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Federal Business Subsidies: Explosive Growth Since 2014

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SUMMARY

Federal business subsidies have risen 140 per cent over the nine years ending in 2023–24, compared to 17 per cent over the previous nine years. New programs accounted for over half the growth. Clean economy measures, which rose $7 billion from 2014–15 to 2023–24, were the major contributor to growth in new programs. Even without the new climate change measures, business subsidies would have doubled over the period. Subsidies are likely to reach about $50 billion in 2027–28, which would represent 54 per cent of corporate income tax revenue, up from 42 per cent in 2014–15.

Other key findings are:

- Small and medium-sized enterprises benefit disproportionately from subsidies. These firms account for about half of output in Canada but receive approximately two-thirds of business subsidies.
- Clean economy measures account for almost a fifth of business subsidies. The agri-food sector receives the second largest share, approximately 15 per cent, which is substantial relative to its four per cent output share.
- Business subsidies are concentrated in a small number of programs. In the current fiscal year, the top 10 programs (out of almost 150 programs) account for almost 60 per cent of subsidies, and the top 20 for almost 80 per cent.
- Spending programs account for a surprisingly small share of business subsidies — approximately 30 per cent in the current fiscal year. The tax system is the most important delivery mechanism (45 per cent), while government business enterprises and refundable tax credits account for just over 10 per cent each.

What are taxpayers getting in return for the massive spending on subsidies? They are certainly getting more of the activities that are being subsidized and less of the activities that are not. However, this change in the composition of economic activity won't necessarily improve well-being because market prices generally allocate society's scarce resources to their best uses. That is, if markets are functioning properly, subsidies harm rather than help economic performance. On the other hand, if subsidy programs address a market failure, the resulting reallocation of activity may be more efficient.

Federal business subsidies that have the potential to improve economic performance, or more generally, to enhance well-being, because they address a market failure accounted for 64 per cent of business subsidies in 2023–24. However, measures accounting for about two-thirds of this spending fail a benefit-cost test — they are not successful in raising Canadians' real income. These programs should be reviewed to determine if they can be restructured to deliver a positive net benefit. If not, they should be eliminated.

Measures accounting for 36 per cent of total spending in 2023–24 are not intended to correct a market failure and are therefore transferring income from one group of Canadians to another while harming economic performance. These measures include general business subsidies and initiatives providing income support. These measures should be carefully reviewed to determine if their income redistribution effects can be justified in the context of the real income loss they cause.

Since 2019–20, subsidies implemented to mitigate the impact of climate change and to create good jobs by subsidizing high-productivity, high-wage industries have grown in importance and will continue to do so. Climate change mitigation measures should only be implemented if they complement carbon pricing, the government's main and most cost-effective instrument for reducing emissions. If they meet this minimum condition, climate change mitigation measures should be assessed based on their relative cost-effectiveness in reducing emissions. The proposition that subsidies intended to create good jobs are sound public policy is controversial. The impact of these measures should be tested against the data before additional funds are committed.

INTRODUCTION

Business subsidies are delivered through spending programs, the tax system, direct investment and the activities of government business enterprises (GBEs). This paper analyzes business subsidies over the 2014–15 to 2023–24 period, which coincides with the tenure of the current government. The paper also provides a projection of business subsidies in 2027–28. This projection is developed by estimating the value of subsidies delivered by spending programs that lapse in 2027–28 or later; by assuming subsidies delivered by GBEs increase in line with historical trends; by assuming tax-based spending measures in effect in 2023–24 grow at the same rate as nominal GDP; and by developing estimates of subsidies delivered through recently announced spending programs and tax-based measures.

The analysis has four limitations. First, official estimates for some important tax-based subsidies are not available. For example, accelerated capital cost allowance measures implemented prior to 2019 have not been costed. Second, a small fraction of the subsidies included are available to both business and non-business entities and it is not possible to separate the amounts. Third, estimates for 2023–24 are not final. Planned program spending set out in Budget 2023 and reflected in departmental plans has been increased once so far this year via the supplementary estimates process. Based on past experience, more increases are likely. Fourth, not all the subsidy estimates are from official sources. Illustrative estimates of subsidies delivered through GBEs and the estimated cost of preferential treatment of outbound investment by Canadian multinational enterprises (MNEs) have been developed for this paper.

The next section sets out the definition of business subsidies used in this paper. The second discusses the rationales for subsidizing businesses. The third section analyzes growth in business subsidies since 2014–15, including a projection to 2027–28. The fourth section discusses the distribution of subsidies by several dimensions including by delivery method, beneficiary and subsidized sector. The fifth section assesses the efficiency of selected business subsidies. Policy recommendations are provided in the last section. The Annex provides a detailed discussion of the data sources and the methodologies used to develop the subsidy estimates.

DEFINING BUSINESS SUBSIDIES

Subsidies in this paper cover spending programs, targeted tax expenditures and the provision of services at below-market prices. Determining the value of subsidies delivered through spending programs often requires looking beyond the first-round beneficiary, which may be a not-for-profit entity such as a business association, a community association or a government. Improved reporting would make it easier to identify and quantify business subsidies (Box 1).

Box 1: Improving the Reporting of Subsidies Delivered through Spending Programs

The main shortcoming in how business subsidies are reported is the absence of a digital dataset for current year and planned spending. These amounts are reported in departmental plans available on departmental websites. However, the data are presented in text tables. At a minimum, each department should present the estimates in a digital dataset that includes historical data from the public accounts. A more ambitious approach would be to consolidate individual departmental plans into a single machine-readable dataset that includes the most recent data from the public accounts, estimated spending for other past years and planned spending for the current and future fiscal years.

A second issue arises because some subsidies are received by business and non-business entities. Departments should report subsidies received by business, business-controlled organizations and others. This change would make it much easier to identify and quantify business subsidies.

Some business subsidies are repayable in certain circumstances. Current practice is to report these repayments by department. Reporting repayments by program would provide a clearer picture of how the government subsidizes business.

In contrast, federal reporting of tax expenditures is exemplary, but determining which measures are subsidies is not straightforward. Finance Canada publishes a comprehensive analysis of tax expenditures and refundable tax credits in its annual Report on Federal Tax Expenditures.[1] Tax expenditures are defined as measures that deviate from normal or standard provisions in Canada's tax system, which is considered the benchmark. Tax expenditures include measures described as "structural" because they are internal to the tax system, implemented to address issues of its fairness and simplicity. The structural category includes measures that promote horizontal equity, recognize costs of earning income, avoid double taxation and keep administration and compliance costs at reasonable levels. In contrast, many of the non-structural measures in the report are implemented to achieve a broader economic or social objective and hence fulfil the same function as program spending measures. In this paper, I describe these measures as "tax-based spending."

Tax-based spending that benefits business and is targeted by industry, size of firm or activity is classified as a business subsidy. For example, tax measures providing accelerated capital cost allowances are considered tax-based spending because they are more generous than standard capital cost allowances. However, while targeted measures are considered business subsidies, the Accelerated Investment Incentive, which is available to all businesses, is not.

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[1] The latest report is available here: https://www.canada.ca/en/department-finance/services/publications/federal-tax-expenditures/2023/part-1.html.

The federal report does not provide cost estimates for all listed measures. For example, accelerated capital cost allowance measures implemented prior to 2019 are not costed. Another notable gap is the absence of an estimate for the cost of permitting multinational enterprises located in Canada to deduct interest and other expenses incurred by their foreign affiliates without being required to include the affiliate's profits in the taxable income booked in Canada. I describe this measure as "cross-border interest deductibility." The illustrative calculation presented in the Annex suggests that the amount of tax revenue forgone is likely to be substantial.[2]

Some GBEs provide services to business at below-market prices. These GBEs are substantially self-sustaining after an infusion of government equity investment or loans. The subsidy these GBEs provide is calculated as the difference between their return on capital and the return that would have been earned if the capital had been placed in a typical business investment, which is often described as the social opportunity cost of that capital. Subsidy estimates are developed for the Business Development Bank (BDC), Farm Credit Canada, the Canada Development Investment Corporation (CDEV) and the Canada Account, which is administered by Export Development Canada (EDC).[3]

Also included in this category is the Canada Growth Fund, which is administered by CDEV. The Fund has a mandate to invest in business while maintaining the value of its initial endowment over a period of several years. The cost of the program, and the subsidy provided, is therefore the forgone earnings on the capital injection, which are estimated using the social opportunity of capital.

RATIONALES FOR BUSINESS SUBSIDIES[4]

A key motivation for subsidizing business is a view that some market outcomes are inefficient. While markets are generally successful at allocating society's scarce resources to their best uses, exceptions occur when prices do not fully capture the social costs and benefits of economic activity. The direct impact of correcting these market failures is to improve economic efficiency, or more generally, to enhance well-being.

The classic example of an inefficient market outcome is investment in R&D. When firms perform R&D, they create knowledge that allows the introduction of new products or the development of more efficient production processes. However, some of the knowledge created inevitably leaks out or spills over to other firms, allowing these firms to be more productive without performing the R&D themselves. When deciding how much to invest in R&D, firms do not consider the spillover benefits received by other firms, so R&D is too low from society's perspective. Subsidizing R&D may therefore be sound public policy since it will raise real incomes, unless the cost of providing assistance exceeds the benefits.

A negative spillover effect arises from greenhouse gas emissions. The market price of fossil fuels does not capture the cost of climate change resulting from the release of CO_2 into the atmosphere when the fuels are burned. Economic analysis consistently shows that putting a price on CO_2

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2 Calculating the subsidy associated with cross-border interest deductibility highlights the difficulty of rigorously defining the benchmark tax system. The estimated subsidy assumes that non-taxation of dividends paid from the active business income of foreign affiliates is part of the benchmark tax system. It would also be plausible to assume that such dividends would be taxed under the benchmark tax system, in which case the subsidy would be the non-taxation of these dividends.

3 Export Development Canada does not subsidize its clients: the fees charged for its services are high enough to cover all costs, including a competitive return on capital. However, higher risk export-related activities which the federal cabinet deems to be in the national interest are subsidized through the Canada Account.

4 This section draws on Lester (2018a).

emissions is the most cost-effective way to reduce them.[5] There are, however, sound reasons not to rely exclusively on carbon pricing. Ragan et al. (2017) explain how subsidies and regulations can complement carbon pricing to reduce the cost of reducing emissions. For example, subsidies or regulations may fill gaps in the coverage of carbon pricing, or they may help generate scale economies and network effects that will reduce the cost of transitioning to a low carbon economy.

Governments also provide subsidies to promote an industrial transformation in favour of good jobs in high-wage, high-productivity industries.[6] Such measures may be successful in the presence of a market failure, which would allow a subsidy-induced reallocation of labour and capital to improve economic outcomes. Evidence is accumulating that wages for what appear to be equally skilled workers differ by firm and industry, which is inconsistent with well-functioning markets.[7] This finding suggests that the minimum condition for a successful intervention is met. However, wage premiums — payments above what a worker could earn elsewhere — are difficult to identify and quantify. Depending on the circumstances, high wages may include a premium, or they may exactly compensate workers for additional skills obtained through investment in human capital. In addition, many skills may be firm-specific. Determining whether measures intended to create good jobs raise real incomes therefore requires a careful assessment of the benefits and costs of the measures.[8]

Policies to create good jobs may provide a social benefit by reducing adjustment costs. For example, without government intervention, the shift from internal combustion to electric vehicles may cause a reduction in overall employment in the automobile sector, possibly accompanied by changes in the geographical distribution of activity within Canada. These changes would impose substantial adjustment costs in the form of lost wages, relocation expenses and premature retirement of private and public capital. Subsidizing the production of electric vehicles and parts could help reduce these social costs, which should be included as a positive element in a benefit-cost analysis of the subsidy.

Another rationale for targeted intervention by government is to improve the trade-off between efficiency and protecting the tax base that often occurs when designing the tax system. Some otherwise sound policies cause unintended revenue losses and recovering the lost revenue harms economic efficiency. One example is the treatment of profit and losses: profits are taxed as earned but there are limitations on the deductibility of losses. This asymmetric treatment raises the effective tax rate on startups and other unprofitable firms. In principle, efficiency would be enhanced by ensuring that business losses affect net income as they are incurred, up to the point of refunding losses to non-taxable firms. In practice, however, such a policy would, among other things, encourage multinational firms to book more losses in a country providing refundability, which would reduce revenue without any improvement in efficiency.[9] Policies such as flow-through share deductions are intended to improve tax efficiency by treating profits and losses more symmetrically, while limiting the scope for unintended revenue losses by restricting eligibility by firm size and sector.

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5 See for example Rivers and Wigle (2018).

6 Policies that promote industrial transformation, often described as industrial policies, include measures to promote not only good jobs but also climate transition, lagging regions, exports, import substitution, innovation and particular types of R&D (Juhasz, Lane and Rodrik 2023). This definition of industrial policy covers many of the subsidies included in this paper.

7 See Lester and Warda (2020) for a detailed discussion.

8 For a review of the theoretical underpinnings of, and the empirical support for, industrial policies, see Pack and Saggi (2006) and the more recent work by Juhasz, Lane and Rodrik (2023).

9 For a more detailed discussion, see Mintz, Brown, Cowan, Dahlby, Lefebvre, Olewiler, Promilow and Richardson (1997).

The taxation of capital gains also involves a compromise between efficiency and protecting the tax base. As discussed by Mintz and Richardson (1995), taxation of capital gains can give rise to double taxation. This occurs, for example, when an innovation raises a firm's expected profitability, thereby increasing the value of its shares. If the shares are sold, the additional income generated by the innovation will be taxed twice: once as a capital gain and a second time when it is distributed as dividends. That is, taxing both the present value of the higher income stream and the stream itself results in double taxation. Exempting capital gains in these circumstances would improve efficiency. On the other hand, exempting capital gains makes it harder to protect the revenue base, even if the exemption is restricted to gains on business shares. For example, firms would have an incentive to use share buy-backs to substitute tax-free capital gains for dividends. Restricting the capital gains exemption to gains on the sale of shares in small closely held firms in well-defined circumstances limits the scope for unintended revenue losses.[10]

Governments also intervene to promote fairness[11] by redistributing income. An example is assistance paid to firms or individuals to help them adjust to structural changes caused by import competition or technological developments. In this case, the government is providing income support without expecting an improvement in economic performance. There is a deliberate policy choice in favour of equity over efficiency. In other cases, programs may have an efficiency objective, but program parameters may prevent this objective from being realized. For example, several programs provide subsidized agricultural income insurance to improve risk management in farming, but some of these programs may be providing income support instead.[12] Regional development subsidies have both an equity and efficiency rationale since retaining economic activity in specific regions may avoid the wasteful duplication of existing public infrastructure by reducing outmigration.[13] Finally, governments intervene to support merit activities such as culture, and to protect national security.

GROWTH IN BUSINESS SUBSIDIES

Business subsidies rose 140 per cent over the nine years ending in 2023–24 (Table 1), which was 1.8 times faster than the growth in overall program spending. Growth over the nine years was also eight times faster than subsidies grew over the nine years ending in 2014–15. Measured per capita or relative to GDP, the increase in subsidies was still very high. While the increase in subsidies as a share of corporate income tax revenue was less robust, the level is high, rising from 42 per cent to 47 per cent of corporate income tax revenue. Clean economy measures rose from near zero in 2014–15 to $7.2 billion in 2023–24. These measures accounted for about 30 per cent of the growth in business subsidies. Nevertheless, subsidies excluding clean economy measures doubled over the period.

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10 To be eligible for the lifetime capital gains exemption, the shares sold must have been owned for at least 24 months prior to the sale by the claimant, a person related to the claimant or by a partnership in which the claimant was a member.

11 A less charitable interpretation is that governments offer subsidies in pursuit of an electoral advantage.

12 Subsidizing agricultural insurance premiums offsets the negative impact of adverse selection and may therefore result in higher farm production by encouraging participation in the insurance plan. However, the AgriInvest program, in which the government matches producer contributions to a savings account, may be more of an income support program than a risk management tool (Lusk 2017).

13 The efficiency argument for regional development programs is that depopulation will require public infrastructure (schools, hospitals) to be rebuilt elsewhere. To the extent that firms and households do not pay the full cost of building public infrastructure elsewhere, society bears some of the adjustment costs and some of these public funds could be allocated to sustaining regional activity.

Table 1: Total Business Subsidies

	2014-15	2019-20	2023-24	Change 2014-15 to 2023-24	
				Level	*Percent*
Total business subsidies ($ millions)	16,639	26,159	40,136	23,497	141.2
Percent of GDP	0.83	1.13	1.40	0.57	–
Percent of program spending	6.7	7.7	9.1	2.4	–
Percent of corporate income tax revenue	42.2	52.3	50.3	8.1	–
Subsidies per capita ($2023)	583	818	1,007	424	72.7

The $23.5 billion increase in subsidies resulted from $13.3 billion in spending on new programs, an increase of $12.7 billion on existing programs and $2.5 billion in savings from discontinued programs. Over the nine-year period, the government introduced over 100 new programs. Climate change mitigation measures accounted for $6 billion of the increase and clean technology measures with an industrial transformation objective accounted for a further $1.2 billion. The key new measures are the Canada Growth Fund, the Clean Technology Investment Tax Credit and the Strategic Innovation Fund, each with a cost of around $1 billion. New measures unrelated to climate change and clean tech were generally less costly, except for the Regional Economic Growth through Innovation Program, which cost $1 billion in 2023–24. Other sizable new measures were the Digital Adoption Program ($575 million), the Critical Minerals Strategy ($324 million) and the Dairy Direct Payment Program ($300 million).

The cost of continuing programs rose about 90 per cent over the period. Particularly rapid growth occurred for the Industrial Research Assistance Program (190 per cent), the Film or Video Production Services Tax Credit (160 per cent) and the Lifetime Capital Gains Exemption for farmers and fishers (150 per cent). Relatively slow growth was observed for the SR&ED investment tax credit for large firms (15 per cent), for Lifetime Capital Gains Exemption on small business shares (25 per cent) and the enhanced SR&ED investment tax credit for smaller firms (53 per cent).

The government discontinued about 75 programs. Their value in 2014–15, $2.5 billion, represented 16 per cent of spending on subsidies in that year. Many of these programs were explicitly temporary and were allowed to lapse on schedule. Several others, particularly agricultural programs, lapsed and were replaced by similar programs.

The status quo outlook is for a further large increase in subsidies over the next four years. Most of the subsidy programs active in 2023–24 are either ongoing or will lapse after 2027–28 (Table 2). Further, new programs becoming effective in 2023–24 or later, particularly the investment tax credits implemented as climate change mitigation measures and the battery plant production subsidies, will add substantially to spending in 2027–28 and beyond. Finally, existing tax-based spending programs and refundable tax credits will automatically increase over the projection period. Unless the federal government takes explicit measures to reduce subsidies, they will rise to $50 billion in 2027–28. That would represent 54 per cent of corporate income tax revenue in that year, up from 47 per cent in 2023–24.

Table 2: Projection of Business Subsidies in 2027-28 ($ millions)

	2023-24	2024-25	2025-26	2026-27	2027-28
Spending programs sunsetting before 2027-28	2,811	2,461	2,095	–	–
Spending programs sunsetting in 2027-28 and later[1]	9,657	8,981	9,841	15,393	15,795
Clean electricity tax credit and battery plant subsidies[2]	–	970	4,145	7,527	7,827
Canada Growth Fund[3]	1,237	1,237	1,237	1,237	1,237
Tax-based spending measures in effect as of 2023-24[4]	17,928	12,617	13,160	13,702	14,232
Refundable tax credits in effect as of 2023-24[5]	4,100	5,404	5,636	5,869	6,096
Government Business Enterprises[6]	4,403	4,561	4,758	4,973	5,189
Total	**40,136**	**36,232**	**40,871**	**48,701**	**50,376**
Share of corporate income tax revenue (%)	50.3	42.6	47.0	54.5	54.4

1. Projection for 2027-28 assumes that 2025-26 funding levels will be maintained for all programs except major clean economy measures.
2. Battery plant production subsidies for Volkswagen, Stellantis/LG, and Northvolt.
3. The Fund has a mandate to maintain its initial endowment of $15 billion while providing financial assistance to firms. The amount of the subsidy is calculated as the social opportunity cost of $1 in capital times $15 billion.
4. The decline in 2024-25 is due to elimination of cross-border interest deductibility and a shift in the impact of immediate expensing for small business from a revenue loss to a revenue gain. Projections for 2025-26 and 2027-28 are based on GDP growth.
5. Projections for 2025-26 and 2027-28 are based on GDP growth.
6. Subsidy levels in 2023-24 were set using averages over the 2014-15 to 2022-23 period excluding the pandemic years. Average GDP shares were used for the Business Development Bank and average dollar shares for the Canada Account and the Canada Development Investment Corporation. Projections to 2027-28 are based on GDP growth.

THE STRUCTURE OF BUSINESS SUBSIDIES

This section examines the distribution of federal business subsidies from several perspectives: by delivery method, by beneficiary, by sector and by type of support. The distribution of subsidies by major program is also reviewed.

Table 3: Distribution of Subsidies by Delivery Instrument (%)

	2014-15	2023-24
Tax-based spending	62.3	44.7
Program spending	19.4	31.1
Refundable Tax Credits	10.2	10.2
Government Business Enterprises[1]	8.0	14.1
Total	**100.0**	**100.0**

1. Includes the Canada Growth Fund

The tax system has been the most important delivery instrument for business subsidies over the nine years ending in 2023–24, although its importance has declined over time (Table 3). The percentage of subsidies delivered through spending programs rose substantially over the period. New programs, such as the Strategic Innovation Fund, the Net Zero Accelerator, the Low Carbon Economy Fund and the Regional Economic Growth through Innovation Program, accounted for almost 40 per cent of the increase. The share of subsidies delivered through GBEs

increased over the period, largely because the Canada Growth Fund began operations in the current fiscal year. In addition, both the Canada Account and CDEV switched from more than covering their costs in the first part of the period to providing subsidies later in the period.

Table 4: Distribution of Subsidies by Beneficiary (%)

	2014-15	2023-24
Business[1]	**93.5**	**87.8**
Available to all	12.8	24.4
SMEs only	48.7	45.0
SME preference	11.9	9.1
Large businesses only	26.7	21.4
Business and not-for-profits[1]	**6.5**	**12.2**
Available to all	72.7	66.0
SME preference	27.3	34.0

1. Percent of total subsidies

In some cases, the direct recipients of federal transfers are not-for-profit entities but the ultimate beneficiaries are businesses. For example, the federal government makes transfers to provincial governments to fund cost-shared agricultural support programs, which are clearly business subsidies. In other cases, the ultimate beneficiaries of a transfer payment are both businesses and not-for-profit entities. There is no information about how these subsidies are allocated between business and other entities. If program descriptions suggested that business and not-for-profit entities were at a minimum on an equal footing, I included the total amount in business subsidies; if not, they were excluded. Subsidies available to both businesses and not-for-profit organizations accounted for about seven per cent of total subsidies in 2014–15 and 12 per cent in 2023–24 (Table 4).

Table 5: Subsidies Benefiting SMEs Only (millions of $)

	2014-15	2023-24
All programs benefiting SMEs only	7,577	15,856
Top ten programs (2023-24 ranking)		
Preferential income tax rate	3,225	6,840
SR&ED ITC – refundable	1,290	1,975
Business Development Bank	995	1,853
Lifetime capital gains exemption – farm and fishing	525	1,300
Immediate expensing for small businesses		1,095
Lifetime capital gains exemption – small business shares	590	740
Industrial Research Assistance Program	160	469
Canada Digital Adoption Program (Technology)		453
Foundation for Sustainable Development Technology		191
Labour-Sponsored Venture Capital Corporations Credit	140	175
Total top ten programs	6,925	15,090
Percent of all programs benefiting SMEs only	91.4	95.2

Small and medium-sized enterprises account for approximately half of output in Canada,[14] but receive a substantially larger share of business subsidies. In 2023–24, 54 per cent of subsidies received by business only were either targeted exclusively at SMEs or SMEs were the beneficiary of choice (Table 4). About a quarter of subsidies were available to both large and small firms. If these subsidies were distributed between SMEs and other businesses in proportion to their output shares, the overall share of SMEs in business subsidies would be two-thirds. The top 10 programs supporting SMEs are shown in Table 5. These programs account for 95 per cent of the cost of all subsidies targeting SMEs in 2023–24.

Subsidies targeted at government-designated equity-deserving groups (youth, Indigenous, women and Blacks) have risen in importance over the nine-year period but remain a small share of total subsidies. These subsidies represented 2.1 per cent of the total in 2014–15 and 3.9 per cent in 2023–24.

Table 6: Business Subsidies By Targeted Sector

	2014-15		2023-24	
	$ millions	*% Share*	*$ millions*	*% Share*
Not targeted	11,756	70.7	23,298	58.0
Clean economy	264	1.6	7,348	18.3
Agrifood	2,955	17.8	6,022	15.0
Mineral extraction	271	1.6	1,034	2.6
Cultural	610	3.7	792	2.0
Other targeted	783	4.7	1,643	4.1
Total	**16,639**	**100**	**40,136**	**100**

Most business subsidies are not targeted at a specific sector. However, targeting has become more important over time because of the increased focus on the clean economy sector, which now receives the largest share of subsidies (Table 6). Agrifood will receive the second largest share of subsidies in 2023–24, although the share will decline from its 2014–15 value. The mineral extraction sector (mining, oil and gas) will be a distant third in relative importance in 2023–24, but its share will be higher than in 2014–15. Cultural sector subsidies are set to rise 30 per cent from 2014–15 to 2023–24, which is low compared to the 150-per-cent rise in overall subsidies, causing their share in total subsidies to fall almost in half.[15]

[14] As reported by the federal department of Industry, Science and Economic Development (https://ised-isde.canada.ca/site/sme-research-statistics/en/key-small-business-statistics/key-small-business-statistics-2022).

[15] Programs subsidizing cultural industries include the Canadian Music, Media, Book and Periodical Funds administered by Heritage Canada; funding for the creation of Canadian content and talent administered by Telefilm Canada; and the Canadian Film or Video Production Tax Credit.

Table 7: Distribution of Subsidies by Subsidized Activity (%)

	2014-15	2023-24
Investment	36.8	44.9
R&D	19.5	14.4
Financing	14.7	13.4
Entrepreneurship	11.5	8.1
Innovation	1.7	5.5
Other	1.5	4.9
Production costs	8.1	4.4
Farm Insurance	6.1	4.2
Total	100.0	100.0

The largest share of business subsidies is allocated to investment activities by firms, followed by R&D subsidies (Table 7). The investment share rose substantially from 2014–15 to 2023–24. The main reason is the introduction of new programs to mitigate the effects of climate change, but immediate deduction of investment spending by small business also makes a substantial contribution to the increase. The large rise in the investment share reduces the relative importance of other categories, all of which are projected to fall over the nine-year period except for subsidies promoting innovation and "other." The Regional Economic Growth through Innovation initiative, announced in 2018, accounts for about two-thirds of the increase in innovation subsidies. Subsidies directed at reducing production costs account for 4.4 per cent of subsidies in the current fiscal year, down almost 50 per cent from nine years earlier.[16] About 45 per cent of the production cost subsidies in 2023–24 are available to cultural industries and another 15 per cent are agricultural income support measures. The share of production cost subsidies is set to rise sharply and investment incentives to decline as subsidized battery plants become operational.

Table 8: Top 10 Subsidy Programs in 2014-15 and 2023-24

2014-15	Cost $ millions	Cumulative share of total	Ranking	
			2014-15	2023-24
Preferential tax rate for small businesses	3,225	19.4%	1	1
Cross-Border Interest Deductibility	2,582	34.9%	2	2
SR&ED ITC – non-refundable	1,510	44.0%	3	6
SR&ED ITC – refundable	1,290	51.7%	4	4
Farm Credit Canada	1,099	58.3%	5	3
Business Development Bank	995	64.3%	6	5
Employee stock option deduction	745	68.8%	7	11
AgriInsurance	611	72.5%	8	12
LCGE – for small business shares	590	76.0%	9	16
LCGE – farm and fishing property	525	79.2%	10	7

[16] In contrast to measures that subsidize investment expenditures, these measures subsidize current expenditures.

2023-24	Cost $ millions	Cumulative share of total	Ranking	
			2023-24	2014-15
Preferential tax rate for small businesses	6840	17.2%	1	1
Cross-Border Interest Deductibility	4000	27.2%	2	2
Farm Credit Canada	2124	32.5%	3	5
SR&ED ITC – refundable	1975	37.5%	4	4
Business Development Bank	1853	42.2%	5	6
SR&ED ITC – non-refundable	1745	46.5%	6	3
LCGE – farm and fishing property	1300	49.8%	7	10
Canada Growth Fund	1238	52.9%	8	New
Clean Technology ITC	1175	55.9%	9	New
Immediate expensing for small businesses	1095	58.6%	10	New

Subsidies have become less concentrated by program since 2014–15 (Table 8). The top 10 programs in 2014–15 accounted for almost 80 per cent of total subsidies; by 2023–24, the top 10 share had fallen to just under 60 per cent. There is considerable overlap in the top 10 programs: seven programs appear in both lists and the top two programs are the same in both years.

ASSESSMENT OF SELECTED PROGRAMS[17]

Table 9 shows the distribution of total business subsidies by potential impact on well-being and economic efficiency in 2023–24. Overall, measures accounting for 64 per cent of business subsidies in that year addressed a market failure and therefore had the potential to improve the well-being of Canadians.[18] However, there are economic costs associated with subsidies, so there is no guarantee that the net social benefit of correcting a market failure will be positive (Box 2).

Table 9: Distribution of Business Subsidies by Potential Impact (%)

		2023-24
Potential positive effect on well-being		**64.4**
Of which	Financing subsidies	41.8
	Climate change mitigation measures	24.6
	R&D subsidies	16.4
	Measures to improve tax efficiency	10.0
	Measures to create good jobs	6.8
	Training	0.4
Negative effect on economic efficiency[1]		**35.6**
Of which:	General economic development	64.3
	Regional development	14.3
	Income support	14.0
	Other measures	7.5
Total		**100.0**

1. These measures do not address a market failure.

[17] This section draws heavily on Lester (2018) and Lester and Warda (2020).
[18] This conclusion is based on a review of the objectives and eligibility criteria of programs to determine if there is a credible case that the measure addresses a market failure.

Box 2: The Benefit-cost Framework

Benefit-cost analysis can be used to compare the social benefits and costs of a policy initiative. The social benefit arises from correcting a market failure. Consider, for example, an R&D subsidy. The social benefit from this measure arises from the additional knowledge created, which allows all firms to become more efficient, not just the firms performing the R&D. It does not include the increase in output and employment arising from the subsidy. In a fully employed economy, or on average over the business cycle, business subsidies change the composition rather than the level of employment. As a result, the private benefits — higher output and employment of subsidized firms—are offset by reductions in output and employment in non-subsidized firms. This can be seen most clearly when the subsidy is financed by higher taxes, which means that, to a close approximation, there is no net change in demand for workers and capital.

However, the social costs as well as the benefits of correcting a market failure must be considered to ensure the intervention improves economic performance. One cost arises from overriding the market distribution of the labour and capital used in the subsidized sector. A loss occurs because capital and labour are being used as efficiently as possible by firms prior to the subsidy-induced shift in resources. The loss in efficiency can be illustrated for an R&D subsidy by considering how the market rate of return on the additional R&D performed is affected. The subsidy lowers the hurdle rate for a profitable investment, so firms undertake R&D projects with less commercial value, which reduces the market value of their output. Firms performing the R&D receive their required return on investment, but part of the return comes from the subsidy.

Another potential cost arises from financing the subsidy. A natural source of financing to consider is an increase in the corporate income tax rate, the logic being that governments should choose between a general tax cut, which benefits all firms, and providing targeted assistance to firms. An increase in the corporate income tax rate reduces business investment, harming economic efficiency. However, this negative impact will be offset if the business subsidy targets investment. For example, an R&D investment tax credit financed by an increase in the corporate income tax rate keeps the tax burden on overall business investment (tangible plus intangible) unchanged, leaving economic efficiency unaffected. However, in all other cases the net cost of financing a subsidy must be carefully evaluated.

Financing a subsidy with higher taxes does not directly affect Canadians' overall income if all the subsidy remains in the country. That is, the first-round effect on national income of increasing taxes on one group of Canadians and giving the proceeds to another is approximately zero. However, some of the subsidy may be transferred to foreigners, which reduces income in Canada. A transfer may occur because some of the subsidy-induced reduction in costs will be passed on to the consumers of the products developed from the subsidized R&D in the form of lower prices. If these products are exported, some of the subsidy will be transferred to foreigners. In addition, some of the profits derived from subsidized investment in R&D may accrue to foreign-owned firms.

Finally, expenses incurred by governments to administer the credits and by firms to apply for and comply with their eligibility requirements represent a social cost. Resources devoted to these activities could have been used productively elsewhere.

Benefit-cost analysis of key measures, summarized in Table 10, reveals that about two-thirds of that spending fails to realize its objective.

The federal government has several large programs intended to mitigate problems SMEs have accessing capital markets. While the proposition that all small firms have difficulty accessing external financing is controversial, in my evaluations of these programs (Lester 2017) I assume that a market failure exists and that the programs improve the allocation of financial capital in the economy. For example, the low rate of corporate income tax available to small firms reduces their cost of capital, which encourages additional investment by these firms. However, this tax preference must be financed by higher taxes elsewhere or by lower spending. If the financing source is higher taxes on large firms, overall investment is unlikely to change. However, since small firms use both capital and labour less efficiently than larger firms (Leung 2008; Baldwin, Leung and Rispoli 2014), the reallocation of economic activity will harm economic performance.[19]

Similarly, the Business Development Bank's financing program is assumed to mitigate a capital market failure for higher risk bank loans to SMEs. However, as discussed in Lester (2017), the benefit of correcting this market failure is less than the social cost of providing the loans, which is the opportunity cost of the federal funding less BDC's gross financial return on its operations. Applying the same approach to Farm Credit Canada indicates that the net social benefit from its lending activities is also negative.

Allowing Canadian MNEs to deduct from their Canadian tax liabilities interest expense incurred to finance outbound investment without including the income generated by the investment in taxable income results in a substantial revenue loss. A stylized calculation puts the loss from such cross-border interest deductibility at about $4 billion in 2023–24.[20] The motivation for providing this tax preference is the expectation that additional outbound investment by Canadian MNEs will result in more domestic investment by these firms. However, my analysis (Lester 2018b) indicates that while the measure is likely to result in additional domestic investment, there would be a bigger impact on domestic investment from a revenue-equivalent reduction in the corporate income tax rate. As a result, making the reasonable assumption that the alternative to the tax preference is a reduction in the general corporate income tax rate, the measure fails a benefit-cost test.

The federal government has two major programs that subsidize R&D performed by firms. The SR&ED investment tax credit is available to all firms performing R&D in Canada. However, the program provides a higher subsidy for small firms, 35 per cent, than for large firms, 15 per cent. A benefit-cost analysis of the SR&ED credit (Lester 2021) finds that the regular, or large firm credit generates a positive net social benefit while the enhanced, or small firm credit fails a benefit-cost test. The main reason for the different outcomes is that the knowledge spillovers occurring when firms perform R&D are greater for large firms than for small firms (Kim and Lester 2019). This disadvantage is compounded by the higher subsidy rate available to small firms and their much higher cost of applying for the tax credit.

The other major federal program supporting R&D is the Industrial Research Assistance Program (IRAP). This program had a budget of approximately $435 million and provided financial assistance to about 3,100 SMEs in 2022–23. IRAP may provide support of up to 75 per cent of eligible project

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[19] If the capital market distortion were the only departure from perfectly competitive markets, correcting it would raise economic efficiency. That small firms are less efficient than large firms suggests there are other distortions preventing the optimal allocation of investment.

[20] See the Annex for details.

costs,[21] but the average subsidy rate (financial assistance divided by project costs) was 37.5 per cent on average over the 10 years ending in 2022–23 and excluding 2020–21, when the subsidy rate soared to 60 per cent.[22] Finally, IRAP provides technical advice to clients, which is effectively an additional R&D subsidy. I estimate this subsidy to be approximately 2.5 per cent of contributions received. IRAP clients may also receive the enhanced SR&ED tax credit, although firms receiving generous levels of support from IRAP have little incentive to apply for the tax credit.[23]

IRAP's administration expenses, net of the technical advice component, represented 17.5 per cent of financial assistance given to firms on average over the nine years ending in 2022–23 and excluding 2020–21. This is dramatically higher than the comparable figure for the enhanced SR&ED tax credit, which is likely in the two- to three-per-cent range (Lester 2021). On the other hand, the cost of applying for IRAP subsidies, 11.6 per cent of assistance received, is slightly lower than for the enhanced SR&ED tax credit, 14.2 per cent (Lester 2012).

A benefit-cost analysis undertaken in 2012 (Lester 2012) found that the social benefits of IRAP financial assistance and advice were less than the social costs of the program. The benefit-cost analysis assumed IRAP officials were successful in selecting firms with substantially above-average knowledge spillovers, but the combination of a high subsidy rate and high administration and compliance costs more than offset the spillover advantage.

Measures implemented to improve the tax system's efficiency accounted for 10 per cent of the subsidies having the potential to improve economic performance. The key programs in 2023–24 were the Lifetime Capital Gains Exemptions (LCGE) on sales of small business shares and farming and fishing property.

As discussed above, there is an element of double taxation in the tax treatment of capital gains on active business income. This double taxation increases the effective tax rate on business investment, so exempting capital gains will result in more investment. This benefit should be compared to the social cost of financing the exemption.

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[21] IRAP Terms and Conditions, June 14, 2018.
[22] Based on information received from IRAP in response to an access-to-information request.
[23] A firm receiving the maximum IRAP subsidy of 75 per cent could claim the 35 per cent credit on the unsubsidized portion of their costs, 25 per cent, which results in a subsidy of 8.75 per cent. The effective subsidy rate is further reduced by the cost of applying for the credit, which has a substantial fixed cost component (Lester 2012).

Table 10: Assessment of Key Programs with the Potential to Improve Economic Efficiency—2023-24

	Program Cost ($M)	Per cent Share[1]	Issue Adressed	Impact on Efficiency	Comments	Reference
Preferential tax rate for small businesses	6,840	26.5	Capital Market Failure	Negative	Cost of shifting resources into smaller, less-efficient firms dominates the benefit of mitigating a capital market failure.	Lester (2017)
Cross Border Interest Deductibility	4,000	15.5	Positive spillovers from outbound investment	Negative	Induced effects on domestic investment do not compensate for financing the subsidy with a higher general corporate income tax rate.	Lester (2018b)
Farm Credit Canada	2,124	8.2	Capital Market Failure	Negative	Benefits of correcting the capital market failure are not large enough to offset the social cost of providing the loans.	Lester (2018a)
Enhanced SR&ED tax Credit—small firms	1,975	7.6	Positive Spillovers from R&D	Negative	This measure performs poorly because of a high subsidy rate, relatively small spillovers, and high compliance costs.	Lester (2021)
Business Development Bank	1,853	7.2	Capital Market Failure	Negative	Benefits of correcting the capital market failure are not large enough to offset the social cost of providing the loans.	Lester (2017)
Regular SR&ED tax credit—large firms	1,745	6.8	Positive Spillovers from R&D	Positive	This measure performs well because of high spillovers.	Lester (2021)
Capital gains exemption on sale of farming and fishing property	1,300	5.0	Tax policy efficiency	Neutral to negative	If financed by an increase in small business tax rates, the impact on investment, and hence real income, would be approximately neutral. If financed by a higher general corporate income tax rate there would be a real income loss.	Lester (2018a)
Capital gains exemption on sale of small business shares	740	2.9	Tax policy efficiency	Neutral to negative		
Industrial Research Assistance Program	469	1.8	Positive Spillovers from R&D	Negative	Excessive subsidization, high administration and compliance costs dominate spillover benefits.	Lester (2012)
Film or Video Production Services Tax Credit	345	1.3	Industrial transformation	Negative	The wage gap is not large enough to offset financing costs and the partial transfer of the subsidy to foreign producers.	Lester (2013)
Total	**21,391**	**82.8**				
Confirmed negative impact	17,606					
Percentage of listed programs	82.3					

1. Percent of all programs having the potential to improve economic efficiency.

If the financing source is an increase in the tax rate applied to small business income, the negative impact on investment would be approximately the same as the positive impact arising from the exemption. On the other hand, a plausible case can be made that the quality of the investment stimulated by the capital gains exemption would be higher than the investment lost through a higher income tax rate.

If the financing source is an increase in the general corporate income tax rate, the net impact on investment would still be small, but the overall impact on efficiency would likely be negative, for two reasons. First, the change in relative tax rates would shift capital from large firms to smaller, less efficient firms. Second, a higher general corporate income tax rate would induce international profit shifting out of Canada, so preserving revenue neutrality would involve a larger tax rate increase than if the exemption is financed by raising the small business tax rate. The net impact would be positive if the financing source is the personal income or value-added tax rate, but the corporate income tax is a more natural source of financing since it keeps the overall tax burden on capital constant.

Measures to create good jobs in 2023–24 accounted for seven per cent of spending on subsidies having the potential to improve economic efficiency. Note, however, that the assumption that these policies are effective in raising real incomes is controversial (Box 3). The two key programs in 2023–24 were the Strategic Innovation Fund (SIF) and the Film or Video Production Services Tax Credit (PSTC), which together accounted for about 80 per cent of all measures promoting good jobs.

The PSTC subsidizes Canadian firms that provide production services for foreign firms shooting films in Canada. The objective is to create good jobs by shifting resources into film production from other sectors. My 2013 benefit-cost analysis of the PSTC (Lester 2013) found a negative net social benefit from the measure. The film production sector does pay above-average wages, but the gap is not large enough to offset the social costs of financing the program and the partial transfer of the subsidy to foreign producers. The PSTC subsidizes production costs, so if it is financed by an increase in the corporate income tax rate, the overall tax burden on investment rises, with adverse effects on economic efficiency. The PSTC reduces the cost of film production services sold to foreign producers. Part of the cost reduction will be passed through to the selling price to foreign buyers, which reduces real income in Canada.

Prior to Budget 2023,[24] the SIF promoted industrial transformation by supporting investment in Canada's "most dynamic and innovative sectors." An evaluation of the SIF (Industry, Science and Economic Development Canada 2021) concludes that the performance of recipient firms improved along several dimensions, but the evaluation does not undertake a benefit-cost analysis. Employment in most of the targeted sectors (automotive, aerospace, health and bio-sciences, digital industries and clean tech) would be considered a good job. However, the benefit-cost analysis of the PSTC reveals that it cannot be assumed that subsidizing the creation of relatively well-paid jobs is a sufficient condition for program success. It will be important to undertake a careful benefit-cost analysis of the earlier version of SIF to form an evidence-based decision on the expansion of subsidies for good jobs. The evaluation should include an assessment of how the program affected adjustment costs.

[24] SIF's priorities were changed in Budget 2023 to supporting clean tech and critical minerals as well as general industrial transformation.

Box 3: Does Subsidizing Good Jobs Pay Off?

In standard economic theory, markets allocate resources as efficiently as possible. As a result, policies designed to shift resources from one sector to another harm rather than help economic performance. Advocates of subsidies for good jobs counter that productivity varies by sector so that real income gains are possible by using subsidies to shift resources across sectors. While it is not always explicit, the assumption is that total factor productivity varies by sector, which implies that rents are being earned in some sectors. An important point is that high wages or high returns to capital do not necessarily mean that rents are being earned. High wages may reflect skill differences and high profits may include a return to risk. Identifying and quantifying rents (wage premiums or above-normal returns to capital) requires careful examination of the data.

The starting point for much of the analysis in this area is the generally accepted empirical finding of large and persistent productivity differentials between observably similar firms in the same industry. Researchers then attempt to determine if these productivity differences affect wages. There are two strands to the empirical literature (Card et al. 2018). The first examines the relationship between firm-level productivity and wage rates. This literature generally finds that, after controlling for worker characteristics and industry-wide productivity shocks, firm-level productivity affects wage rates. The second strand examines what happens to wages when workers change jobs. In a perfectly competitive labour market, all employers would pay workers the value of their (fixed) marginal product. This literature finds that wages for the same employee vary across firms, which adds to the evidence suggesting labour markets are imperfectly competitive.

Card et al. (2018) find evidence that high-productivity firms hire more productive workers and pay wage premiums to all workers. Industry-level wage premiums could therefore be observed if the distribution of high-productivity firms varies by industry. Card et al. (2018) do not advocate the use of subsidies based on their findings. They have reservations about both the model they use — described as a simple static wage-setting model — and the empirics, particularly the ability to isolate exogenous changes in productivity. The authors state that more evidence is required on how such policies affect firm and worker behaviour before a recommendation on subsidizing good jobs can be made.

Assuming that wage premiums are identified and quantified in an industry, what would be the appropriate policy response? Given that sectoral differences in wages may be driven by firm-level developments, a broad-based measure is unlikely to be the optimal policy response. Syverson (2011) discusses the sources of firm-level differences in productivity. The factors identified are directly or indirectly related to the quality of management, so policies that level up management skills should be considered. Policies that effectively discourage entry (or encourage exit) of low-productivity firms should also be considered. If high wages are compensation for skill differences, the appropriate policy response could be to increase the subsidy for the acquisition of the skills required in the high-productivity sector.

Programs implemented to mitigate climate change impacts accounted for a small share of the subsidies that are expected to improve well-being in 2019–20 but have grown rapidly since then. Key measures in 2023–24 include the Canada Growth Fund, the Clean Technology Investment Tax Credit and the Low Carbon Economy Fund.

These measures should be evaluated using a two-step procedure. Since these measures are certain to be less cost-effective than pricing carbon, they should be assessed in terms of their

complementarity to the main instrument for reducing emissions. That is, are they filling a gap in the carbon pricing regime, or addressing a market problem that impedes the effectiveness of carbon pricing? Measures that do not complement carbon pricing should be eliminated.

The second step is to assess the costs and benefits of the policy measure. In principle, the benefit should be measured as the harm avoided by reducing emissions. However, the social cost of emissions is difficult to measure objectively,[25] so it may be more useful to evaluate programs based on their relative cost of achieving a given reduction in emissions. This approach would be particularly useful in identifying outliers, or programs that are remarkably less cost-effective than others.

About 35 per cent of business subsidies in 2023–24 were not intended to address a market failure. These measures transfer money among Canadians while changing the distribution of economic activity in a way that harms economic efficiency. Programs with the potential to improve economic performance but fail to do so account for 44 per cent of all subsidies, bringing the total share of subsidies having a negative impact on economic performance to 80 per cent in 2023–24.

POLICY RECOMMENDATIONS

Business subsidies have grown explosively since 2014–15 and are set to grow rapidly over the next four years. Given funding for existing spending programs, projected growth in existing tax-based measures and announced initiatives, business subsidies are likely to represent well over half of corporate income tax revenue by 2027–28, up from 42 per cent in 2014–15.

About two-thirds of business subsidies in 2023–24 address a recognized market failure and therefore have the potential to improve the well-being of Canadians. However, there is solid evidence that most of these programs fail to realize their potential. Most of the failing programs support small businesses by reducing the cost of financing or by subsidizing R&D. These programs should be reviewed to determine if they can be restructured to generate a net benefit. If they cannot, these programs should be eliminated.

Most of the projected increase in subsidies over the next four years arises from clean economy programs and measures to create good jobs. The clean economy measures should be evaluated using a two-step procedure. First, they should be assessed to determine if they are complementary to carbon pricing. If they are not, they should be eliminated. Second, the retained programs should be evaluated based on their relative cost-effectiveness to identify programs that could be fine-tuned or eliminated.

The government should be particularly cautious about using subsidies to create good jobs until it can be demonstrated that they improve economic performance. These programs will succeed in altering the structure of the Canadian economy, but the costs may exceed the benefits, even when benefits include adjustment costs avoided.

Subsidy programs not intended to raise real income, either because they have a fairness goal or because they support merit activities, should be assessed to determine if their income distribution effects can be justified given the economic costs they impose.

An evidence-based assessment of business subsidies would demonstrate the potential for large fiscal savings by eliminating wasteful subsidies. Using these savings to pay down the debt or cut corporate income taxes would improve economic performance.

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[25] A key issue here is how costs are compared over time. Future costs are linked to the present using an estimate of the social discount rate and there is no consensus on what rate to use. Substantially different estimates of the social cost of emissions are obtained from relatively small changes in the social discount rate.

ANNEX A: DATA SOURCES AND METHODS

Governments subsidize business through spending programs, through tax measures and by making what are typically described in the public accounts as "loans, investments and advances" to government-controlled entities and private sector firms.

SPENDING PROGRAMS

Details on government spending by program and department are presented in the public accounts. Business subsidies are included in the more general category of transfer payments. The recipients of the transfers are not identified in the public accounts, so each program must be reviewed to classify it as a business subsidy or other transfer.[26] Program descriptions, including intended beneficiaries, are available in departmental plans. While most transfer payments classified as business subsidies are paid directly to firms, some are routed through provincial governments and other non-profit entities. This study includes such measures in business subsidies. For example, federal transfers to provinces to finance federal-provincial shared cost programs in agriculture are included in business subsidies.

The public accounts transfer payments data are now available as a digital dataset, which is published about seven months after the fiscal year end.[27] Information on transfer payments for the current year is taken from departmental plans, which also include data for the previous year and planned spending for two years ahead. The plans are available on departmental websites, but transfer payments are not available as a dataset. As a result, the data for each program must be copied from a text table and pasted into the public accounts dataset. The data in the plans for the current year are consistent with the budget, but are not final. The budget estimates are revised several times throughout the year through the supplementary estimates process. The first revision (Supplementary Estimate A, published in August 2023) raised subsidies by $1.2 billion, all of which was related to federal transfers to provinces for agriculture support programs.

Federal business subsidies provided through departmental spending programs take two general forms: grants and contributions. Grants are unconditional subsidies; recipients are not required to report on the use of funds and are not audited. Contributions are subject to performance conditions and recipients must report on the use of funds; they are also subject to audit. Contributions may be non-repayable, or repayable with or without conditions. Non-repayable and conditionally repayable contributions are included in subsidies as they are made. Unconditionally repayable contributions are recorded as loans in the public accounts and are not included in this study. Recoveries of conditionally repayable contributions are included in departmental revenues. In this study, these repayments are deducted from aggregate subsidies to avoid overstating payments; they represent a small share of total subsidies but are significant in several programs.

The reporting of subsidies delivered through spending programs could be improved in three ways. First, the information on transfer payments reported in individual departmental plans should be consolidated into a single machine-readable dataset that includes the most recent data from the public accounts, estimated spending for other past years and planned spending for the current fiscal year and future years. Second, recipients of each transfer payment program should be identified as private businesses, business-controlled organizations and other.

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[26] Information on transfer payments by program and department is available in volume 2 of the accounts. Individual recipients of transfer payments above $100,000 are identified in volume 3 of the accounts.

[27] The transfer payment dataset can be accessed through the report builder feature of the Government of Canada InfoBase. Start here https://www.tbs-sct.canada.ca/ems-sgd/edb-bdd/index-eng.html#start, then select "Finances," "Datasets," "Transfer Payments." The transfer payments dataset will then be ready to download in a csv spreadsheet.

This change would make it much easier to identify and quantify business subsidies. Third, recoveries of conditionally repayable contributions should be recorded by program, not as a department-wide aggregate.

TAX-BASED SPENDING

Finance Canada publishes a dataset of tax expenditures and refundable tax credits as part of its annual Report on Federal Tax Expenditures.[28] Each dataset covers eight years: the current year, one year ahead and six years of historical data. The tax expenditure report contains a detailed description of each measure and classifies tax expenditures as structural or non-structural. The structural category consists of measures "whose main objective is internal to the tax system" (Finance Canada 2018, 29), such as promoting tax fairness or simplicity.[29] The non-structural category consists of measures implemented to achieve economic and social objectives. Non-structural measures with an economic objective are classified as business subsidies. However, measures that apply to all businesses, such as the Accelerated Investment Incentive, are not included in business subsidies. They are considered to be part of the tax system, much like the statutory tax rate on corporate income. Only measures targeted by industry, size of firm or activity are classified as subsidies.

The tax expenditures report also includes estimates for refundable tax credits. These credits are part of government spending, but they are not reported separately in any other document.

The tax expenditure report provides a comprehensive list of tax expenditures affecting income tax and GST revenue but not for the tax revenue forgone through excise taxes or through preferential employment insurance contribution rates. Further, the report does not provide cost estimates for all listed measures. For example, the targeted accelerated capital cost allowance measures implemented prior to 2019 are not costed.

Another notable gap is the absence of an estimate for the cost of permitting multinational enterprises located in Canada to deduct interest and other expenses incurred by their foreign affiliates without being required to include the affiliate's profits in the taxable income booked in Canada.

A stylized calculation suggests that the amount of tax revenue forgone is likely to be substantial.[30] A Canadian MNE taking advantage of the favourable tax environment would, in equilibrium, finance its outbound investment with a mixture of debt and equity determined by its overall debt-to-equity ratio. Assuming all MNEs maximize their interest deductions on outbound investment, an estimate of the fiscal cost in 2021 can be developed as follows:[31]

- The stock of outbound equity investment in subsidiaries of Canadian-based firms amounted to $1,689 billion. Foreign-controlled MNEs, who face restrictions on their ability to deduct cross-border interest expenses, are assumed to account for 10 per cent of this amount.
- The debt-equity ratio for all non-financial firms in Canada was .75; assuming a slightly higher ratio, .80, applies to large firms, the amount of debt incurred by MNEs to finance outbound investment would have been $1,215 billion.

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[28] The dataset is available here: https://www.canada.ca/content/dam/fin/publications/taxexp-depfisc/2023/taxexp-depfisc-23-eng.xlsx.

[29] More specifically, the structural category includes measures implemented to promote horizontal equity, to recognize costs of earning income, to avoid double taxation and to keep administration and compliance costs at reasonable levels.

[30] For additional detail, see Lester (2018b).

[31] Sources: Statistics Canada https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3610000801 and https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=3310049801 for outbound investment and financial data respectively.

- The average effective interest rate on debt incurred by non-financial corporations was 3.5 per cent.
- Not all firms can use deductions as they are earned. This calculation assumes that the present value of $1 in deductions is 67 cents.[32]
- With a federal statutory corporate income tax rate of 15 per cent, the forgone federal tax revenue would have been $1.215*.035*.15*.67 = $4.3 billion in 2021.

An estimate for 2023 was developed by considering movements in interest rates and likely increases in outbound foreign direct investment. This measure will be eliminated for firms with tax years starting after November 1, 2023. The 2023 estimate of the revenue loss is adjusted for the partial coverage in 2023.

GOVERNMENT BUSINESS ENTERPRISES

Loans, investments and advances are also presented in the public accounts and are available as a dataset. Most of these investments are made in government-controlled entities, particularly in government business enterprises (GBEs), that are substantially self-sustaining after an infusion of government equity investment or loans. Government-controlled entities that prepare a separate set of financial statements are considered a distinct source of subsidies, separate from other loans, investments and advances, which are undertaken directly by the federal government. In contrast to spending programs and tax measures, supplementary calculations are required to determine the subsidy arising from loans, investments and advances.[33]

The subsidy provided by the self-sustaining GBEs is calculated as the difference between the return on the GBE's capital and the return that would have been earned if the capital had been placed in a typical business investment, or the social opportunity cost of that capital. Consider the Business Development Bank of Canada (BDC). In 2014–15, the value of the government's investment (equity and debt) was $19.5 billion (Table A1). The social opportunity cost of this investment is estimated at $1.6 billion.[34] The gross financial return on BDC's capital was about $.6 billion, which resulted in an implicit subsidy of about $1 billion to the firms benefiting from BDC's services. By 2022–23, the latest year that BDC financial statements are available, the implicit subsidy had risen to about $2.3 billion, reflecting increased government funding and a lower rate of return on this investment. Applying the same methodology to Farm Credit Canada, the implicit subsidy on farm loans was about $1.2 billion in 2014–15 and $1.9 billion in 2022–23.

In contrast, the gross financial return on capital employed by Export Development Canada (EDC) exceeded the social opportunity cost of capital by about $600 million in 2014–15. The subsidy rose to $1.4 billion in 2019–20, but this was an outlier. On average over the nine years ending in 2022–23, the financial return on EDC's capital exceeded the opportunity cost by about $125 million. As a result, no subsidy arising from EDC is included in this report. Support for

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[32] Finance Canada (2010) provides information on the utilization of non-capital tax losses incurred in 2000. The utilization pattern implies that the present value of a $1 loss not used in 2000 was 53 cents, assuming a six per cent discount rate. The low present value reflects the seven-year loss carry-forward period available in 2000, relatively unfavourable cyclical conditions in 2001 and 2002 as well as the impact of tax reductions on tax liabilities. An alternative estimate was developed by assuming the longer carry-forward now available means that no losses expire and by cutting in half the amount of losses not used for other reasons (e.g., bankruptcy). The first adjustment raised the present value to 59 cents and the second to 67 cents.

[33] The data required to make these calculations are obtained from tables in the public accounts. Equity of Canada and net income are from Table 9.4; loans are from Table 9.2; and interest paid on these loans is taken from a following supplementary table. Canada Account data are from the Canada Account Annual Report.

[34] The nominal social opportunity cost of capital is assumed to be 8.25 per cent. This estimate is based on analysis by Jenkins and Kuo (2007), adjusted to reflect more recent analysis by the Bank of Canada. See (Lester 2017) for details.

export-related activities that are characterized by a risk level or financing conditions that are inconsistent with EDC's mandate is delivered through the Canada Account, which is managed and administered by EDC. On average from 2014–15 to 2021–22, the implicit subsidy to exporters arising from the Canada Account was $150 million.[35]

The Canada Development Investment Corporation (CDEV), which invests in individual firms to advance government policy objectives, more than covered the social opportunity cost of government financing in 2014–15 when its holdings of GM shares purchased in 2009 were sold at a profit. However, on average in the following eight years, CDEV's adjusted net income was $170 million less than its cost of capital.[36] Current investments are in the Trans Mountain Pipeline and the Hibernia offshore oil development project.

Table A1: Implicit Subsidies Provided by Selected Government Business Enterprises (in Millions of $)

	Federal Investment			Opportunity Cost of Investment[1]	Gross Financial Return			Implicit Subsidy[2]
	Equity	Loans	Total		Interest Received	Net Income	Total	
Business Development Bank								
2014-15	4,542	15,002	19,544	1,612	127	460	587	1,025
2019-20	8,303	22,843	31,145	2,336	372	-100	271	2,064
2022-23	20,404	23,509	43,913	3,184	519	392	910	2,274
Farm Credit Canada								
2014-15	4,510	22,360	26,870	2,217	214	815	1,029	1,188
2019-20	6,841	31,258	38,098	2,857	513	718	1,231	1,626
2022-23	8,577	38,858	47,435	3,439	834	721	1,556	1,883
Export Development Canada								
2014-15	7,901	-	7,901	652	-	1,250	1,250	-599
2019-20	9,085	-	9,085	681	-	-727	-727	1,409
2022-23	13,733	--	13,733	996	-	1,544	1,544	-548
Canada Account								
2014-15		2,996	2,996	247	-	385	385	-138
2019-20		7,018	7,018	544	-	335	335	209
2021-22		16,987	16,987	1,232	-	998	998	234
Canada Development Investment Corporation								
2014-15	4,416	-	4,416	364	-	997	997	-632
2019-20	337	5,523	5,860	439	261	82	343	96
2022-23	107	16,201	16,308	1,182	747	238	985	197

1. Calculated as the social opportunity cost of capital (SOC) times the total federal investment. The SOC is 8.25 per cent in 2014-15, 7.75 per cent in 2019-20, and 7.25 per cent in 2021-22 and 2022-23.

2. The opportunity cost of capital less the gross financial return.

Sources: public accounts of Canada and corporate reports

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35 Excluding transactions related to the Canadian Emergency Business Account in 2020–21 and 2022–22.

36 Net income is adjusted to include unrealized capital gains and losses as recorded in "other comprehensive income."

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