants, and immigration and citizenship, in light of expanded eligibility to the LMDAs beyond active and former EI claimants

Management response and action plan

Overall management response

ESDC would like to thank all members of the Labour Market Development Agreements (LMDA) Evaluation Steering Committee for their valuable contributions to the evaluation of the LMDAs.

Recommendation #1

ESDC and provinces/territories are encouraged to share and discuss lessons learned, best practices and challenges associated with the design and delivery of EI-funded provincial/territorial programming. Discussions are encouraged at the bilateral or multilateral levels as well as with service delivery network if necessary.

Management response

As the evaluation demonstrates, participation in most LMDA programs similar to Employment Benefit and Support Measures (EBSMs) improves labour market attachment and reduces dependence on government income supports compared to similar non-participants. For example, a survey conducted after program participation in the Self-Employment program demonstrates that participants increased their employment levels from 59% to 74%. EI claimants who participated in Skills Development activities while collecting EI benefits reduced their use of EI benefits and had higher annual earnings (\$2,508 higher on average) than those who did not take training.

To identify further opportunities to enhance participant outcomes under the LMDAs, ESDC will encourage discussions with provinces and territories on the lessons learned, best practices and challenges associated with the design and delivery of programs similar to EBSMs through existing bilateral and multilateral forums.

Management action plan	Completion date
1.1 The Skills and Employment Branch, ESDC, will explore opportunities through existing bilateral and multilateral forums to discuss with provinces and territories the lessons learned, best practices and challenges associated with the design and delivery of programs similar to EBSMs.	April 1, 2024

Recommendation #2

ESDC and provinces/territories are encouraged to pursue efforts to maintain and strengthen data collection provisions in support of reporting, performance measurement and data-driven evaluations at the national and provincial/territorial levels. To that regard, ESDC should:

- Continue to prioritize data integrity, including validating data uploads and documenting changes over time
- Explore ways of accessing data on social assistance, unsuccessful EI applicants, and immigration and citizenship, in light of expanded eligibility to the LMDAs beyond active and former EI claimants

Management response

ESDC will explore opportunities to engage with provinces and territories on performance measurement and evaluation in order to improve reporting and better demonstrate results for Canadians.

Management action plan	Completion date
2.1 The Skills and Employment Branch, ESDC, will engage with provinces and territories to develop an approach to strengthen data integrity and reporting to Canada, which will help ensure a continuous monitoring of trends.	April 1, 2024
2.2. ESDC will continue to support efforts led by Strategic and Service Policy Branch, to explore possible data development options aiming to improve, refine and allow more flexibilities for upcoming policy analysis, research and evaluations activities.	September, 2024

1. Introduction

Employment and Social Development Canada (ESDC) worked jointly with 12 provinces and territories to undertake the 2018 to 2023 third cycle for the Labour Market Development Agreement (LMDA) evaluations.

The first cycle of LMDA evaluations was carried out from 1998 to 2012. It involved the conduct of separate formative and summative evaluations in all provinces and territories under the guidance of bilateral Joint Evaluation Committees.

Building on lessons learned and best practices from the first cycle, the second cycle of LMDA evaluations was undertaken between 2012 and 2017. The second cycle was designed and implemented under the guidance of a federal-provincial/territorial LMDA Evaluation Steering Committee.⁵ The work was supported by bilateral discussions at Joint Evaluation Committees.

Under the second cycle, studies generated evaluation evidence on the effectiveness, efficiency and design and delivery of Employment Benefits and Support Measures (EBSMs). Findings and conclusions from up to 9 studies were summarized in 1 national and 12 bilateral reports for public release.

The third LMDA evaluation cycle builds on the success of the second cycle. The aim is to fill in knowledge gaps about the effectiveness, efficiency, and design and delivery of EBSMs. The evaluation cycle was designed and implemented under the guidance of a federal-provincial/territorial LMDA Evaluation Steering Committee composed of ESDC and 12 participating provinces and territories.⁶

This report presents a summary of the third cycle evaluation findings from 9 studies.⁷

⁵ As stipulated in the Canada-Québec LMDA, Québec is responsible for undertaking its own evaluation. However, data from Québec are included in the national level analyses.

⁶ Québec representatives participate in the LMDA Evaluation Steering Committee meetings as observers.

⁷ Provincial and territorial evaluation reports are scheduled for public release in 2023.

2. Labour Market Development Agreements

The LMDAs are bilateral agreements between Canada and each province and territory for the design and delivery of EBSM programs and services. They were established under Part II of the 1996 Employment Insurance (EI) Act.

In fiscal year 2020 to 2021, Canada transferred nearly \$2.5 billion (including nearly \$186.6 million in administration funds) to provinces and territories.⁸ Each province and territory is responsible for the design and delivery of programs and services aimed at assisting individuals to prepare for, obtain, and maintain employment.

As of February 2010, the delivery of EBSMs became fully devolved to all provinces and territories. Table 1 provides the key dates related to the LMDAs' devolution and recent LMDA expenditures by jurisdiction.

Table 1. LMDA devolution dates and total expenditures between 2018 and 2021.

Province / Territory	Devolution date	2018 to 2019	2019 to 2020	2020 to 2021
British Columbia	February 2, 2009	\$320,325,994	\$321,242,200	\$324,175,000
Alberta	November 1, 1997	\$166,560,149	\$174,226,603	\$192,380,000
Saskatchewan	January 1, 1999	\$48,105,020	\$ 50,028,901	\$54,371,000
Manitoba	November 27, 1997	\$55,820,088	\$56,883,703	\$61,704,000
Ontario	January 1, 2007	\$700,423,363	\$707,753,826	\$741,361,740
Quebec	April 1, 1998	\$688,104,016	\$688,291,329	\$706,505,000
Newfoundland & Labrador	November 2, 2009	\$142,334,176	\$145,579,812	\$150,306,000
Nova Scotia	July 1, 2009	\$96,166,239	\$ 97,991,656	\$101,182,000
New Brunswick	April 1, 1997	\$107,078,366	\$107,755,844	\$111,497,000
Prince Edward Island	October 5, 2009	\$28,965,942	\$29,050,151	\$29,755,000
Nunavut	April 1, 2000	\$3,769,642	\$ 3,799,455	\$3,954,000

⁸ Employment and Social Development Canada. (2022). 2020 to 2021 EI Monitoring and Assessment Report.

Province / Territory	Devolution date	2018 to 2019	2019 to 2020	2020 to 2021
Northwest Territories	October 1, 1998	\$4,705,577	\$4,699,339	\$4,766,000
Yukon	February 1, 2010	\$4,397,899	\$ 4,453,652	\$4,669,000
Total	n/a	\$2,366,756,471	\$2,391,756,471	\$2,486,625,740

Source: EI Monitoring and Assessment Reports (2018 to 2019, 2019 to 2020, and 2020 to 2021).

LMDA programs and services are classified under 2 categories:

- **Employment benefits**^{9,10} fall into 5 sub-categories: Skills Development, Targeted Wage Subsidies, Self-Employment, Job Creation Partnerships, and Targeted Earnings Supplements.¹¹
- **Support measures** fall into 3 sub-categories: Employment Assistance Services¹², Labour Market Partnerships, and Research and Innovation.

Provinces and territories have the flexibility to adapt EBSMs to their jurisdiction's context as long as they are consistent with Part II of the *EI Act*.¹³

The objective of EBSMs is to assist individuals to obtain or keep employment through various active employment programs, including training or employment assistance services. Successful delivery of EBSMs is expected to result in participants receiving needed services, a quick return to work, and savings to the EI account.

Programs and services examined in this study include:

2.1 Employment benefits

- **Skills Development (SD)** provides direct financial assistance to individuals to select, arrange, and pay for training. Training is tailored to the needs of participants through counselling and career orientation, and averages 48.5 weeks. It can include adult-based education, literacy and essential

⁹ As of April 1, 2018, eligibility for employment benefits was expanded to include those who have made minimum EI premium contributions above the premium refund threshold (that is \$2,000 in earnings) in at least 5 of the last 10 years.

¹⁰ In July 2016, new provisions were introduced, changing the definition of former claimants to cover those who completed an EI claim in the past 5 years.

¹¹ Targeted Earnings Supplements is not examined as part of this evaluation, as it is not currently being used.

¹² Employment Assistance Services are available to all Canadians.

¹³ Employment and Social Development Canada (2012). Labour Market Development Agreements Process for Determination of Similarity (internal document).

skills, language training, short-term training and occupational training leading to certification from an accredited institution.

- **Targeted Wage Subsidies (TWS)** subsidize the wages of individuals whom employers would not ordinarily hire. Subsidies range in duration from 16 to 52 weeks, with the maximum level ranging from 50% to 100% of the employee's wage.
- **Job Creation Partnerships (JCP)** support community-oriented projects that provide work experience to participants. Participants can take part in a finite project for up to 52 weeks.
- **Self-Employment** provides financial assistance and business planning advice to participants to help them start their own business.

2.2 Support measures

- **Employment Assistance Services (EAS)** support individuals as they prepare to enter or re-enter the workforce or assist them to find a better job. Services include job search services, career development and counselling, and résumé writing assistance. These services are light touch interventions due to their very short duration, and can be provided on a one-on-one basis or in a group setting.
 - A typical intervention lasts less than 1 day, but a participant may receive multiple short interventions over a few weeks. These services are generally provided in combination with more intensive interventions.
- **Labour Market Partnerships** seek to deal with labour force adjustments and meet human resources requirements. They enable employers, employee or employer associations, community groups, and communities to work together to develop or implement strategies.
- **Research and Innovation** initiatives seek to identify better ways of helping people prepare for, return to or keep employment, and be productive participants in the labour force.

2.3 Eligible participants covered in this study

The incremental impacts are estimated for active and former EI claimants:

- **Active claimants** are participants who started an EBSM intervention while collecting EI benefits.
- **Former claimants** are participants who started an EBSM intervention up to 3 years after the end of their EI benefits.¹⁴

Table 2 provides an overview of the share of funding allocated to EBSMs and the average cost per participant. It is noted that the average cost per participant is calculated based on the 2010 to 2012 data from the EI Monitoring and Assessment Reports. The 2010 to 2012 period corresponds with the

¹⁴ Former claimants can be underemployed and unable to requalify for EI, out of the labour force for various reasons or on Social Assistance.

cohort of participants selected for incremental impacts and cost-benefit analysis in the LMDA evaluation.

From the 2010 to 2012 time period to the 2020 to 2021 fiscal year, investments in SD decreased by 13 percentage points and those in Self-Employment decreased by 4 percentage points. The largest increases in funding are noted for Research and Innovation (+9 percentage points) and Labour Market Partnerships (+5 percentage points).

Table 2. Share of LMDA funding and average cost per Action Plan Equivalent per participant across Canada^{15,16}

Employment Benefits and Support Measures	Share of funding (2010 to 2012 years)	Share of funding (year 2020 to 2021)	Average cost – active claimants (2010 to 2012)	Average cost – former claimants (2010 to 2012)
Skills Development	52%	39%	\$10,193	\$10,052
Employment Assistance Services	30%	31%	\$826	\$826
Labour Market Partnerships	7%	12%	N/A	N/A
Self-Employment	6%	2%	\$15,551	\$15,833
Targeted Wage Subsidies	3%	5%	\$7,538	\$7,384
Job Creation Partnerships	2%	2%	\$11,750	\$10,940
Research and Innovation	<1%	10%	N/A	N/A

Sources: EI Monitoring and Assessment Reports for fiscal years 2010 to 2011, 2011 to 2012 and 2020 to 2021.

¹⁵ The average cost for SD includes the cost of delivering SD regular and SD-Apprentices. It is not possible to estimate the cost of delivering SD regular alone because expenditure information is not available for SD regular and SD-Apprentices separately.

¹⁶ Labour Market Partnerships and Research and Innovation do not typically have participant specific interventions.

3. Methodology

This section presents key aspects of the quantitative analyses carried out as part of the LMDA studies.

All quantitative analyses are based on administrative data from the EI Part I (EI claim data) and Part II (EBSM participation data). The EI Part I and II data are then linked to the T1 and T4 taxation files from the Canada Revenue Agency. Incremental impact and cost-benefit analyses are based on up to 100% of participants who began their EBSM participation in 2010 to 2012.

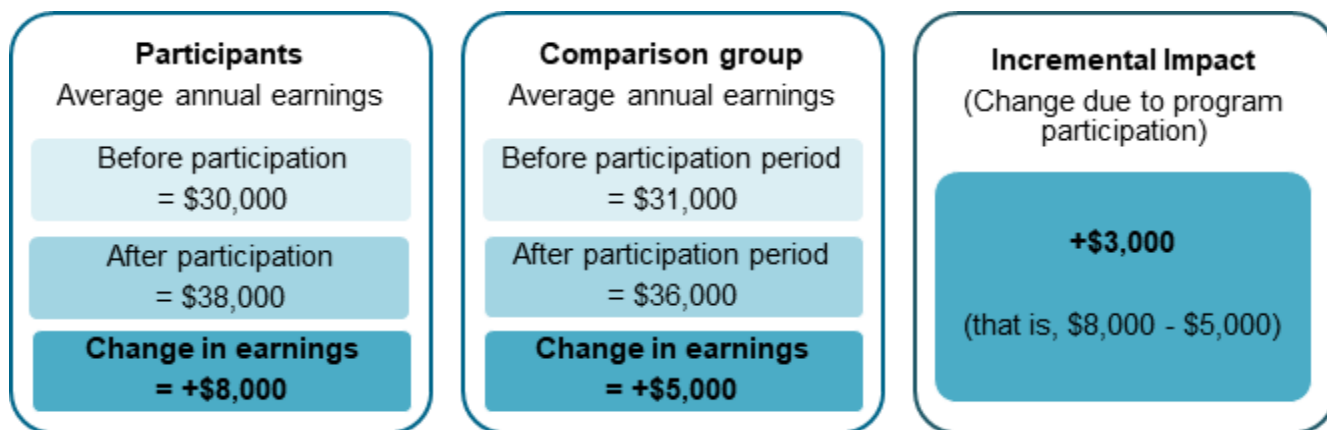
The 2010 to 2012 timeframe was selected in order to assess the impacts of EBSMs in the years following participation. Impacts were assessed over a period of at least 4 years after program completion up to the 2017 calendar year (most recent available information at the time of this evaluation).

3.1 Incremental impacts analysis¹⁷

Program effectiveness is assessed by estimating incremental impacts from EBSM participation on participants' labour market experience. That is, earnings from employment and self-employment, incidence of employment, use of EI, use of Social Assistance (SA), and dependence on government income supports after participation.

The role of the incremental impact analysis is to isolate the effects of participation from other factors. In order to achieve this, the incremental impact analysis compares the labour market experience of participants before and after their participation with that of similar non-participants. Figure 1 presents an example of incremental impact calculation.

Figure 1. Example of the incremental impact calculation



¹⁷ For more details about the methodology used for the incremental impacts, please refer to: ESDC, *Third Cycle for the Horizontal Evaluation of the Labour Market Development Agreements: Quantitative Methodology Report*. (ESDC Evaluation Directorate, 2019, internal document).

The main estimator used is propensity score kernel matching technique combined with difference-in-differences estimator. Moreover, 3 different state-of-the-art estimation techniques (Inverse Probability Weighting, Nearest Neighbour and Cross-sectional Matching) were carried out separately for each type of EBSMs and EI claimants in order to validate the impact estimates.

As for previous LMDA evaluation studies, the Action Plan Equivalent is the unit of analysis used. Action Plan Equivalents regroup all EBSMs received by an individual within less than 6 months between the end of one EBSM and the start of the next. Action Plan Equivalents are categorized based on the longest EBSM they contain, except for EAS-only Action Plan Equivalents which include only EAS interventions.

The analysis includes Action Plan Equivalents that consist only of LMDA interventions. Action Plan Equivalents that include a combination of LMDA and other labour market programs funded by ESDC, were excluded from the participant sample.

The matching of participants and comparison group members used up to 75 socio-demographic and labour market variables observed over 5 years before participation. Two different comparison groups were used to measure impacts for active and former EI claimants.

- For **active claimants**, incremental impacts were measured relative to a comparison group of active claimants who were eligible to, but did not, participate in EBSMs during the reference period.
- For **former claimants**, the comparison group was created using individuals who participated in EAS only during the reference period.¹⁸ In other words, the experience of former claimants in SD, TWS, or JCP interventions is compared to the experience of former claimants who received EAS only. This is a conservative approach given the fact that participation in EAS can lead to limited effects on labour market outcomes.

Due to this difference in measurement, incremental impacts estimated for active claimant participants should not be directly compared to those of former claimant participants.

Impacts are generated over 4 years for SD, JCP and TWS, while a fifth year is estimated for participants in EAS.¹⁹

¹⁸ This is based on previous evaluation methodologies, on expert advice and given the difficulty in generating a suitable comparison for former claimants using administrative data alone.

¹⁹ Further details are available in the report entitled *Technical Report on the Analysis of Employment Benefits and Support Measures (EBSMs) Profile, Outcomes and Medium-Term Incremental Impacts* from 2010 to 2017 (2021). The report is available upon request.

3.2 Factors accounted for in the cost-benefit analysis^{20,21}

Building on the results of the incremental impacts, program efficiency is assessed through a cost-benefit analysis. The analysis compares the participants' cost of participating and the government's cost of delivering the program to the benefits associated with the program. Overall, this analysis provides insights on the extent to which the program is efficient for society (that is, for both participants and the government).

Sources of data and information

The analysis takes into account all the quantifiable costs and benefits directly related to EBSM delivery and participation that can be measured given the information available. The analysis is comprehensive in that it accounts for the vast majority of possible direct costs and benefits.

However, the analysis does not account for all costs and benefits. For example, there are factors that can lead to an understatement of the benefits (for example, positive spillovers to other family members) and other factors that can lead to an overstatement of the benefits (for example, effects on skill prices or displacement).

This study relied on integrated data from the EI Part I and II Databank and Income Tax records from the Canada Revenue Agency. Information about earnings, use of EI, and use of social assistance was taken from the study of incremental impacts.²² The program costs were calculated using information available in the EI Monitoring and Assessment Reports.

Relative to the previous cycle of evaluation, the methodology has been extended to incorporate one of the indirect health benefits associated with increased labour market attachment. In particular, the methodology includes an estimate of the change in public health care cost due to the decline in health care utilization resulting from program participation.

Data on average public healthcare costs by income quintiles are taken from the report *Lifetime Distributional Effects of Publicly Financed Health Care in Canada (2013)* by the Canadian Institute for Health Information.

Program costs are measured using information on LMDA expenditures and new interventions reported in the EI Monitoring and Assessment Reports. Other costs and benefits are assessed using integrated administrative data from the EI Part I and II databank and the Canada Revenue Agency.

²⁰ Further details about the methodology used for the cost-benefit analysis are available in the technical report entitled *Cycle II of the Evaluation of the Labour Market Development Agreements: Cost-Benefit Analysis of Employment Benefits and Support Measures (2015)*. The report is available upon request.

²¹ Further details about the methodology used for the savings to health care are available in the technical report entitled *Cost-Benefit Analysis: Incorporating Public Health Care Costs Savings in the Context of the Labour Market Programs Evaluation (2022)*. The report is available upon request.

²² Further details are available in the report entitled *Technical Report on the Analysis of Employment Benefits and Support Measures (EBSMs) Profile, Outcomes and Medium-Term Incremental Impacts from 2010 to 2017 (2021)*. The report is available upon request.

Incremental impacts measured over the second year of participation and up to 5 post-program years are discounted by 3% to bring them to a common base with the program cost and benefits incurred in the program start year. This 3% rate accounts for the interest the government could have collected if the funds used to pay for the program had been invested. Incremental impacts are estimated using 2010 constant dollars and this accounts for inflation.

The costs and benefits accounted for in the calculations

- **Program costs:** costs incurred by the government for delivering the program (that is, administration and direct program costs calculated from data reported in the EI Monitoring and Assessment Reports).
- **Marginal social cost of public funds:** loss incurred by society when raising additional revenues such as taxes to fund government spending. The value is estimated at 20% of the program cost, sales taxes, income taxes, impacts on EI and impacts on SA paid or collected by the government.
- **Foregone earnings:** estimated net impacts on participants' earnings during the participation period. During labour market program participation, some individuals have lower earnings than what they would have received if they had not participated.
- **Employment earnings:** incremental impacts on participants' earnings during and after participation. In-program earnings represent the foregone earnings for participants.
- **Fringe benefits:** the employer-paid health and life insurance as well as pension contributions. They are estimated at 15% of the incremental impacts on earnings.
- **Federal and provincial income taxes:** incremental impacts on federal, provincial and territorial taxes paid by participants.
- **Sales taxes:** the sales taxes paid by participants estimated as incremental impacts on earnings multiplied by the propensity to consume (97%), the proportion of household spending on taxable goods and services (52%) and the total average federal and provincial sales tax rate (11%).
- **Social assistance and Employment Insurance benefits collected:** incremental impacts on SA and EI benefits use by participants following participation.
- **Canada Pension Plan and Quebec Pension Plan contribution and EI premiums:** these contributions and premiums were identified from the Canada Revenue Agency data and then, the incremental impacts on Canada Pension Plan and Quebec Pension Plan contributions and EI premiums were estimated.
- **Public health care costs:** estimated impact of participation in EBSMs on public health care costs shown as an average change per participant over the post-program period examined.

3.3 Strengths and limitations of the studies

One of the key strengths from the studies is that all quantitative analyses are based on administrative data rather than survey responses. Compared to survey data, administrative data are not subject to recall errors or response bias.

The propensity score models used to match participants and non-participants for the incremental impact analyses are judged to be robust. In part, this is because they were based on 5 years of pre-participation data. Moreover, these models are based on a vast array of variables including sociodemographic characteristics, location, skill level related to last occupation, and indicators of labour market attachment.

However, the matching process can be further refined for specific subgroups if the following information is available in the future:

- Persons with disabilities: the type and severity of the disability, and the capacity/willingness to work full-time.
- Recent immigrants: the country of origin, the proficiency in English or French, and the relevance of credentials and work experience.
- Visible minorities: place of birth; individuals who are born outside of Canada face different challenges compared to those born in Canada.

Refining the matching process for population subgroups could broaden the scope for greater Gender-based Analysis Plus.

Sensitivity analysis and the use of alternative estimation methods have increased confidence in the incremental impact estimates. However, one limitation with the propensity score matching techniques is that no one can be fully sure the impacts are not influenced by factors not captured in the data.

The cost-benefit analysis accounted for all quantifiable costs and benefits directly attributable to the EBSMs and could be estimated with the available administrative data. It is further strengthened by incorporating one of the indirect benefits, which is the change in public health care expenditures associated with program participation. However, the analysis did not account for non-quantifiable factors that can lead to an understatement of the benefits (for example, positive spillovers to other family members) and factors that can lead to an overstatement of the benefits (for example, effects on skill prices or displacement).

In some studies that use qualitative data collection methods, the number of key informants interviewed is relatively small in some provinces and territories. Responses provided by key informants reflect their own experience and their own region, and may not be fully representative of the entire province and territory.

3.4 Overview of the studies summarized in this report

The findings in this report are drawn from 9 separate studies carried out at the national level. These studies examine issues related to program effectiveness, efficiency, design/delivery and used a mix of qualitative and quantitative methods. Appendix B presents an overview of these studies. The studies are:

- Examination of the medium-term outcomes from 2010 to 2017
- Estimation of the medium-terms incremental impacts from 2010 to 2017

- Cost-benefit analysis of Employment Benefits and Support Measures
- Cost-Benefit Analysis: Incorporating Public Health Care Costs Savings in the Context of the Labour Market Programs Evaluation
- Heterogeneity of treatment effects
- Design and delivery of the Job Creation Partnerships program
- Design and delivery of the self-employment program
- Design and delivery of the Labour Market Partnerships program
- Design and delivery of the Research and Innovation support measure

4. Evaluation findings

4.1 Profile of participants

Across Canada, nearly 609,000 EI active and former claimants participated in LMDA programs and services between 2010 and 2012. The profile of participants is presented in Table 3.

The profile of participants is presented in Table 3 by gender, age, sociodemographic group, and marital status. Information about their educational attainment, occupation and industry is based on the latest job they held prior to applying for EI benefits. Information about sociodemographic groups is self-reported.

Table 3. Profile of active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	367,964	240,857
Gender	Female = 49% Male = 51%	Female = 50% Male = 50%
Age	30 and under = 27% 31 to 54 = 59% 55 and over = 14%	30 and under = 31% 31 to 54 = 58% 55 and over = 12%
Sociodemographic group	Indigenous = 4% Person with disability = 5% Visible minority = 5% Recent immigrant = 4%	Indigenous = 8% Person with disability = 8% Visible minority = 6% Recent immigrant = 4%
Marital status	Married or common-law = 43% Widow / divorced / separated = 13% Single = 41%	Married or common-law = 34% Widow / divorced / separated = 14% Single = 46%
Education or skills level	High school or occupational training = 39% On-the-job training = 23% College, vocational education or apprenticeship training = 28% University degree = 5%	High school or occupational training = 39% On-the-job training = 27% College, vocational education or apprenticeship training = 25% University degree = 4%
Top 3 occupational groups	Semi-skilled manual workers = 14% Clerical personnel = 14% Other manual workers = 13%	Other manual workers = 14% Semi-skilled manual workers = 14% Clerical personnel = 12%

Categories	Active claimants	Former claimants
Top 3 industries	Manufacturing = 15% Retail trade = 11% Construction = 10%	Manufacturing = 14% Retail trade = 12% Administrative and support, waste management and remediation services = 11%

*Values may not equal 100% due to rounding or missing information.

As presented in Table 4, in the year before program participation, former claimants have lower levels of employment and earnings than active claimants. Former claimants also have a higher dependence on SA.

Table 4. Employment and earning levels, and use of SA in the year before participation in EBSMs

Pre-EBSM participation employment characteristics	Active claimants	Former claimants
Average employment earnings	\$24,910	\$12,547
Percentage employed	99%	82%
Percentage on SA	6%	19%

4.2 Incremental impacts for active and former EI claimants

The incremental impact results presented below are generally consistent with those found as part of the second LMDA evaluation cycle.

Incidence of employment

Chart 1 presents the incremental impacts on the incidence of employment for active and former claimants by type of program.²³ The estimates can be interpreted as a change in the probability of being employed following participation.

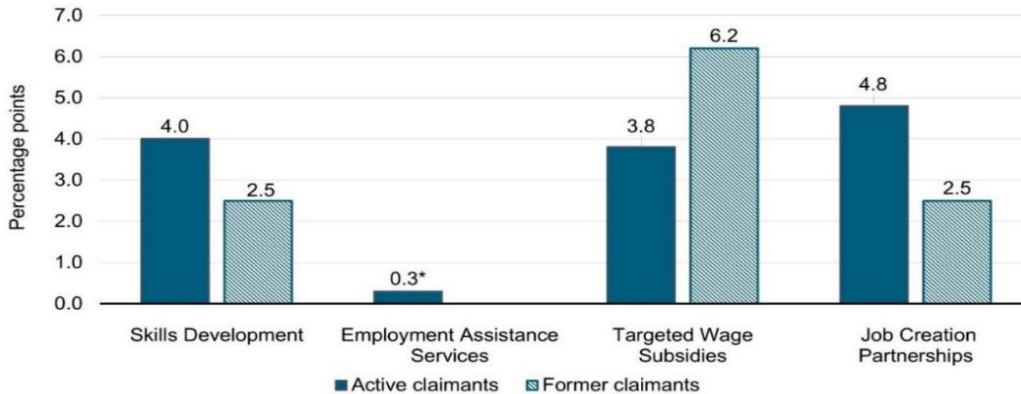
Active claimants in SD, TWS and JCP increase their incidence of employment relative to similar non-participants. Former claimants in SD, TWS and JCP increase their incidence of employment relative to similar participants who receive only EAS.

Active claimants in EAS-only experience a small positive, but not statistically significant, impact on their incidence of employment. EAS are relatively modest activities such as counselling, job search assistance and case management, which focus on quicker returns to work for participants. EAS

²³ An individual is considered employed if they earned more than \$1 from employment or self-employment in a calendar year.

supports that are not provided with longer interventions, are not expected to increase participants' skills or influence their employment levels to a large extent.

Chart 1. Change in probability of being employed in participants relative to non-participants (annual average)



*The impact is non-statistically significant, however, it is still valid in terms of informing the direction of the impact (negative or positive).

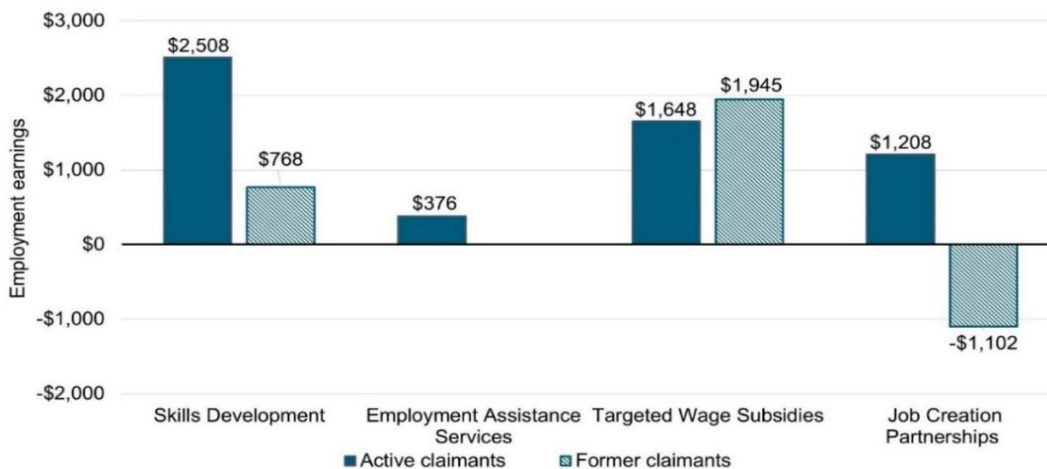
Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Employment earnings

Chart 2 presents the average annual increase in employment earnings for active and former EI claimants over the 4 years post-participation. Active EI claimants in SD, TWS, JCP, and EAS increase their employment earnings compared to similar non-participants.

Former EI claimants in SD and TWS increase their employment earnings relative to similar participants who receive only EAS services. Former claimants in JCP have lower employment earnings compared to similar participants in only EAS services.

Chart 2. Employment earnings of participants relative to non-participants (annual average)



Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

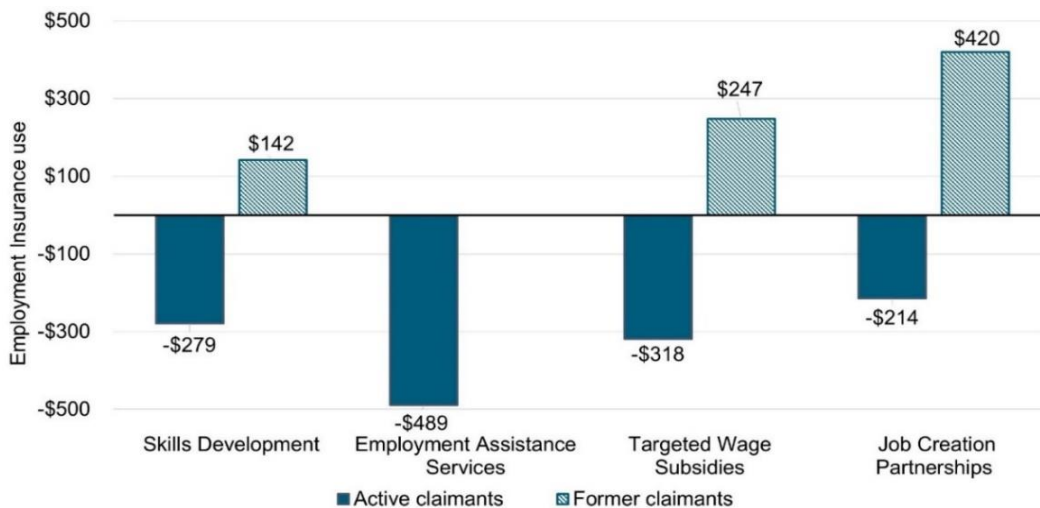
Use of EI benefits

As shown in Chart 3, active claimants reduce their use of EI benefits in the post-program period compared to similar non-participants. In the post-program period, former claimants in SD, TWS and JCP increase their EI benefits use relative to similar participants who receive EAS services only.

In the case of SD and TWS, the increase in the use of EI by former claimants is consistent with previous evaluations and is not necessarily a negative impact. Following participation, former claimants are likely to requalify for EI benefits due to their stronger labour market attachment demonstrated by increases in their incidence of employment and earnings.

The increase in the use of EI for former claimants in JCP is a negative impact given the decrease in employment earnings. Therefore, for former EI claimants, this intervention will not be effective from a cost-benefit perspective. However, the supplemental study for JCP confirmed that the program has added value for participants, employers, and communities that cannot be taken into account.

Chart 3. Change in the use of EI benefits (annual average)



Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Use of social assistance (SA) benefits

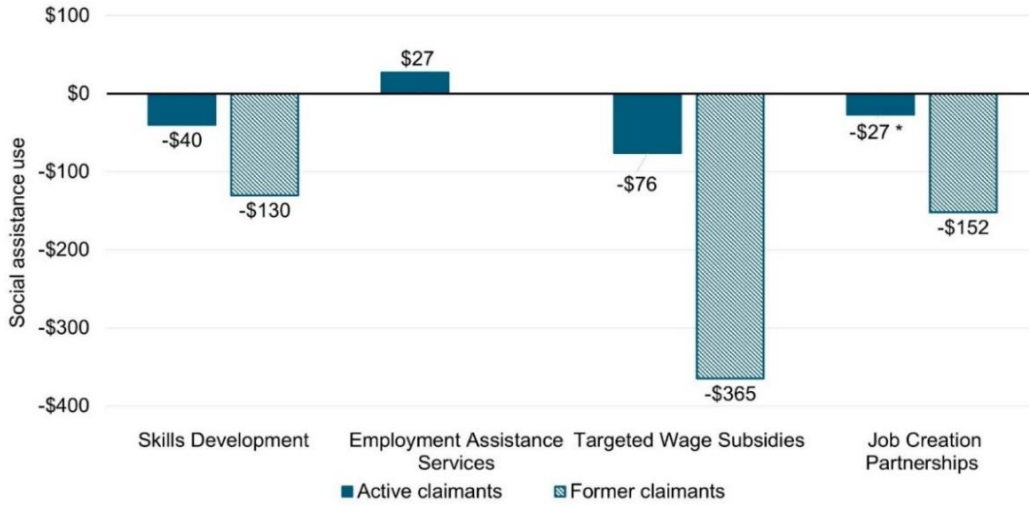
As shown in Chart 4, most active and former EI claimant participants decrease their use of SA benefits in the post-program period.

Active EI claimants in SD and TWS decrease their use of SA benefits in the post-program period compared to similar non-participants. Active EI claimants in EAS services experience a small increase in the use of SA benefits compared to similar non-participants.²⁴

Former EI claimants in SD, TWS and JCP decrease their use of SA benefits compared to similar participants in only EAS services.

²⁴ The estimate for active claimants who participated in JCP was not statistically significant.

Chart 4. Change in the use of SA benefits (annual average)



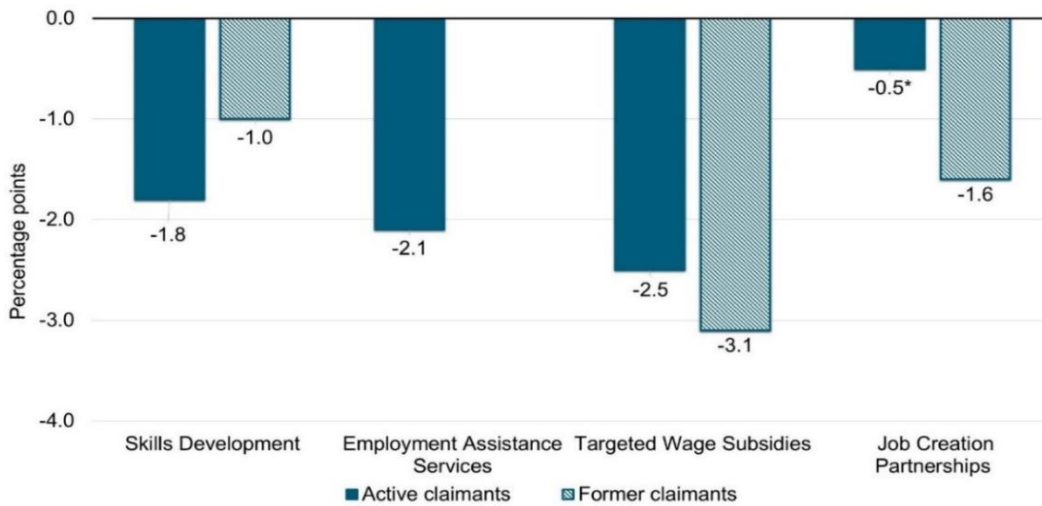
*The impact is non-statistically significant, however, it is still valid in terms of informing the direction of the impact (negative or positive).

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Dependence on income support

As shown in Chart 5, overall active and former claimants reduce their dependence on government income supports.

Chart 5. Change in dependence on government income support (annual average)



*The impact is non-statistically significant, however, it is still valid in terms of informing the direction of the impact (negative or positive).

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

4.3 Incremental impacts by subgroups of participants

Female participants

Nearly 300,350 EI active and former claimant participants in LMDA programs and services, between 2010 and 2012 are female, representing nearly 49% of participants.

The profile of female participants is presented in Table 5 by age, sociodemographic group, and marital status. Information about their educational attainment, occupation and industry is based on the latest job they held prior to applying for EI benefits. Information about sociodemographic groups is self-reported.

Table 5. Profile of female active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	179,882	120,469
Age	30 and under = 24% 31 to 54 = 62% 55 and over = 14%	30 and under = 30% 31 to 54 = 59% 55 and over = 11%
Sociodemographic group	Indigenous = 4% Person with disability = 5% Visible minority = 4% Recent immigrant = 4%	Indigenous = 8% Person with disability = 7% Visible minority = 6% Recent immigrant = 4%
Marital status	Married or common-law = 43% Widow / divorced / separated = 17% Single = 37%	Married or common-law = 38% Widow / divorced / separated = 18% Single = 41%
Education or skills level	High school or occupational training = 44% On-the-job training = 18% College, vocational education or apprenticeship training = 25% University degree = 6%	High school or occupational training = 44% On-the-job training = 22% College, vocational education or apprenticeship training = 22% University degree = 5%
Top 3 occupational groups	Clerical personnel = 20% Intermediate sales and service personnel = 17% Other sales and service professionals = 11%	Intermediate sales and service personnel = 20% Clerical personnel = 18% Other sales and service professionals = 15%

Categories	Active claimants	Former claimants
Top 3 industries	Retail trade = 13% Manufacturing = 11% Healthcare and SA = 10%	Retail trade = 15% Accommodation and food services =12% Healthcare and SA = 10%

*Values may not equal 100% due to rounding or missing information.

Main findings: Female participants improve their labour market attachment through increases in their incidence of employment and earnings. Excluding JCP, participants also decrease their dependence on government income supports. While female former claimants increase their use of EI benefits irrespective of the program received, only JCP participants saw an increase in their dependence on government income supports.

Table 6 presents the detailed incremental impacts. For example, the results reveal that:

- Relative to similar non-participants, female active claimants in SD have higher annual earnings (+\$1,964 per year) and increase their incidence of employment (+4.7 percentage points). They also depend less on government income supports (-2.4 percentage points), by decreasing their use of EI (-\$318 per year) and SA (-\$75 per year) benefits.
- Female former claimants in TWS increase their annual earnings (+\$1,478 per year) and incidence of employment (+5.6 percentage points). They also lower their reliance on government income supports (-2.3 percentage points), mostly by decreasing their use of SA benefits (-\$344).

Table 6. Incremental impacts for female participants (annual average)²⁵

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants	JCP active claimants	JCP former claimants	EAS active claimants
Incidence of employment (percentage points)	4.7***	2.4***	5.4***	5.6***	6.6***	5.3***	1.4***
Employment earnings (\$)	1,964***	679***	1,485***	1,478***	1,724***	614	605**
EI benefits (\$)	-318***	113***	-37	350***	-26	635***	-380***
SA benefits (\$)	-75***	-130***	-31	-344***	-21	-236***	13
Dependence on income support	-2.4***	-1.0***	-1.1***	-2.3***	1.7**	1.3	-1.6***

²⁵ Due to the very large sample of EAS female active claimant participants, a 15% random sample was examined for the incremental impact analysis.

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants	JCP active claimants	JCP former claimants	EAS active claimants
(percentage points)							
n=	39,034	22,546	4,511	6,319	1,460	1,259	20,224

Statistical significance level *** 1%; ** 5%; * 10%, other values are non-statistically significant.

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Male participants

Nearly 308,840 EI active and former claimant participants in LMDA programs and services between 2010 and 2012 are male, representing about 51% of participants.

The profile of male participants is presented in Table 7 by age, sociodemographic group, and marital status. Information about their educational attainment, occupation and industry is based on the latest job they held prior to applying for EI benefits. Information about sociodemographic groups is self-reported.

Table 7. Profile of male active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	188,280	120,563
Age	30 and under = 29% 31 to 54 = 57% 55 and over = 14%	30 and under = 31% 31 to 54 = 56% 55 and over = 12%
Sociodemographic group	Indigenous = 5% Person with disability = 5% Visible minority = 4% Recent immigrant = 4%	Indigenous = 9% Person with disability = 9% Visible minority = 5% Recent immigrant = 3%
Marital status	Married or common-law = 42% Widow / divorced / separated = 9% Single = 44%	Married or common-law = 31% Widow / divorced / separated = 10% Single = 52%
Education or skills level	High school or occupational training = 33% On-the-job training = 27% College, vocational education or apprenticeship training = 31% University degree = 4%	High school or occupational training = 33% On-the-job training = 31% College, vocational education or apprenticeship training = 29% University degree = 4%

Categories	Active claimants	Former claimants
Top 3 occupational groups	Semi-skilled manual workers = 21% Other manual workers = 19% Skilled crafts and trades = 15%	Semi-skilled manual workers = 21% Other manual workers = 21% Skilled crafts and trades = 15%
Top 3 industries	Manufacturing = 18% Construction = 16% Administrative and support, waste management and remediation services = 10%	Manufacturing = 19% Construction = 16% Administrative and support, waste management and remediation services = 11%

*Values may not equal 100% due to rounding or missing information.

Main findings: Male participants in SD and TWS improve their labour market attachment through increases in their incidence of employment and employment earnings. They also decrease their dependence on government income support, that is, their combined use of EI and SA benefits. Mixed and non-statistically significant results are found for participants in JCP and EAS.

Table 8 presents the detailed incremental impacts. For example, the results reveal that:

- Relative to similar participants in EAS only, male former claimants in SD have higher annual earnings (+\$865 per year) and incidence of employment (+2.5 percentage points). They also depend less on government income supports (-0.9 percentage points), mostly by decreasing their use of SA benefits (-\$128).
- Male active claimants in TWS have higher annual earnings (+\$1,657 per year) and incidence of employment (+3.9 percentage points). They also lower their income support reliance rate (-2.4 percentage points), by decreasing their use of EI benefits (-\$379 per year).

Table 8. Incremental impacts for male participants (annual average)²⁶

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants	JCP active claimants	JCP former claimants	EAS active claimants
Incidence of employment (percentage points)	3.5***	2.5***	3.9***	6.7***	3.4***	0.6	0.1
Employment earnings (\$)	3,291***	865***	1,657***	2,294***	832	-4,068***	544
EI benefits (\$)	-224***	194***	-379***	133***	-55	284*	-448***

²⁶ Due to the very large sample of EAS active claimants, a 15% random sample of male participants is examined for the incremental impact analysis.

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants	JCP active claimants	JCP former claimants	EAS active claimants
SA benefits (\$)	-48***	-128***	-51**	-395***	-3	-52	86***
Dependence on income support (percentage points)	-2.1***	-0.9***	-2.4***	-3.7***	0.6	2.1**	-1.4***
n=	44,052	20,273	4,999	7,495	1,095	1,261	20,697

Statistical significance level *** 1%; ** 5%; * 10%, other values are non-statistically significant.

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Youth participants

Nearly 172,730 EI active and former claimant participants, between 2010 and 2012, were 30 years of age or younger when they began their program, representing about 28% of participants.

The profile of youth participants is presented in Table 9 by gender, sociodemographic group, and marital status. Information about their educational attainment, occupation and industry are based on the latest job they held prior to applying for EI benefits. Information about sociodemographic groups is self-reported.

Table 9. Profile of youth active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	98,805	73,922
Gender	Female = 44% Male = 56%	Female = 49% Male = 51%
Sociodemographic group	Indigenous = 5% Person with disability = 4% Visible minority = 3% Recent immigrant = 3%	Indigenous = 9% Person with disability = 6% Visible minority = 4% Recent immigrant = 3%
Marital status	Married or common-law = 23% Widow / divorced / separated = 3% Single = 71%	Married or common-law = 22% Widow / divorced / separated = 5% Single = 69%
Education or skills level	High school or occupational training = 36% On-the-job training = 28% College, vocational education or apprenticeship training = 27%	High school or occupational training = 38% On-the-job training = 33% College, vocational education or apprenticeship training = 24%

Categories	Active claimants	Former claimants
	University degree = 4%	University degree = 3%
Top 3 occupational groups	Other manual workers = 18% Clerical personnel = 12% Semi-Skilled Manual Workers = 12%	Other manual workers = 18% Other sales and service professionals = 15% Intermediate sales and service personnel = 14%
Top 3 industries	Construction = 14% Retail trade = 13% Manufacturing = 12%	Retail trade = 15% Manufacturing = 12% Accommodation and food services = 12%

*Values may not equal 100% due to rounding or missing information.

Main findings: Youth in SD and TWS improve their labour market attachment through increases in their incidence of employment and employment earnings. They also decrease their dependence on government income support (that is, the combined use of EI and SA benefits).

Mixed and non-statistically significant results are found for participants in JCP and EAS.

Table 10 presents the detailed incremental impacts. For example, the results reveal that:

- Relative to similar non-participants, youth active claimants in SD have higher annual earnings (+\$1,887 per year) and incidence of employment (+1.9 percentage points). They also depend less on government income supports (-2.4 percentage points), by decreasing their use of EI (-\$349 per year) and SA (-\$150 per year) benefits.
- Youth former claimants in TWS have higher annual earnings (+\$2,122 per year) and incidence of employment (+5.1 percentage points) compared to similar participants in EAS only. They also lower their reliance on government income supports (- 3.3 percentage points), by decreasing their use of SA (- \$409).

Table 10. Incremental impacts for youth participants (annual average)²⁷

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants	JCP active claimants	JCP former claimants	EAS active claimants
Incidence of employment	1.9**	2.9***	4.1***	5.1***	-1.2	3.0***	0.1

²⁷ Due to the very large sample of EAS active claimants, a 15% random sample of youth participants is examined for the incremental impact analysis.

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants	JCP active claimants	JCP former claimants	EAS active claimants
(percentage points)							
Employment earnings (\$)	1,887***	1,144***	2,345***	2,122***	-1,857	-911	218
EI benefits (\$)	-349***	209***	-7	211***	-284	463***	-432***
SA benefits (\$)	-150***	-140***	-67*	-409***	-188*	-171*	46*
Dependence on income support (percentage points)	-2.4***	-0.6*	-1.9***	-3.3***	-3.2*	0	-1.4***
n=	30,227	16,261	2,318	4,111	688	724	9,825

Statistical significance level *** 1%; ** 5%; * 10%, other values are non-statistically significant.

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Older worker participants

Nearly 79,500 EI active and former claimant participants, between 2010 and 2012, were 55 years of age or older when they began their program, representing about 13% of participants.

The profile of older worker participants is presented in Table 11 by gender, sociodemographic group, and marital status. Information about their educational attainment, occupation and industry are based on the latest job they held prior to applying for EI benefits. Information about sociodemographic groups is self-reported.

Table 11. Profile of older worker active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	51,513	27,997
Gender	Female = 50% Male = 50%	Female = 47% Male = 53%
Sociodemographic group	Indigenous = 3% Person with disability = 6% Visible minority = 4%	Indigenous = 5% Person with disability = 10% Visible minority = 6%

Categories	Active claimants	Former claimants
	Recent immigrant = 1%	Recent immigrant = 1%
Marital status	Married or common-law = 55% Widow / divorced / separated = 23% Single = 20%	Married or common-law = 43% Widow / divorced / separated = 26% Single = 26%
Education or skills level	High school or occupational training = 42% On-the-job training = 22% College, vocational education or apprenticeship training = 26% University degree = 4%	High school or occupational training = 40% On-the-job training = 24% College, vocational education or apprenticeship training = 25% University degree = 5%
Top 3 occupational groups	Semi-skilled manual workers = 16% Clerical personnel = 14% Intermediate sales and service personnel = 11%	Semi-skilled manual workers = 16% Other sales and service professionals = 12% Clerical personnel = 12%
Top 3 industries	Manufacturing = 16% Retail trade = 12% Administrative and support, waste management and remediation services = 9%	Manufacturing = 16% Retail trade = 11% Administrative and support, waste management and remediation services = 11%

*Values may not equal 100% due to rounding or missing information.

Main findings: Incremental impacts reveal that older workers in SD and TWS improve their labour market attachment. Older workers who are active claimants and participate in JCP also improve their labour market attachment. However, only former EI claimants in TWS also decrease their dependence on government support following participation.

Table 12 presents the detailed incremental impacts. For example, the results reveal that:

- Compared to similar participants in EAS only, older worker former claimants in TWS have higher annual earnings (+\$2,254) and incidence of employment (+8.9 percentage points). They also depend less on government income supports (-3.3 percentage points), mostly by decreasing their use of SA benefits (-\$278).
- Older worker active claimants in JCP have higher annual earnings (+\$1,241) and incidence of employment (+8.3 percentage points) compared to similar non-participants. However, the increase in EI benefits (+\$466) indicates that participants are unable to maintain the employment secured following the intervention.

Table 12. Incremental impacts for older worker participants (annual average)²⁸

Indicator	SD active claimant	SD former claimant	TWS active claimant	TWS former claimant	JCP active claimant	JCP former claimant	EAS active claimant
Incidence of employment (percentage points)	11.8***	4.1***	8.1***	8.9***	8.3***	-0.2	0.2
Employment earnings (\$)	3,847***	1,626***	3,479***	2,254***	1,241**	-2,498*	180
EI benefits (\$)	82	100	77	173*	466**	282	-359***
SA benefits (\$)	181***	71	132***	-278***	20	-35	135***
Dependence on income support (percentage points)	1.3***	0.5	0.1	-3.3***	1.0	2.4	-1.0***
n=	5,791	2,859	1,518	1,682	602	468	17,436

Statistical significance level *** 1%; ** 5%; * 10%, other values are non-statistically significant.

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of Employment Assistance Services).

Indigenous participants

Nearly 36,400 EI active and former claimant participants, between 2010 and 2012, self-identify as being Indigenous Canadians, representing about 6% of participants.

The profile of Indigenous participants is presented in Table 13 by gender, age and marital status. Information about educational attainment, occupation and industry are based on the latest job held prior to applying for EI benefits. The profile of Indigenous participants is generally comparable to the one observed for LMDA participants at large across Canada.

²⁸ Due to the very large sample of EAS active claimants, a 40% random sample of older worker participants is examined for the incremental impact analysis.

Table 13. Profile of Indigenous active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	16,416	19,981
Gender	Women = 46% Men = 54%	Women = 46% Men = 54%
Age	30 and under = 30% 31 to 54 = 61% 55 and over = 9%	30 and under = 33% 31 to 54 = 60% 55 and over = 7%
Marital status	Married or common-law = 31% Widow / divorced / separated = 12% Single = 53%	Married or common-law = 25% Widow / divorced / separated = 11% Single = 57%
Education or skills level	High school or occupational training = 35% On-the-job training = 29% College, vocational education or apprenticeship training = 28% University degree = 4%	High school or occupational training = 33% On-the-job training = 33% College, vocational education or apprenticeship training = 26% University degree = 4%
Top 3 occupational groups	Other manual workers = 18% Semi-skilled manual workers = 15% Intermediate sales and service personnel = 11%	Other manual workers = 20% Semi-skilled manual workers = 13% Other sales and service professionals = 13%
Top 3 industries	Construction = 15% Public administration = 14% Accommodation and food services = 8%	Construction = 15% Public administration = 14% Accommodation and food services = 10%

*Values may not equal 100% due to rounding or missing information,

Main findings: Indigenous participants in SD, TWS and EAS improve their labour market attachment through increases in their incidence of employment and employment earnings. They also decrease their dependence on government income support (that is, the combined use of EI and SA benefits). The findings are consistent with findings from the Indigenous Skills and Employment Training Strategy evaluation.

Table 14 presents the detailed incremental impacts. For example, the results reveal that:

- Relative to similar non-participants, Indigenous active claimants in SD have higher annual earnings (+\$5,759 per year) and incidence of employment (+7.4 percentage points). They also depend less

on government income supports (-3.4 percentage points), by decreasing their use of SA benefits (-\$182 per year).

- Indigenous former claimants in TWS have higher annual earnings (+ \$2,312 per year) and incidence of employment (+ 6.7 percentage points) compared to similar participants in EAS only. They also lower their reliance on government income supports (-4 percentage points), mostly by decreasing their use of SA benefits (-\$471 per year).

Table 14. Incremental impacts for Indigenous participants (annual average)²⁹

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants	EAS active claimants
Incidence of employment (percentage points)	7.4***	5.1***	7.2***	6.7***	1.9***
Employment earnings (\$)	5,759***	3,996***	4,210***	2,312**	2,056***
EI benefits (\$)	34	306***	-381*	98	-153**
SA benefits (\$)	-182***	-275***	-158*	-471***	110***
Dependence on income support (percentage points)	-3.4***	-1.3*	-2.8**	-4.0***	-0.6
n=	4,079	3,509	423	670	11,717

Statistical significance level *** 1%; ** 5%; * 10%, other values are non-statistically significant.

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of EAS).

Persons with disabilities

Nearly 38,000 EI active and former claimant participants, between 2010 and 2012, self-identify as persons with disabilities, representing about 6% of participants.

The profile of persons with disability participants is presented in Table 15 by gender, age, and marital status. Information about their educational attainment, occupation and industry is based on the latest job they held prior to applying for EI benefits.

Recent interviews with 40 service providers working with persons with disabilities reveal that a significant proportion of participants are looking or only capable of working on part-time basis. In fact,

²⁹ Please note, due to the small number of participants, incremental impacts can not be estimated for Indigenous participants in JCP.

the outcome trends reveal that at least 40% of persons with disabilities earn less than \$10,000 per year in the 4 post-program years.

Table 15. Profile of persons with disabilities active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	18,465	19,562
Gender	Female = 47% Male = 53%	Female = 46% Male = 54%
Age	30 years and younger = 20% 31-54 years old = 64% 55 years and older = 17%	30 years and younger = 22% 31-54 years old = 63% 55 years and older = 15%
Marital status	Married or common-law = 32% Widow / divorced / separated = 17% Single = 47%	Married or common-law = 26% Widow / divorced / separated = 16% Single = 53%
Education or skills level*	High school or occupational training = 40% On-the-job training = 27% College, vocational education or apprenticeship training = 25% University degree = 4%	High school or occupational training = 38% On-the-job training = 31% College, vocational education or apprenticeship training = 23% University degree = 4%
Top 3 occupational groups	Other sales and service professionals = 14% Semi-skilled manual workers = 14% Clerical personnel = 14%	Other sales and service professionals = 16% Other manual workers = 14% Semi-skilled manual workers = 13%
Top 3 industries	Retail trade = 13% Manufacturing = 12% Administrative and support, waste management and remediation services = 11%	Retail trade = 13% Manufacturing = 12% Administrative and support, waste management and remediation services = 12%

*Values may not equal 100% due to rounding or missing information.

Main findings: Persons with disabilities, who are active claimants in SD and TWS, improve their incidence of employment and decrease their dependence on income support. Participants have small positive but non-statistically significant impacts on employment earnings. Former EI claimants in SD and TWS improve their labour market attachment and decrease their overall level of dependence on income supports.

Table 16 presents the detailed incremental impacts. For example, the results reveal that:

- Relative to similar participants in EAS only, persons with disabilities who are former claimants in SD have higher annual earnings (+\$2,087) and incidence of employment (+6.3 percentage points). They also lower their reliance on government income supports (-1.7 percentage points) mostly by decreasing their receipt of SA benefits (-\$436).
- Persons with disabilities who are active claimants in TWS have higher incidence of employment (+8.1 percentage points) compared to similar non-participants. They also lower their reliance on government income supports (-8.1 percentage points) mostly by decreasing their use of SA benefits (-\$641).

Table 16. Incremental impacts for persons with disabilities (annual average)³⁰

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants
Incidence of employment (percentage points)	5.6***	6.3***	8.1***	11.5***
Employment earnings (\$)	38	2,087***	221	2,489***
EI benefits (\$)	-46	331***	-229	364***
SA benefits (\$)	-151	-436***	-641***	-938***
Dependence on income support (percentage points)	-2.3**	-1.7*	-8.1***	-9.2***
n=	3,392	2,295	1,249	1,797

Statistical significance level *** 1%; ** 5%; * 10%, other values are non-statistically significant.

Note: Impacts are estimated over 4 post-program years.

Recent immigrants³¹

Nearly 24,500 EI active and former claimant participants in LMDA programs and services, between 2010 and 2012, are recent immigrants, representing about 4% of participants.

The profile of recent immigrant participants is presented in Table 17 by gender, age and marital status. Information about their educational attainment, occupation and industry is based on the latest job they held prior to applying for EI benefits.

³⁰ Please note, due to the small number of participants, incremental impacts can not be estimated for Persons with Disabilities in JCP and EAS.

³¹ For the purposes of this evaluation, recent immigrants are defined as individuals who immigrated to Canada within 5 years of EBSM participation.

Table 17. Profile of recent immigrant active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	15,543	8,944
Gender	Female = 46% Male = 54%	Female = 54% Male = 46%
Age	30 years and younger = 19% 31-54 years old = 77% 55 years and older = 5%	30 years and younger = 22% 31-54 years old = 74% 55 years and older = 4%
Marital status	Married or common-law = 72% Widow / divorced / separated = 9% Single = 17%	Married or common-law = 72% Widow / divorced / separated = 10% Single = 16%
Education or skills level*	High school or occupational training = 36% On-the-job training = 26% College, vocational education or apprenticeship training = 25% University degree = 9%	High school or occupational training = 38% On-the-job training = 32% College, vocational education or apprenticeship training = 21% University degree = 6%
Top 3 occupational groups	Semi-skilled manual workers = 14% Other manual workers = 14% Clerical personnel = 12%	Other sales and service professionals = 17% Other manual workers = 15% Semi-skilled manual workers = 14%
Top 3 industries	Manufacturing = 18% Administrative and support, waste management and remediation services = 17% Retail trade = 8%	Administrative and support, waste management and remediation services = 19% Manufacturing = 17% Retail trade = 10%

*Values may not equal 100% due to rounding or missing information.

Main findings: Recent immigrants who are active EI claimants in SD, TWS and EAS improve their labour market attachment. Participants in SD and EAS also reduce their use of EI benefits. The incremental impacts for recent immigrant former EI claimants are non-statistically significant.

Table 18 presents the detailed incremental impacts. For example, the results reveal that:

- Relative to similar non-participants, recent immigrants who are active claimants in SD have higher annual earnings (+\$2,942) and incidence of employment (+6.7 percentage points). They also depend less on government income supports (-1 percentage point), mostly by decreasing their use of EI benefits (-\$324 per year).

- Recent immigrants who are active claimants in EAS have higher annual earnings (+\$2,120) and incidence of employment (+4.7 percentage points) relative to similar non-participants. Active claimants also lower their use of EI benefits (-\$251 per year).

Table 18. Incremental impacts for recent immigrants (annual average)³²

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants	EAS active claimants
Incidence of employment (percentage points)	6.7***	-0.7	6.7***	4.1	4.7***
Employment earnings (\$)	2,942***	-3,110	5,167***	2,019	2,120***
EI benefits (\$)	-324***	-154*	-143	231	-251***
SA benefits (\$)	22	-5	100	-102	48*
Dependence on income support (percentage points)	-1.0***	-0.7	-0.1	-1.6	-0.3
n=	3,510	2,155	279	334	11,738

Statistical significance level *** 1%; ** 5%; * 10%, other values are non-statistically significant.

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of Employment Assistance Services).

Visible minorities

Nearly 29,000 EI active and former claimant participants in LMDA programs and services, between 2010 and 2012, self-identify as visible minorities, representing about 5% of participants.

The profile of visible minority participants is presented in Table 19 by gender, age, and marital status. Information about their educational attainment, occupation and industry are based on the latest job they held prior to applying for EI benefits.

Table 19. Profile of visible minority active and former EI claimant participants in EBSMs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	15,384	13,600
Gender	Female = 52% Male = 48%	Female = 53% Male = 47%
Age	30 years and younger = 18%	30 years and younger = 20%

³² Please note, due to the small number of participants, incremental impacts could not be estimated for recent immigrant participants in JCP.

Categories	Active claimants	Former claimants
	31-54 years old = 69% 55 years and older = 14%	31-54 years old = 69% 55 years and older = 12%
Marital status	Married or common-law = 54% Widow / divorced / separated = 13% Single = 30%	Married or common-law = 48% Widow / divorced / separated = 15% Single = 33%
Education or skills level*	High school or occupational training = 40% On-the-job training = 23% College, vocational education or apprenticeship training = 26% University degree = 6%	High school or occupational training = 41% On-the-job training = 27% College, vocational education or apprenticeship training = 23% University degree = 6%
Top 3 occupational groups	Semi-skilled manual workers = 16% Clerical personnel = 14% Other sales and service professionals = 12%	Semi-skilled manual workers = 15% Other sales and service professionals = 14% Clerical personnel = 14%
Top 3 Industries	Manufacturing = 18% Administrative and support, waste management and remediation services = 12% Retail trade = 9%	Manufacturing = 19% Administrative and support, waste management and remediation services = 14% Retail trade = 9%

*Values may not equal 100% due to rounding or missing information.

Main findings: Visible minorities who are active EI claimants in SD and TWS improve their labour market attachment. Only those who participate in SD, are also able to decrease their reliance on government income supports. Visible minority participants who are former EI claimants in TWS improve their labour market attachment. Former participants in SD do not benefit from the program.

Table 20 presents the detailed incremental impacts. For example, the results found that:

- Relative to similar non-participants, visible minorities who are active claimants in SD, have higher annual earnings (+\$1,605) and incidence of employment (+8.9 percentage points). They also depend less on government income supports (- 3.3 percentage points).
- Former claimants in TWS have higher annual earnings (+ \$2,775) and incidence of employment (+ 5.0 percentage points) compared to similar participants in EAS only.

Table 20. Incremental impacts for visible minority participants (annual average)³³

Indicator	SD active claimants	SD former claimants	TWS active claimants	TWS former claimants
Incidence of employment (percentage points)	8.9***	-0.4	8.6***	5.0**
Employment earnings (\$)	1,605**	-1,616**	5,812***	2,775**
EI benefits (\$)	-66	-26	299	246
SA benefits (\$)	-108	-2	-30	-163
Dependence on income support (percentage points)	-3.3***	-0.2	-0.6	0.5
n=	3,008	2,004	296	375

Statistical significance level *** 1%; ** 5%; * 10%, other values are non-statistically significant.

Note: Impacts are estimated over 4 post-program years (or 5 years in the case of Employment Assistance Services).

4.4 Heterogeneity of treatment effect study

A supplemental study, the heterogeneity of treatment effects, examines alternative methods to traditional incremental impact analysis.³⁴ This new method uses newly developed causal machine learning methods to examine whether the effectiveness of EBSMs varies across participants' sociodemographic characteristics.^{35,36}

This information may help to inform program and policy making decisions in the future. The findings for the Heterogeneity of Treatment Effects study for SD active participants can be found in Appendix A.

³³ Please note, due to the small number of participants, incremental impacts can not be estimated for visible minority participants in JCP and EAS.

³⁴ Further details about the methodology used are available in the technical report entitled *Heterogeneous Causal Effects of the Canadian Labour Market Development Agreements: A Machine Learning Approach*. (2022). The report is available upon request.

³⁵ See Athey, S., & Imbens, G. (2019). *Machine Learning Methods Economists Should Know About*.

³⁶ See Lechner, Michael. (2019). *Modified Causal Forests for Estimating Heterogeneous Causal Effects*.

4.5 Cost-benefit analysis

This analysis is based on the EBSM medium-term incremental impacts previously described in this report. Costs and benefits are examined over the participation period of 1 or 2 years and 5 or 10 years after the end of participation.³⁷

The cost-benefit analysis addresses the following questions:

1. Are the benefits from EBSMs exceeding the costs within 5 years (for TWS, JCP or EAS) or 10 years (for SD and SD youth participants) after the end of participation?
2. How much is the benefit for the government and society if the government spends \$1 in EI part II funding?
3. How many years does it take the benefits to recover the costs?

The following results are presented from the social perspective, that is, the government and individual combined. This allows for a sound assessment of program effectiveness in achieving its objectives of helping unemployed individuals to obtain and maintain employment and to generate EI savings.

Table 21 presents the cost-benefit results for active and former EI claimant participants.

Table 21. Cost-benefit results for active and former EI claimant participants

Variable	SD active claimants (10 years post- program)	SD youth active claimants (10 years post- program)	TWS active claimants (5 years post- program)	JCP active claimants (5 years post- program)	EAS active claimants (5 years post- program)	SD former claimants (10 years post- program)	TWS former claimants (5 years post- program)
Net present value	\$5,508	\$21,619	-\$351	-\$13,902	-\$2,395	-\$9,573	\$9,052
Benefit cost ratio	\$1.54	\$3.19	\$0.95	-\$0.18	-\$1.90	\$0.05	\$2.23
Payback period (years after end of	8.3 years	5.4 years	5.2 years	16.1 years	7.7 years	18.5 years	0.7 year

³⁷ EAS is examined for 1 participation year, while SD, TWS, and JCP are examined for 2 participation years. As well, TWS, JCP, and EAS are examined over 5 post-program years, while SD is examined over 10 years (the first 4 post-program years are based on an observed period, while the fifth year and onwards are projected). A separate analysis for SD youth active claimants projects the cost-benefit analysis for 10 years post-program (4 years observed, 6 years projected).

Variable	SD active claimants (10 years post- program)	SD youth active claimants (10 years post- program)	TWS active claimants (5 years post- program)	JCP active claimants (5 years post- program)	EAS active claimants (5 years post- program)	SD former claimants (10 years post- program)	TWS former claimants (5 years post- program)
participation)							
Social return	54%	219%	-5%	-118%	-290%	-95%	123%
Savings to public health care	\$178	\$298	\$75	\$52	-\$47	-\$15	\$169

The information below provides examples of the net present value, the benefit-cost ratio, the payback period, the social rate of return and savings to health care costs.

Skills Development³⁸

During the 2010 to 2012 period, SD represents almost 52% of EBSM expenditures under the LMDAs across Canada. The average duration of an SD Action Plan Equivalent is 49 weeks for active claimants and 48 weeks for former claimants. As shown in Table 21, over the 10 year post-program period, the benefit for active claimants is +\$5,508 higher than the costs, yielding a social return of 54% on investment. This means that if the government spends \$1 on SD for active EI claimants, it generates +\$1.54 of benefit for society. It takes 8.3 years for the benefits to recover the costs of programming. Overall, there are savings to health care costs of \$178 per participant.

Targeted Wage Subsidies

During the 2010 to 2012 period, TWS represents 3% of total EBSM expenditures across Canada. The average duration of a TWS Action Plan Equivalent is 38 weeks for active claimants and 31 weeks for former claimants. As shown in Table 21, over the 5 year post-program period, the benefit for former claimants is +\$9,052 higher than the costs, yielding a social return on investment of 123%. A savings to health care costs of \$169 is found per participant 5 years after the program. The costs are recovered during the first year following participation (0.7 year).

Of all EBSMs, TWS has the most positive results for former claimants.

³⁸ Please note, the cost of delivering SD pertains to both SD-regular and SD-Apprentices since expenditure information is not available for each intervention type separately. However, the benefits detailed in this report are those that relate solely to participation in SD-regular.

Job Creation Partnerships³⁹

In addition to helping participants obtain work experience in the funded projects, JCP also benefits the communities where the projects are implemented. However, community impacts are not accounted for in this cost-benefit analysis, since they are not captured in the administrative data and are difficult to quantify.

In this context, the benefits from the social perspective are likely underestimated. Overall, JCP represented 2% of the total EBSM investment in the 2010 to 2012 period. The average duration of a JCP Action Plan Equivalent is 33 weeks for active claimants, and 30 weeks for former claimants.

As shown in Table 21, over the 5 year post-program period, the benefits of delivering JCP to active claimants are -\$13,902 lower than the costs 5 years after participation, yielding a return on investment of -118%. It takes 16.1 years for the benefits to recuperate the cost. A savings of \$52 in health care costs is found per participant following participation.

Employment Assistance Services⁴⁰

EAS includes a variety of services such as computer access for job search services, group sessions to prepare for an interview, career counselling, and action plan development. The administrative data, however, do not allow to identify what proportion of EAS interventions belong to each category or the intensity of services offered to participants.

While EAS are often provided with other EBSMs, this analysis examined only participants who received one or more EAS without participating in other EBSMs. EAS represents about 30% of total EBSM expenditures between 2010 and 2012. The average length of an EAS-only Action Plan Equivalent is 12 weeks compared to between 33 to 49 weeks for active EI claimant participants in other EBSMs.

As shown in Table 21, over the 5 year post-program period the benefits for active claimants in EAS is -\$2,395 lower than the costs, yielding a social return on investment of -290%. It takes 7.7 years after participation for the benefits to recover the costs. No savings to health care costs is found.

Overall, the goal of EAS is not to help participants acquire more skills, therefore, increasing participants' earnings after participation is not necessarily expected. Conducting a cost-benefit analysis for EAS is a challenge as it is not possible to attribute a dollar figure to the return to employment. However, including earnings in the cost-benefit calculation is still very relevant since it captures partially the positive impact of the quicker return to work.

³⁹ Cost-benefit analysis is not conducted for JCP former claimants as the estimation of incremental impacts found that participants do not increase their earnings in the post-program period relative to similar non-participants.

⁴⁰ The cost-benefit analysis is conducted only for EAS active claimants, since it is not possible to evaluate incremental impacts for EAS former claimants using available administrative data.

5. Supplemental studies

5.1 Self-Employment⁴¹

Program design and delivery

The following is a summary of guidelines from provinces and territories that were delivering the self-employment programming in fall 2018. Key informants did confirm and complement the information found in program guidelines.

The Self-Employment program aims to assist participants in creating employment for themselves by providing them with a range of services including:

- Assistance with business plan development
- Counselling, coaching and mentoring
- Entrepreneurial training and workshops

In addition to being unemployed and EI-eligible, participants must not already own and/or operate their businesses prior to program participation.

Provinces and territories have the flexibility to design and deliver the program to meet their labour market needs. In fall 2018, the program was delivered mainly through third-party organizations, including:

- Business development corporations
- Community Futures (used in rural areas)
- Community organizations serving specialized groups (such as, women and francophone)
- Private management or consulting firms

Program officials report that the amount allocated to the Self-Employment program depends on regional allocations, demand for the program and local labour market conditions. Three provinces and territories have decided not to deliver the program because other entrepreneurial programs exist, high costs relative to the demonstrated results, or low demand and labour market conditions.

The application process aims to ensure that participants are suited for self-employment, have a viable business idea and the financial resources to launch a business.

⁴¹ Further details about the self-employment program are available in a study entitled *Evaluation of the Labour Market Development Agreements, Design and delivery of the self-employment program, December 15, 2020*. The report is available upon request.

Participants' employment outcomes

The following is a summary of labour market outcomes and satisfaction rates from a survey of self-employment participants across 9 provinces and territories completed in winter 2020.⁴² A total of 2,199 individuals responded to the survey with a 40.5% response rate.

Self-employment participants increased their employment level by 15 percentage points from 59% in the year before participating to 74% at the time of survey. That is, 2 to 4 years after program participation. The increase is mainly due to an increase in the percentage of self-employed participants.

Type of businesses created, survival rates and success factors

Nearly 50% of survey respondents launched a self-employment business and it was still in operation in winter 2020 (2 to 4 years following program participation).

- Among the 1,365 respondents who started a business, 68% of them were still operating their business at 2 to 4 years post-program.
- Another 4% sold their business, but it was still operational.
- Twenty-four percent (24%) of respondents were unable to maintain the operation of the business they started as part of the program.

The business survival rate is consistent with a 2018 Statistics Canada study that found that less than half of unincorporated self-employed individuals continued operations for more than 2 years.⁴³

Half of self-employment businesses were launched in other services⁴⁴; professional, scientific and technical services; as well as in construction and retail trade.

Regarding factors influencing the success or failure of self-employment businesses:

- Participants who started a business and were still in operation at the time of survey attributed their business success to:
 - Their dedication, hard work and positive attitude
 - The high demand for their services or products
 - The quality of service provided;
 - Their own abilities, experience, knowledge and skills
 - Their network and business contacts

⁴² The survey was conducted throughout January and February 2020.

⁴³ Douwre Grekou and Huju Liu, "The Entry into and Exit out of Self-employment and Business Ownership in Canada", Statistics Canada, 2018.

⁴⁴ From the North American Industry Classification System (NAICS). Other services include: establishments engaged in repairing, or performing maintenance on motor vehicles, machinery and equipment, providing personal care services, funeral services, laundry services, pet care services, etc.

- Participants who started a business but were forced to close it attributed the closure to:
 - Poor sales and low revenues
 - Small market
 - Workload
 - Finding another job
- Participants who did not launch a business attributed this to:
 - The lack of funding, and the level of uncertainty and risk involved
 - Workload, work life balance, and underestimating the required commitment

Earning outcomes and reliance on income support

Survey respondents were not comfortable answering questions that related to their earnings. This situation made it difficult to compare the pre- and post-earnings of self-employment participants.

Overall, there appears to be an increase in the number of participants reporting less than \$10,000 in earnings annually. However, survey respondents, who are able to maintain the operation of their business, are more likely to report earning more or the same as before participating in the program.

As a complement to the earning questions, survey respondents did assess their financial well-being. When considering their entire financial situation:

- Seventy-three percent (73%) of respondents said that they are financially about the same or better off after the program.
- Seventy percent (70%) of respondents said that their household net worth is about the same or higher after the program.

In line with survey findings, 14 provincial/territorial program managers state that immediate increases in earnings are not necessarily an expected outcome of the program.

Regarding the reliance on government income support, participants reduce reliance on the use of EI and SA following program participation.

Satisfaction with services received and current employment

A high percentage of respondents who started a self-employment business report that they are equally or more satisfied with their job situation after program participation. Those who are able to maintain the operation of their business are 29 percentage points more likely to report being more satisfied, compared to those whose business closed (76% compared to 47%).

The survey did examine the contribution of the program to the success of self-employment businesses. At least 81% of survey respondents who launched a self-employment business rate the following services and training as very or somewhat important to the business launch, operation and success:

- Assistance with business plan development
- One-on-one mentoring / advice or counselling supports
- Discussion on risks and challenges of self-employment
- Assessment of entrepreneurial readiness

- Living allowance during participation and financial assistance with business start-up costs
- Information about and assistance to access capital
- Training on budgeting, financial management, marketing, business operation and sales

Challenges and lessons learned related to program design and delivery

The following is based on key informant interviews with program managers, and front-line third-party service providers, and case workers.

Key informants identify the following challenges related to program design and delivery, including:

- The lack of clear communication between service providers and the provincial or territorial department and/or Service Canada regarding the confirmation of eligibility for Employment Insurance
- Restrictive contract provisions for service providers
- Complex assessment process of candidates
- Difficulty to serve remote and rural areas

Best practices related to program design and delivery included:

- Using local and specialized organizations to deliver the program
- Using standardized tools for business plan development
- Relying on local expertise to assess business viability
- Providing ongoing mentorship, advice and counselling
- Using specialists to deliver tailored training
- Providing participants with opportunity to network and facilitating their knowledge of and access to funding

Key considerations for Self-Employment program and policy development

The following considerations emerged as part of the study.

- The Self-Employment program can benefit from an updated objective specifying that it is dedicated to eligible participants who have a viable business idea, the financial or in-kind resources to launch a business, and the required level of dedication.
- The data collection process should include only participants who have been deemed suitable for self-employment and accepted into the program. This will require excluding candidates who attended information sessions alone or those deemed not suited for self-employment. The latter participants can be reported under Employment Assistance Services.
- Indicators of program success can include: increase in employment and/or self-employment levels; medium-term increase in earnings; business survival rate similar to the local economy and/or the sector; and acquisition of transferable skills.
- Provinces and territories may wish to consult with their service delivery network on the extent to which identified challenges are applicable to their unique context, and how best to address them along with integrating lessons learned that can benefit program delivery.

Rationale

The Self-Employment program aims to assist participants in creating employment for themselves. The participant's application process is structured and aimed to ensure that they are suited for self-employment, have a viable business idea, and the financial resources to launch a business. However, the survey revealed that:

- One third of participants did not launch a business.
- One hundred and seventy-six (176) survey respondents confirmed that they did not participate in the program.
- Nearly one quarter of participants were unable to maintain the operation of the business they had started as part of the program.

Participants who started a business under the Self-Employment program and were still in operation at the time of the survey attributed their business success to: their dedication, hard work and positive attitude; the high demand for their services or products; the quality of service provided; their own abilities, experience, knowledge and skills; their network; and, business contacts. Those who started a business but were forced to close it attributed the closure to: poor sales and low revenues; small market; workload; and, finding another job. Finally, participants who did not launch a business during program participation attributed this to: the lack of funding; the level of uncertainty and risk involved; workload, work-life balance; and, underestimating the required commitment.

The survey confirmed that participants acquire transferable skills through training and workshops, they experience increase in employment and medium-term earnings, and they create additional jobs. As well, business survival rates mirror those observed for small business in the economy. These indicators are useful in measuring and reporting program success as well as managing contribution agreements with service providers.

5.2 Job Creation Partnerships⁴⁵

Program description

The following is a summary of guidelines from 8 provinces and territories that were delivering JCP in the years 2018 and 2019. Key informants did confirm and complement the information found in program guidelines.

Program objective

The objective of JCP is to provide participants with the opportunity to gain work experience or training that improves their employment prospects.

Provinces and territories use 2 models to deliver the program:

⁴⁵ Further details about the program are available in a study entitled *Design and delivery of the Job Creation Partnerships program, June 4, 2019*. The report is available upon request.

- The first, and most common, is the provision of funds to an organization that implements a community-benefiting project while providing work experience to participants.
- The second is the provision of classroom-based training in combination with work experience for participants through third-party training providers.

Participants receive benefits from EI Part I or II.⁴⁶ Benefits to participants follow the prevailing wage rate, up to the maximum EI weekly benefit rate. Provinces and territories may provide additional funding to project holders or training providers to cover the project or training costs.

Program delivery

The design and delivery of JCP allow provinces and territories to address a variety of barriers to employment experienced by their citizens (such as, lack of work experience). Provinces and territories can use the program to address various labour market needs by targeting sub-groups of individuals, professions or economic sectors in demand and communities.

Program managers report that the amount allocated to the program depends on government priorities, demand for the program, previous funding levels and labour market needs. Five provinces and territories did not deliver the program in 2018 and 2019 because of budget priorities, lack of interest by organizations and job seekers, and the temporary nature of jobs offered under the program.

In addition to gaining work experience, key informants expect participants to develop work-related skills and to enhance their career development, job search abilities, and to improve their personal well-being. Project holders can benefit from the program through increased capacity, implementing their projects, and increasing their presence within local communities.

For employers that provide work experience to trained participants, benefits are mostly associated with gaining a source of trained employees. At the community level, projects support the local economy and provide new assets (such as, restored buildings or hiking trails) or services (such as, support for newcomers).

Challenges and lessons learned

Key informants identify challenges related to:

- The recruitment of participants and organizations
- Ensuring that funded projects are assisting participants in addressing their barriers to employment
- Program administration and monitoring

Key informants identify the following elements as contributing factors to participants' success:

- Implementation is effective when contract coordinators provide support to project holders during the writing of their program proposal and throughout project implementation.

⁴⁶ As specified by the EI Act, Part I refers to federally delivered direct income supports and Part II refers to provincially or territorially delivered employment benefits.

- On-site visits, open communication, and establishing clear project expectations support effective monitoring.
- For training providers, participant recruitment can improve by involving employers in the recruitment process and in curriculum development.
- Classroom-based training is most effective when it is occupation or sector-specific and aligned with current or forecasted labour demand.
- Participants who benefit the most from the program face one or multiple barriers to employment. These barriers include work experience, networking opportunities, skills training, or assistance with reintegrating into the labour force.
- Experienced organizations who used the program previously can implement effective projects, as they have the capacity to manage funding and to provide support to participants.
- Projects found to be best suited for funding are those who align with community needs, government priorities and labour market issues. Examples of well-suited project sectors and activities include event coordination, arts and culture, and construction.

Key considerations for JCP program and policy development

The following considerations emerged as part of the JCP study.

Consideration #1: JCP could benefit from an updated logic model and narrative explaining the program theory, from the development of detailed Terms and Conditions, or simply from an update to the “Process for Determination of Similarity”⁴⁷ document, in consultation with provinces and territories.

The objective of JCP is to enable unemployed persons who qualify as “insured participants” under section 58 of the EI Act to obtain employment by providing them with employment opportunities through which they can gain work experience to improve their long-term employment prospects.

The qualitative and quantitative evidence, documented in this study, demonstrate that JCP is generally meeting its objectives by assisting participants to improve their labour market attachment following their program participation. As well, JCP has benefits to organizations, employers and local communities.

However, the current program description is not comprehensive enough to cover all the programs similar to JCP that are designed and implemented by provinces and territories. For example:

- It is not clear to what extent the combination of training and work experience or placements provided in 3 provinces and territories are aligned with the description of JCP in the document entitled “Process for Determination of Similarity”.
 - As is, the incremental impacts for these programs should be reported separately from JCP and SD. One province has recently reclassified the program as SD instead of JCP in its annual plan.

⁴⁷ The document sets out a standard process for determining whether provincial/territorial programs are “similar” to the EBSMs established by the EI Commission and whether they can be funded under a transfer LMDA.

This may require creating a new program category (e.g., Training to Work or Training and Work Experience) or expanding the definition of JCP.

- Moreover, the “Process for Determination of Similarity” document does not address the issue of repeat participation for participants and organizations, though there may be advantages to this approach.
 - Evidence suggests that some participants can benefit from more than one JCP participation, or simply from a participation of a longer duration.
 - Furthermore, evidence from key informant interviews suggests that established organizations who used JCP in the past are well suited to implement JCP projects.

Consideration #2: Compared to other Employment Benefits offered under the LMDAs, JCP is a less attractive program and is the least used. The program could benefit from increased promotion to organizations and more importantly from reducing its administrative burden.

On average, JCP accounted for 1.5% of total LMDA expenditure between 2012 to 2013 and 2016 to 2017. Only 2 provinces spent close to 7% of their LMDA expenditure on JCP in 2016 to 2017. Furthermore, the program is not used in 5 provinces and territories because of budget priorities, lack of interest by organizations and job seekers, and the temporary nature of jobs.

Awareness and interest in the program was a challenge, despite its positive outcomes. Key informants reported the lack of promotion to potential organizations and identified the lack of interest by organizations and job seekers as challenges. Recruitment of participants may be affected by the low level of financial support available to them. The availability of skilled participants can support the recruitment of low-capacity organizations.

Key informant interviews revealed the complex nature of JCP administration for both organizations and government staff. The administration of the program includes activities such as submitting a project proposal, producing monthly reports, advertisement and recruitment, confirmation of EI eligibility, and monitoring participants and project holders. In the current design of JCP, key informants identified delivery challenges related to the burden of program administration and monitoring for both contract coordinators and small organizations.

5.3 Labour Market Partnerships⁴⁸

The Labour Market Partnerships program(s) aim to assist employers, communities and/or industries to address their labour force adjustments and human resource needs. It includes a wide range of funded activities, such as:

- Labour market and human resource research

⁴⁸ Further details about the program are available in a study entitled *Horizontal evaluation of the Labour Market Development Agreements, Design and delivery of the Labour Market Partnerships program, August 23, 2021*. The report is available upon request.

- Development of workforce strategies and plans
- Raising awareness about human resources and labour market information
- Skills development training
- Labour force adjustment services (for example, pre-layoff supports and needs assessment of laid-off workers)
- Developing training curriculum
- Engagement activities

Labour Market Partnerships is one type of support measures delivered under the LMDAs. In 2019 to 2020, provinces and territories spent nearly \$277 million or 11% of the LMDA funding envelope. In 2020 to 2021, provinces and territories spent nearly \$256 million on Labour Market Partnerships, which represented 12% of the LMDA funding envelope.

Funded organizations

Funded organizations include non-profits such as:

- Industry associations, sector councils, employer associations and businesses/employers
- Indigenous organizations, educational institutions and training providers (private and non-profit)
- Municipal and local governments including Indigenous governments

Targeted labour market issues

Funded projects target current and/or forecasted skills and/or labour shortages. These projects also target specific unemployed populations (for example, women, youth, Indigenous peoples, newcomers, persons with disabilities and the self-employed).

Generally, projects target labour market issues associated with:

- Lack of capacity for human resource planning resulting in employee attraction and retention challenges
- Projected or actual growth of industry/business
- Aging workforce
- Businesses downsizing/closure
- Limited employment opportunities in Indigenous, small and remote communities
- Barriers to employment experienced by a target population

The majority of projects reviewed align with their respective provincial or territorial program objectives and eligible activities.

Partnerships

All participating provinces and territories confirm that program officials carried out activities to support the formation and maintenance of partnerships. Provincial and territorial departments and key informants explained that partners' expertise, network and financial contribution are all essential to project implementation and success.

The document review of 117 projects confirm that:

- Partnerships were established to support the delivery of the majority of projects.
- Partners made a financial or in-kind contribution. The most common forms of in-kind contribution were expertise, staff time to project administration and delivery, office/event space and equipment.
- Project activities delivered with the support of partners include:
 - Labour market and human resource research
 - Training development and/or delivery
 - Career/job awareness, workforce strategy/plan development, and engagement
 - Awareness of labour market information and human resource tools development

Challenges and lessons learned

Provinces and territories, and key informants identified challenges related to project holder recruitment and setting up projects (application, identifying partners). Additional challenges include program administration and monitoring.

Actions of program officials and project characteristics that are conducive to the success of the program include:

- Ongoing communication and relationship building between provincial and territorial government officials and project holders
- Clearly defined labour market issues/needs that the projects aimed to address. These generally occur through clear project objectives, activities, expected outputs and outcomes, and performance measurement requirements.
- Ensuring that project holders have the capacity to deliver the project
- Strong partnerships between project holders, government officials, and stakeholders (community, sector) resulting in valuable contributions to the project delivery

Key considerations for Labour Market Partnership program and policy development

The following considerations emerged as part of the Labour Market Partnerships study.

- Considering that the current performance indicators do not reflect the diversity of activities funded under Labour Market Partnerships, it is important for ESDC and provinces and territories to discuss current Labour Market Partnerships funded activities in order to make recommendations on how to best report on results.
- Considering the intermittent or limited use of the program in some provinces and territories, it is essential to share lessons learned about successful Labour Market Partnerships projects. Particularly, for projects targeted to employers (such as workplace or employer-sponsored training), and those assisting communities and economic sectors dealing with labour market adjustment issues (contraction or expansion).

5.4 Research and Innovation⁴⁹

Research and Innovation provides funding for research and demonstration projects. These projects aim to identify better ways of helping participants prepare for, return to, or keep employment and to be productive in the labour force.

Program officials report that the amount allocated to Research and Innovation is influenced by:

- Government priorities
- Labour market demand
- Project capacity to introduce innovative tools
- Previous funding levels

Between 2014 and 2020, 11 provinces and territories used Research and Innovation funding.⁵⁰ Of the 11 jurisdictions, 8 provinces and territories used the support measure regularly, while 3 used it intermittently. Two jurisdictions did not use Research and Innovation during the review period.

Funded organizations

Funded organizations include:

- Not-for-profit organizations (such as research organizations, school boards, and Indigenous organizations)
- Businesses/employers
- Educational institutions and training providers
- Municipal and local governments including Indigenous governments

Funded Research and Innovation activities

Research and Innovation projects encompassed a variety of activities including:

- Development and/or testing of new approaches to improve employment outcomes for clients with some projects also focusing on persons with disabilities, youth, Indigenous, and other demographic groups
- Strengthening service providers
- Improving learning and post-secondary education with a focus on expanding online course delivery
- Funding for cost-sharing of internships, temporary work placements, or training
- Delivering career fairs or career/employment information presentations
- Research

⁴⁹ Further details about the program are available in a study entitled *Design and delivery of the Research and Innovation support measure*. July 5, 2022. The report is available upon request.

⁵⁰ Source: 2014 to 2015 and 2019 to 2020 Employment Insurance Monitoring and Assessment Reports, Chapter 3.

Innovation definition and criteria

Provinces and territories use different criteria to determine what is innovative. For example, in 4 provinces and territories, innovative approaches are deemed to be either:

- Tools or processes that have not been used in the jurisdiction or Canada in general; and/or,
- For a specific client group and that help to improve existing services or programs

Dissemination and adoption of innovative approaches

Five participating jurisdictions confirmed that project results can be shared with other provincial/territorial departments. They can also be shared with various stakeholders, which can include employment practitioners, employers, communities, researchers, and other key industry stakeholders.

Dissemination activities include:

- Synthesis of best practices
- Development of knowledge and presenting products such as webinars, conference presentations, infographics, online products, and articles
- Creating/enriching portals of the project holders
- Issuing media releases
- Developing and piloting a new apprenticeship curriculum

Performance measurement

Evaluation of project results was an integral part of Research and Innovation performance measurement in 5 provinces/territories.⁵¹

Challenges and lessons learned

Project documents and program officials identified challenges related to testing and identification of innovative approaches including:

- Project holder staff turnover due to poor terms of employment and job security
- Recruitment and/or retention of participants to implement pilot projects
- Recruitment of employers as partners in the delivery of supports to participants

In relation to factors contributing to successful testing and identification of innovative approaches, program officials highlighted the importance of:

- Project holders employing experienced staff
- Possessing organizational structure and financial reporting capacity
- Having strong commitments with partners
- Providing detailed cost estimates as part of their project proposals
- Having clear project implementation plan with measurable outcomes

⁵¹ These jurisdictions conducted or reserved the right to conduct evaluations upon completion of the projects.

- Continuous application intake to address on-going and emerging labour market issues

5.5 Skills Development-Apprentices

The objective of the program is to help apprentices become skilled tradespeople and to increase their labour market attachment. Program participants have generally chosen a career and are already attached to the labour market. The apprenticeship process involves on-the-job learning and technical training in a classroom setting.

Apprentices who have worked enough hours to qualify for EI can apply to receive EI Part I benefits while on training. The program provides financial assistance to EI eligible apprentices to help them offset the costs they incur while they attend technical training. The level of funding is based on the needs of apprentices, the location of the training, and any fees paid by the apprentices.⁵²

The profile of program participants is presented in Table 22 by gender, age, sociodemographic group, and marital status. Information about their educational attainment, occupation and industry is based on the latest job they held prior to applying for EI benefits. Information about sociodemographic groups is self-reported.

Table 22. Profile of active and former EI claimant participants in Skills Development - Apprentices programs across Canada in 2010 to 2012

Categories	Active claimants	Former claimants
Number of participants	43,494	28,910
Gender	Female = 5% Male = 95%	Female = 8% Male = 92%
Age	30 and under = 75% 31 to 54 = 24% 55 and over = 1%	30 and under = 73% 31 to 54 = 26% 55 and over = 1%
Sociodemographic group	Indigenous = 4% Person with disability = 1% Visible minority = 5% Recent immigrant = 1%	Indigenous = 4% Person with disability = 1% Visible minority = 6% Recent immigrant = 1%
Marital status	Married or common-law = 30% Widow / divorced / separated = 3% Single = 65%	Married or common-law = 34% Widow / divorced / separated = 3% Single = 61%

⁵² Funding is generally attributed based on fixed rates.

Categories	Active claimants	Former claimants
Education or skills level	High school or occupational training = 4% College, vocational education or apprenticeship training = 88% On-the-job training = 7% University degree = 0%	High school or occupational training = 7% On-the-job training = 10% College, vocational education or apprenticeship training = 82% University degree = 0%
Top 3 occupational groups	Skilled crafts and trades workers = 83% Other manual workers = 7% Semi-skilled manual workers = 3%	Skilled crafts and trades workers = 74% Other manual workers = 8% Skilled sales and service personnel = 4%
Top 3 Industries	Construction = 64% Manufacturing = 7% Retail trade; Other services (excluding public administration) = 6% each	Construction = 51% Manufacturing = 13% Retail trade; Other services (excluding public administration) = 7% each

*Values may not equal 100% due to rounding or missing information.

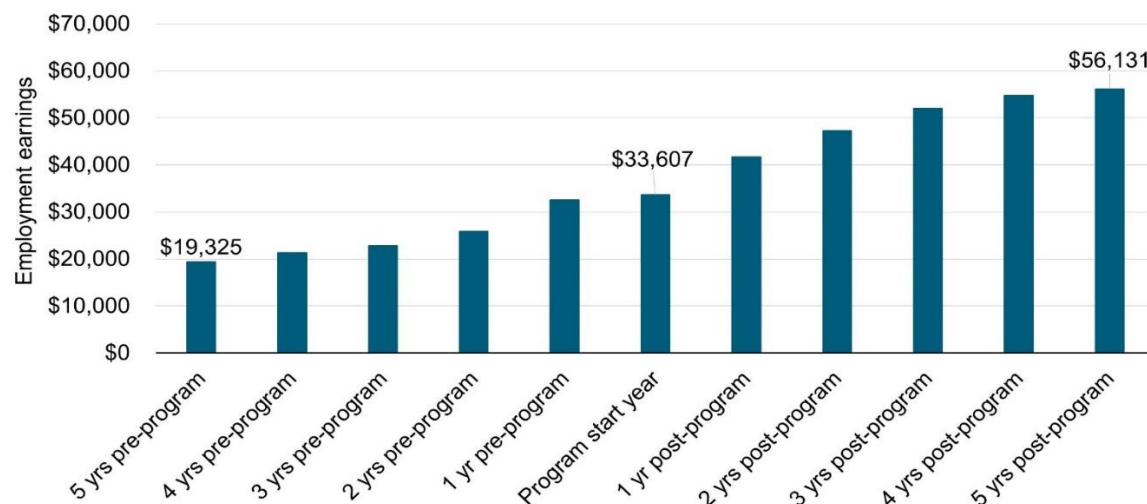
Labour market outcomes

The labour market outcomes are based on individuals who began their participation during the 2010 to 2012 period. Statistics focus on 5 years before program participation and 5 years after the program start year.

Active claimants

As shown in Chart 6, program participants increase their average earnings from \$19,325 in the fifth year pre-program to \$56,131 in the fifth year after the program start year.

Chart 6. Average earnings for active claimant participants in Skills Development-Apprentices

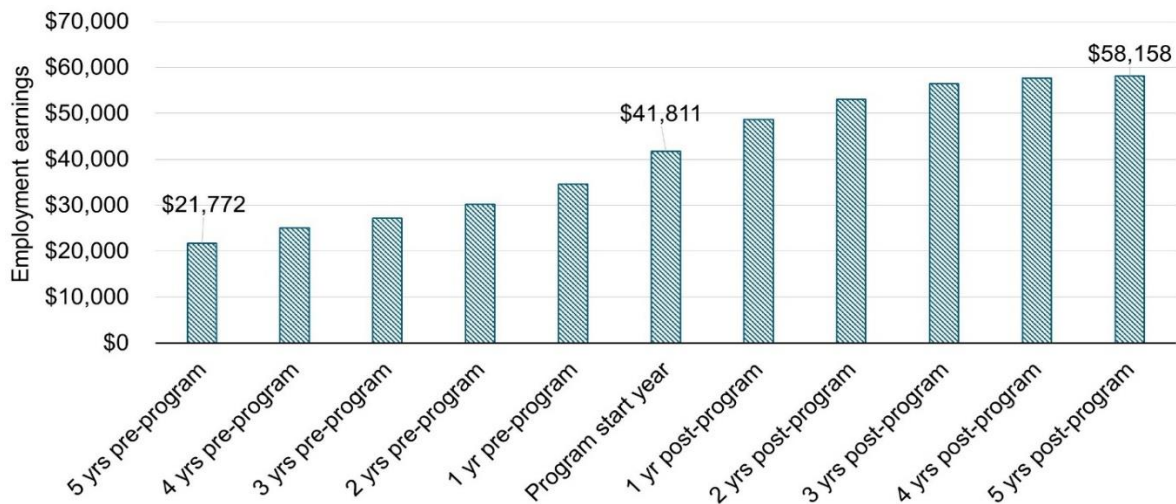


The proportion of employed participants declines by 1 percentage point annually after the program start year but remains around 96%. The proportion of participants on EI Part I decreases from 100% in the program start year to 35% in the fifth year after the program start year. Participants decrease their dependence on income support from 23% in the program start year to 5% in the fifth year after participation.

Former claimants

As shown in Chart 7, program participants increased their average earnings from \$21,772 in the fifth year pre-program to \$58,158 in the fifth year after the program start year.

Chart 7. Average earnings for former claimant participants in Skills Development-Apprentices



The proportion of employed participants declined by 1 percentage point annually after the program start year but remained around 95%. The proportion of participants on EI Part I decreased from 70% in the program start year to 28% in the fifth year after the program start year. Participants decreased their dependence on income support from 12% in the program start year to 5% in the fifth year after participation.

6. Conclusions and recommendations

The LMDAs are the largest annual investment in active labour market programs and services in Canada. Based on the findings presented in this report, the EBSMs are meeting the objective of assisting individuals to obtain or keep employment through various active employment programs, including training or employment assistance services.

6.1 Summary of findings

Overall, incremental impacts demonstrate that participation in most EBSMs improves labour market attachment and reduces dependence on government income supports compared to similar non-participants. A subgroup analyses shows that with some exceptions, SD and TWS improves the labour market attachment and reduced the dependence on income support for most subgroups of participants. EAS alone was found to improve the labour market attachment for female, Indigenous and recent immigrant participants, and decrease their use of EI. As well, the social benefits of participating in EBSMs exceeds the costs of investments for most interventions over time.

A series of supplemental studies address information gaps previously identified in LMDA evaluations for Self-Employment, JCP, Labour Market Partnerships, Research and Innovation, and SD-Apprentices. Each study identified lessons learned, best practices and challenges, and issued when relevant considerations for policy design and development.

Overall, the following findings emerged from these studies.

- The Self-Employment program helps carefully selected participants to create employment for themselves by providing them with a range of services.
- Provinces and territories use JCP to address a variety of barriers to employment experienced by their citizens (such as, a lack of work experience). In addition, provinces and territories use these programs to address the various labour market needs of subgroups of individuals, employers, and communities. It is difficult to quantify all the positive impacts of JCP for individuals, employers and communities.
- Provinces and territories use Labour Market Partnerships programs to assist employers, communities and/or industries to address their labour force adjustment and human resource needs. The current performance indicators do not reflect the diversity of funded activities. Therefore, it is important for ESDC and provinces/territories to discuss current funded activities in order to make recommendations on how to best report on results.
- The Research and Innovation support measure is used by provinces and territories to fund labour market research and demonstration projects. There is an added value in documenting and sharing of lessons learned and best practices from demonstration projects.
- After participating in SD, apprentices increase their employment earnings and decrease their dependence on government income supports.

6.2 Recommendations

Since 2012, 15 qualitative and quantitative studies addressed issues and questions related to EBSM design, delivery and effectiveness:

- The quantitative studies successfully assessed the effectiveness and efficiency of EBSMs by producing incremental impacts and cost-benefit analysis.
- The qualitative studies identified specific challenges, lessons learned and best practices associated with the design and delivery of EBSMs. Each study included key considerations for program and policy development or recommendations.

The recently completed evaluation of the Workforce Development Agreements complements the LMDA qualitative studies. This evaluation was also supported by literature reviews and provided unique insights into challenges and lessons learned to assist persons with disabilities, immigrants and those further removed from the labour market.

Most results from this evaluation stem from the conduct of advance causal analysis whereby impacts found could be attributed to a specific EBSM. These analyses are predicated on having access to high quality administrative records, thereby confirming the importance of the capacity to leverage and integrate relevant administrative data.

From these main findings, 2 key recommendations emerge:

Recommendation #1: ESDC and provinces/territories are encouraged to share and discuss lessons learned, best practices and challenges associated with the design and delivery of EI-funded provincial/territorial programming. Discussions are encouraged at the bilateral or multilateral levels as well as with service delivery network if necessary.

Recommendation #2: ESDC and provinces/territories are encouraged to pursue efforts to maintain and strengthen data collection provisions in support of reporting, performance measurement and data-driven evaluations at the national and provincial/territorial levels. To that regard, ESDC should:

- Continue to prioritize data integrity, including **validating** data uploads and documenting changes over time
- Explore ways of accessing data on social **assistance**, unsuccessful EI applicants, and immigration and citizenship, in light of expanded eligibility to the LMDAs beyond active and former EI claimants

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Appendix A. Heterogeneity of treatment effects study findings for active EI claimants in Skills Development

A supplemental study, the heterogeneity of treatment effects, examines alternative methods to traditional incremental impact analysis.⁵³ This new method uses newly developed causal machine learning methods to examine whether the effectiveness of EBSMs varies across participants' sociodemographic characteristics.^{54,55}

In general, machine learning methods are used either for predictive or descriptive purposes. Unlike typical machine learning algorithms, causal machine learning is not trying to predict an outcome, but to estimate an incremental impact. These methods are able to estimate impacts at a very fine-grained level (in this case, at the participant level) and can also be used to systematically detect groups with heterogeneous effects.

The incremental impacts estimated using machine learning methods differ from those estimated using propensity score kernel matching techniques combined with difference-in-differences estimators. The reason for this difference is due to using different estimators. However, it is important to note that the direction of the findings under both methods is consistent.

The study outlines the causal machine learning methods used to capture heterogeneous incremental impacts of participation in EBSMs under the LMDAs. It was carried out in 2020 to 2021, as a component of the third cycle for the Horizontal Evaluation of the LMDAs. This study covers active claimants in SD who began participating in EBSMs delivered under LMDAs across Canada between April 1, 2010 and December 31, 2012.

The unit of analysis is the Action Plan Equivalent.

The sample sizes used for this study, including participant sociodemographic characteristics, are summarized below.

⁵³ Further details about the methodology used are available in the technical report entitled *Heterogeneous Causal Effects of the Canadian Labour Market Development Agreements: A Machine Learning Approach*. (2022). The report is available upon request.

⁵⁴ See Athey, S., & Imbens, G. (2019). *Machine Learning Methods Economists Should Know About*.

⁵⁵ See Lechner, Michael. (2019). *Modified Causal Forests for Estimating Heterogeneous Causal Effects*.

Table A 1. Selected sociodemographic characteristics of participants^{56,57}

Sample	SD active EI claimants
Number of observations	33,234
Sample selected of all participants	40%
Average Duration (weeks)	49
Sociodemographic characteristics	SD active EI claimants
Male	53%
Female	47%
Average age (years)	37
Single	45%
Recent Immigrants	11%
Person with disability	4%
Visible minority	5%
Indigenous individual	4%

The main estimation method is the Modified Causal Forests algorithm. It was implemented to detect heterogeneity as part of program effects. This method allows for the estimation of individual average treatment effects and uncovers substantial heterogeneity effects across participants.

Using the Modified Causal Forest algorithm, net impacts can be estimated at 3 levels of aggregation:

- Individualized Average Treatment Effect (IATE): measure the average impact a treatment has for individuals with a given set of characteristics. This represents the incremental impacts at the finest aggregation level of the features available.
- Average Treatment Effect (ATE) and Average Treatment Effect on the Treated (ATET): represent the population averages and participants' population averages, respectively. These 2 levels of aggregation are considered the classical parameters investigated in many econometric causal studies.
- Group Average Treatment Effect (GATE): parameters are in between Individualized Average Treatment Effect and Average Treatment Effect with respect to their aggregation levels. It is similar to traditional subgroup analysis where one preselects the variables prior to estimation according to policy interest.

⁵⁶ Status is self-reported by participants.

⁵⁷ On average the full population of comparison group pool for each intervention was about N=2,000,000. The best matches for participants were selected from the pool of non-participants for each intervention type using Linear Discriminant Analysis. This was done to reduce computational burden.

These include ATET, GATE and IATE. The table below reports the annual average post-program incremental impacts for SD active EI claimant participants.

SD interventions help active claimants increase their labour market attachment through increases in employment and earnings and decreases in dependence on government income supports. The table below details the incremental impacts found.

Table A 2. Annual average post-program incremental impacts for Skills Development active claimants

Indicators	Incremental impacts
Incidence of employment (percentage points)	3.9***
Employment earnings	\$1997***
Dependence on income support (percentage points)	-1.1***

Statistical significance level *** 1%; ** 5%; * 10%

The IATE estimates the incidence of employment, employment earnings, and dependence on income support at the granular level. On average, SD interventions benefited:

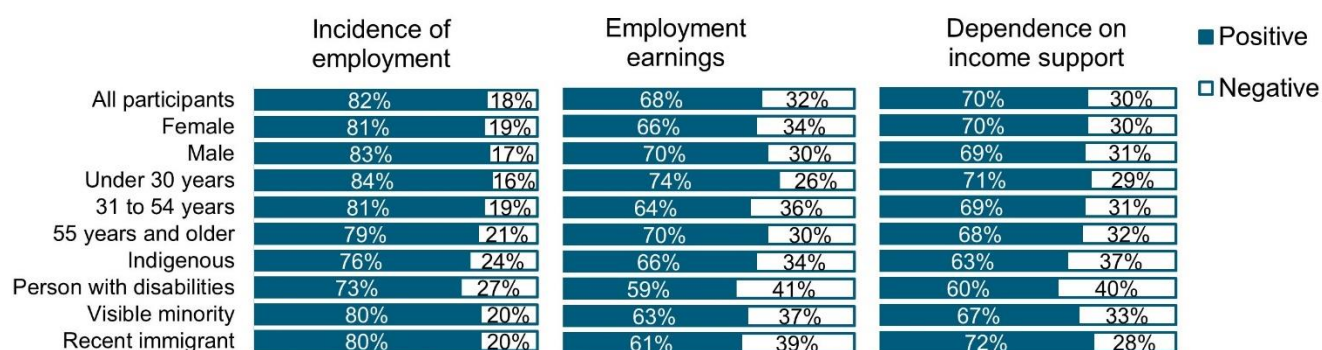
- Eighty-two percent (82%) of participants in terms of incidence of employment
- Sixty-eight percent (68%) of participants in terms of employment earnings
- Seventy percent (70%) of participants to reduce their reliance on income support

In an additional analysis, k-means clustering was conducted to better understand the individuals who are most or least benefitting from interventions. The algorithm partitions the population of participants into distinct clusters.

Clustering is performed using the IATE for each outcome and intervention separately. The groups are then ordered according to program effectiveness and profiled to obtain an informal characterization of subgroups and detect patterns of heterogeneity.

Chart A1 presents the percentage of participants benefiting from program participation by all participants and subgroups of interest.

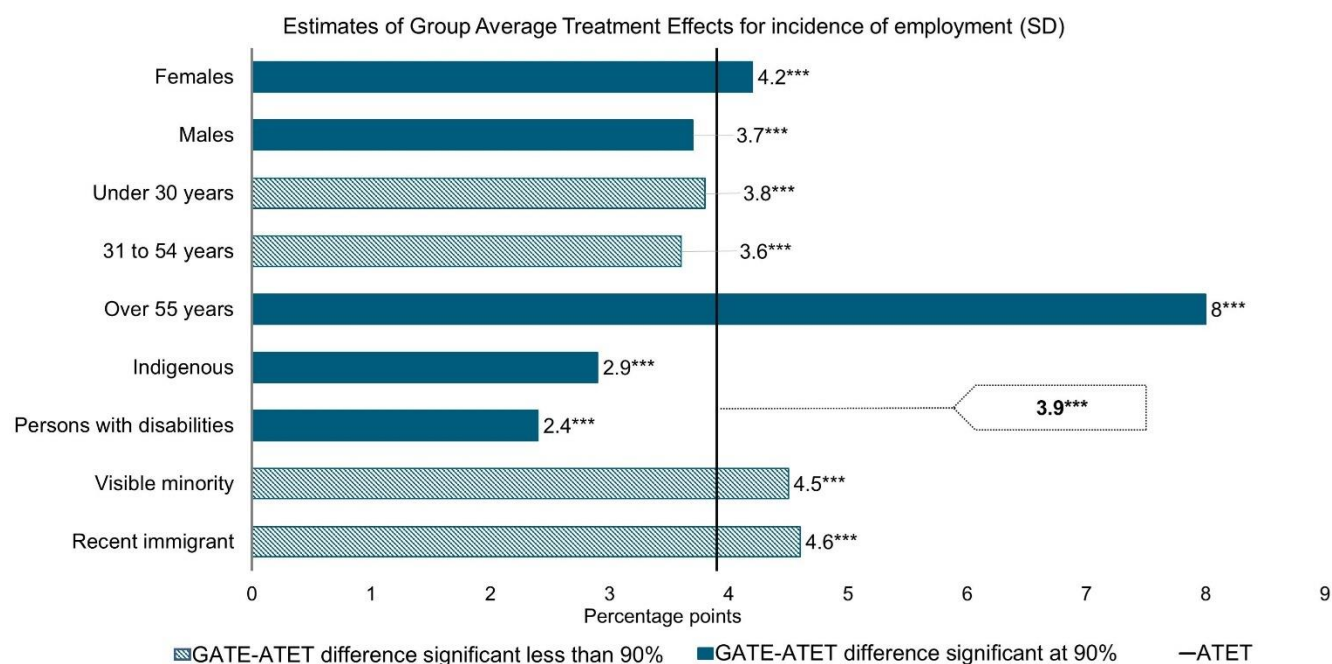
Chart A 1. Individualized Average Treatment Effects by all participants and subgroups



Further, the study examines how the GATE varies across select sociodemographic groups. The findings reveal that for all subgroups in SD there are positive and statistically significant improvements in incidence of employment and earnings.

The following charts illustrate the GATE by subgroups for incidence of employment, employment earnings and dependence on government income supports. For example, Chart A2 demonstrates that all subgroups of SD participants had positive and statistically significant improvements in incidence of employment. Relative to similar non-participants older workers and female participants experienced the largest impacts.

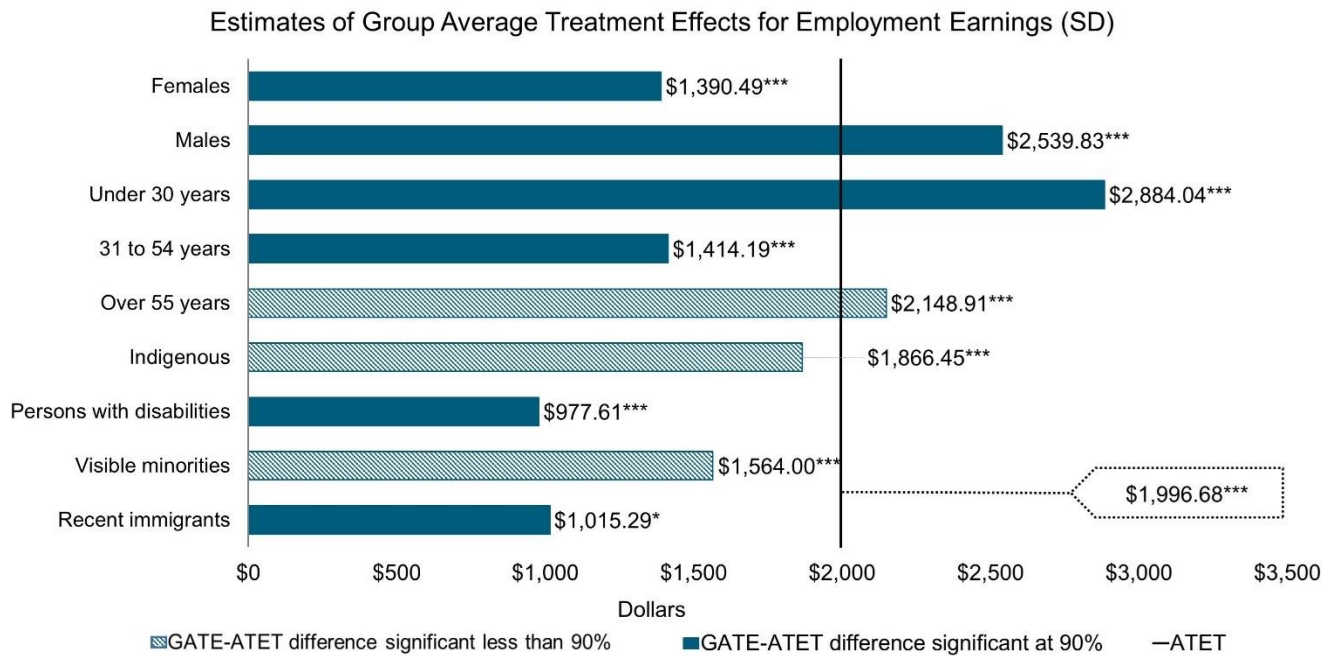
Chart A 2. Estimates of Group Average Treatment Effects for incidence of employment by subgroup



Statistical significance level *** 1%; ** 5%; * 10%

Chart A3 demonstrates that all SD subgroups experienced positive and statistically significant improvements in employment earnings. It was found that SD is most effective in improving the employment earnings of youth and male participants.

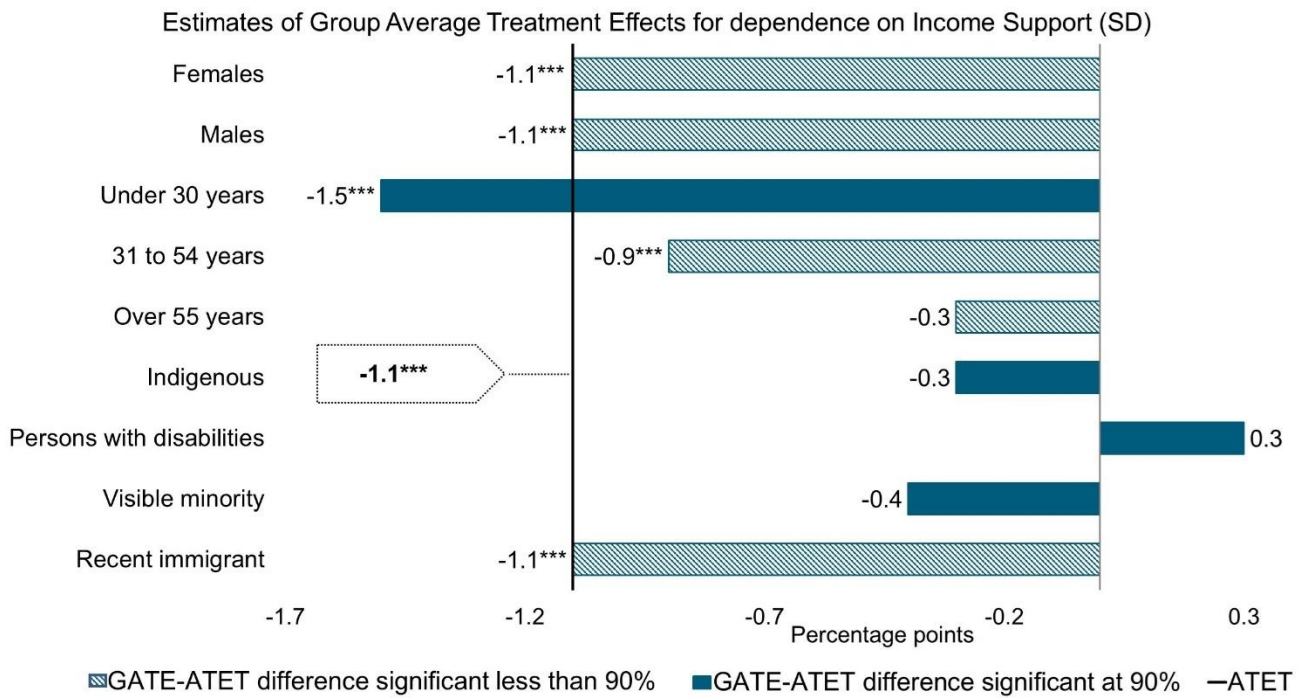
Chart A 3. Estimates of Group Average Treatment Effects for employment earnings by subgroup



Statistical significance level *** 1%; ** 5%; * 10%

Chart A4 shows that findings vary by subgroups of SD participants. For example, females, males, youth, adults (31 to 54 years of age), and recent immigrants all experience statistically significant reductions in dependence on government income supports after SD participation. Youth participants were found to benefit the most in terms of reducing their dependence on government income supports.

Chart A 4. Estimates of Group Average Treatment Effects for dependence on government income supports by subgroup



Statistical significance level *** 1%; ** 5%; * 10%

The Modified Causal Forest algorithm is able to simultaneously yield aggregate level and heterogeneous treatment effects. This allows for robust and precise estimates of EBSM intervention effects on sociodemographic groups. It is also possible to detect and quantify the amount by which select subgroups benefit the most or least from these interventions. This information may help to inform program and policy making decisions in the future.

Appendix B. List of 9 studies included in this national synthesis report

Table B 1. Overview of studies included in this synthesis report

Study	Evidence generated	Methods	Reference period	Observation period
Examination of medium-term outcomes from 2010 to 2017	National level profile of active and former EI claimants Outcomes by claimant type and by subgroup	Before and after results of program participation	2010 to 2012 participants	Up to 12 years (5 years before participation, 1 to 2 years of participation, and 5 years after participation)
Estimation of medium-term incremental impacts from 2010 to 2017	Incremental impacts for active and former EI claimants Incremental impacts by subgroup Profile and socio-demographic characteristics of participants	Non-experimental method using propensity score matching in combination with Difference-in-Differences Statistical profiling	2010 to 2012 participants	Up to 7 years (1 to 2 years in program, and up to 5 years after participation)
Cost-Benefit Analysis of Employment Benefits and Support Measures	Cost-benefit analysis	Non-experimental method using propensity score matching in combination with Difference-in-Differences Cost analysis	2010 to 2012 participants	5 years post-program for TWS, JCP and EAS 10 years post-program for SD and SD youth
Cost-Benefit Analysis: Incorporating Public Health Care	Cost-benefit analysis	Estimation of adjusted annualized healthcare costs	2010 to 2012 participants	5 years post-program for TWS, JCP and EAS 10 years post-program for SD and SD youth

Study	Evidence generated	Methods	Reference period	Observation period
<p>Costs Savings in the Context of the Labour Market Programs Evaluation</p>				
<p>Heterogeneous Causal Effects of the Canadian Labour Market Development Agreements: A Machine Learning approach</p>	<p>Heterogeneous incremental impacts</p>	<p>The use of causal machine learning methods (Causal Modified Forest) to capture heterogeneous incremental impacts</p>	<p>2010 to 2012 participants</p>	<p>Up to 7 years (1 to 2 years in program, and up to 5 years after participation)</p>
<p>Design and delivery of the Job Creation Partnerships program</p>	<p>Program design and delivery Challenges and lessons learned</p>	<p>Non-experimental approach (from cycle II) Statistical analysis Document review 88 semi-structured telephone interviews with 117 key informants (8 provinces and territories)</p>	<p>2015 to 2017 participants</p>	<p>2015 to 2019</p>
<p>Design and delivery of the self-employment program</p>	<p>Program design, delivery and success Define outcomes attributed to the program Fill in knowledge gaps Challenges and lessons learned</p>	<p>Document review Statistical analysis of administrative data Canadian self-employment literature and statistics 80 semi-structured telephone interviews with 102 key informants (9 provinces and territories) Statistical analysis of administrative data</p>	<p>2015 to 2017 participants</p>	<p>2015 to 2020</p>

Horizontal Evaluation of Labour Market Development Agreements

Study	Evidence generated	Methods	Reference period	Observation period
		Survey of self-employment participants across 9 provinces and territories		
Design and delivery of the Labour Market Partnerships program	Program design and delivery Challenges and lessons learned	Document review Questionnaire completed by 11 provinces and territories 60 interviews with 68 key informants in 10 provinces and territories	2018 to 2020	Design and delivery at the time of the data collection
Design and delivery of the Research and Innovation Support measure	Program design and delivery Challenges and lessons learned	Document review Questionnaire completed by 9 provinces and territories	2017 to 2020	Design and delivery at the time of the data collection