Government incentives: past, present and future

EY Policy Brief

Building a better working world

EY Policy Brief is a new thought leadership series by EY Canada on public policy issues of economic and strategic significance to Canadian business and government, and accordingly, of general interest to the public. The Brief is designed to inform and stimulate public interest and debate. "Government incentives: past, present and future" *is the second in the series.*

Introduction

Government incentives have long been a key part of economic development policy in Canada. In the 1960s, programs like those offered under the Agriculture Rehabilitation and Development Act (ARDA) attempted to increase incomes in rural areas by providing assistance for the use of marginal land, creating work opportunities, developing water resources and setting up projects for other industries.

Recent incentives have focused on a variety of economic development goals, including stimulating business growth in specific geographies, increasing the number of women entrepreneurs, developing more sustainable technologies and hiring new graduates.

The forms that incentives take vary, but are generally either entitlements or discretionary (direct or indirect). Both types can be structured and delivered differently as tax incentives, subsidies, tax rebates or other financial incentives. While various factors influence investment decisions (e.g., the state of the economy, geopolitical circumstances), incentives can sometimes be the difference between adopting and rejecting an investment or project.

Here we look at discretionary government incentives awarded in Canada over the last five years as tracked in Wavteq's Incentives Monitor database (Wavteq, 2019). The Wavteq database includes discretionary fiscal incentives offered to companies to establish new operations or to expand an existing operation. For Wavteq to include an incentive deal in this database, the investment project must create new employment and/or retain existing jobs and/or involve a capital investment (capex).

The types of incentives recorded include grants or subsidies, loans/credit, tax rebates and nonfinancial incentives. The database does not include incentives awarded to: universities or colleges, public organizations, cities or counties. It also does not include projects where there is no job creation, incentives purely for R&D purposes (such as SR&ED) or aid provided for restructuring, recovery or rescue.

For the purpose of this brief, we have not tested the completeness of the database but assume it provides a general picture of the landscape that's sufficient for an analysis of trends and general comparisons.

Q1 How much money is given out?

Some studies have suggested that incentives are more impactful when they are targeted to specific areas of research, industries or geographies rather than funding that is available to everyone meeting more relaxed eligibility criteria.[1] In addition to innovation, emphasis on capital expansion and job creation are a key focus of many incentives.

Table 1 provides details specifically related to Canadian discretionary financial incentives that support capital expansion and job creation (Wavteq, 2019).[2]

Table 1: Incentive deals in Canada 2014-18

Metric	2014	2015	2016	2017	2018	Total
Deals	173	216	217	265	436	1,307
Incentives (US$)	1.0b	663.0m	993.0m	623.0m	1.8b	5.2b
Capex (US$)	6.4b	2.2b	7.9b	3.9b	11.2b	31.6b
Avg Inc % capex[3]	15.2%	24.6%	11.7%	14.5%	15.2%	14.9%

Source: Wavteq, 2019.

As the table illustrates, the amount of money disbursed to Canadian companies through these types of incentives has varied considerably over the last five years. In 2014, 173 incentive deals relating to job creation or supporting capital expansion were made with companies in Canada for a total amount of $1.0 billion. In 2015, they amounted to only $663 million. In 2016 funding jumped back up to nearly $1 billion, but it dropped to below 2015 levels in 2017. In 2018, however, the number of deals almost doubled from the 2017 levels and funding almost tripled, when 436 projects were awarded for a total of $1.8 billion.

The level of funding per dollar of capital expenditure (capex) has also varied considerably, from a low of 11.7% in 2016 to a high of 24.6% in 2015. Not surprisingly, this highest percentage of incentive to capital spending coincides with the lowest annual capital expenditure of $2.2 billion. In 2018 total investment in capital rose to the highest levels at $11.2 billion, but because of the increase in total incentives awarded, the average percentage of incentive to capital expenditure held at 15.2%, only slightly above the 5-year average of 14.9%.

An important point to note is that although the number of "deals" steadily increased between 2014 and 2018, with the number in 2018 almost 65% greater than 2017, only select few companies have benefited from these programs. For example, more than 20,000 companies receive Scientific Research and Experimental Development (SR&ED) tax credits each year for R&D activities compared to the 436 who receive the direct benefits from programs rewarding growth/expansion.

[1] Alessio J. G. Brown, "*Can hiring subsidies benefit the unemployed?*", IZA World of Labour 2015, Germany, 2015.

[2] All monetary values in this paper are expressed in US dollars.

[3] Ratio of average incentive to capex as a percentage is calculated only on deals where the capex is known.

Q2 Which sectors have benefited most from government discretionary incentive programs?

Table 2 summarizes deals over the last 5 years awarded through the Canadian incentive programs tracked in the Wavteq database that are aimed primarily at job creation or capital expansion. It shows that the most money went to companies in the basic materials sector, which received a total of $1.2b. This sector includes chemicals, mining, plastics, steel, aluminum and wood products. The automotive sector received the next highest level of incentives at $833.6m.

Despite coming in fourth in terms of total incentives received, the non-renewable energy sector (e.g., coal, petroleum, natural gas) received the highest average amount of incentives per deal at $65.1m per deal; this is likely due to the capital-intensive nature of those businesses.

While the greatest number of deals were awarded to companies in the industrial goods sector, the average value of each deal was only $1.5m.

Table 2: Sector ranking (2014-18)

Industry sector	Incentives	Avg incentive	Deals sample
Basic materials	$1.2b	$7.8m	147
Automotive	$833.6m	$9.6m	87
Consumer goods	$464.5m	$5.5m	85
Non-renewable energy	$390.7m	$65.1m	6
Food and drink	$384.6m	$1.9m	202
Information technology and telecom (ITT)	$375.7m	$2.4m	158
Aerospace, defence and marine (ADM)	$362.5m	$6.9m	53
Industrial goods	$302.1m	$1.5m	208
Life sciences	$298.8m	$4.7m	63
Services	$256.1m	$3.3m	77

Source: Wavteq, 2019.

An interesting metric is the ratio of incentive dollars received per dollar of capital expenditure (see Table 3 below).[4] The consumer goods sector (includes household products, furniture, sports and leisure products) had a ratio of 30.4%, although the sector's capital spending ranked only 7th.

The basic materials sector had the highest total capital expenditures in the last five years, but the ratio of incentive to capital expenditure was only 14.6%. The information technology and telecom sector had the lowest incentive/capital dollar ratio at 9.7%.

Table 3: Total capex 2014-18 by sector

Industry sector	Total capex ($m)	Average capex ($m)	Incentive/ capex(%)
Industrial goods	1,471.0	9.4	19.1
Food and drink	2,973.0	22.7	11.1
Information technology and telecom (ITT)	2,951.0	44.0	9.7
Basic materials	7,498.0	71.4	14.6
Creative industries	504.0	4.2	11.2
Automotive	5,088.0	72.7	16.1
Consumer goods	1,553.0	23.2	30.4
Services	845.0	32.5	21.1
Life sciences	1,828.0	46.9	13.7
Electronics	392.0	11.2	24.9
Other	6,496.0	110.1	13.1
Total	31,599.0	36.2	14.9

Source: Wavteq, 2019.

[4] Ratio of average incentive to capex as a percentage is calculated only on deals where the capex is known.

Q3 How are funds distributed across Canada?

Regional impact is a critical dimension of any program. Table 4 shows where the most discretionary incentives were awarded on a provincial basis. Québec and Ontario top the list, with companies in these provinces receiving $2.5b and $1.8b, respectively, over the last 5 years, accounting for 47% and 34%, respectively, of all incentives awarded in Canada. Companies in those two provinces were also provided the greatest number of deals, with 486 and 450, respectively. Nova Scotia and New Brunswick organizations were also well represented, with 184 and 141 deals, respectively. Although Alberta ranked third in terms of total incentives at $415.4m, this money was awarded in only 6 deals.

Table 4: Incentive deals by province (2014-18)

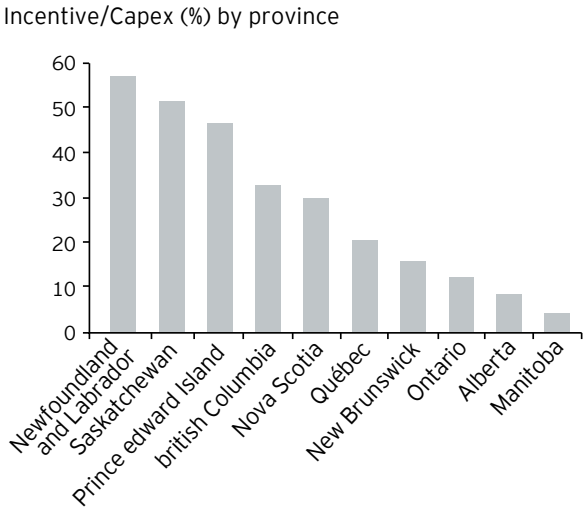
Province	Incentives ($US)	% of Canada's total incentives*	Deals sample	Avg. incentive per deal	Average capex per deal ($m)
Québec	$2.5 b	47	486	$5.1m	28.0
Ontario	$1.8 b	34	450	$3.9m	49.8
Alberta	$415.4 m	8	6	$69.2m	1,612.3
Nova Scotia	$183.9 m	4	184	$1.0m	2.0
New Brunswick	$156.6 m	3	141	$1.1m	8.6
British Columbia	$80.3 m	2	6	$13.4m	74.6
Manitoba	$27.7 m	0.01	7	$4.0m	67.5
Prince Edward Island	$22.7 m	0.01	17	$1.3m	2.9
Newfoundland and Labrador	$10.8 m	0	7	$1.5m	1.8
Saskatchewan	$6.6 m	0	3	$2.2m	2.7
Canada	**$5.1b**	**100**	**1,307**	$4.0	**36.2**

Source: Wavteq, 2019.

**Total does not add to 100% due to rounding.*

Deals in Alberta attracted the highest incentives on average at $69.2m per deal, as well as the largest projects on average based on capital investment at an average of $1,612m. Newfoundland and Labrador also had the highest incentive per capital investment (capex) ratio at 57.2%. Manitoba had the lowest ratio at 4.0. (see Figure 1 below).

Figure 1: Incentives/capex percentage by province (2014-18)



Source: Wavteq, 2019.

Q4 How many programs are there?

The number of incentive programs available to Canadian companies changes frequently, since some programs sunset after a certain period of time and new ones are often announced based on economic factors across regions. Even if a program is still active, it may have only a few intake periods each year.

The sheer number and variable life of the programs makes keeping on top of what is available and meeting application deadlines challenging for Canadian companies because it requires time and resources better allocated to growing their business.

In the last 5 years, deals were awarded through 82 different municipal, provincial and federal programs. Table 5 shows the breakdown between loans/credits awarded vs. grants or subsidies. "Unspecified" can be a combination of loans and grants and/or the details of the deal were not made public.

Table 5: Incentive type ranking in Canada (2014-18)

Incentive type	Incentives	Avg incentive	Deals sample
Loan/Credit	$3.2b	$5.2m	616
Grant/Subsidy	$2.1b	$4.7m	443
Unspecified	$1.4b	$4.6m	298
Tax	$708.2m	$5.3m	135

Source: Wavteq, 2019.

Table 6 shows the top 10 programs in terms of total incentives awarded in the period 2014-18. The federal Strategic Innovation Fund tops the list with a total of $850.6m awarded through 20 separate deals and is one of only two federal programs in the top 10. Ontario's Jobs and Prosperity fund comes second at $679.9m. However, this program has since been cancelled. Québec programs account for 3 of the top 10.

Table 6: Incentive program ranking (2014-18)

Incentive program	Incentives	Avg incentive	Deals sample
Canada Strategic Innovation Fund	$850.6m	$42.5m	20
Ontario Jobs and Prosperity Fund	$679.9m	$17.4m	39
Alberta Petrochemicals Diversification Program (PDP)	$389.5m	$194.8m	2
Québec ESSOR Program	$271.1m	$6.6m	41
Québec Capital Mines Hydrocarbures (CMH) Fund	$264.9m	$66.2m	4
Québec Economic Development Program	$205.9m	$0.9m	231
Ontario Advanced Manufacturing Fund (AMF)	$151.8m	$25.3m	6
Canada Investments in Forest Industry Transformation (IFIT)	$100.0m	$12.5m	8
Nova Scotia NSBI's Strategic Investment Funds	$99.5m	$2.3m	44
Southwestern Ontario Development Fund	$87.2m	$0.6m	151

Source: Wavteq, 2019.

Q5 How does Canada compare with other countries?

Not surprising in today's competitive global marketplace, Canada is not alone in its efforts to support businesses through discretionary incentives. Table 7 provides some context when examining where Canada fits in the global incentives landscape. Again, these figures do not include R&D tax credits but rather focus on capital projects and job creation.

Not surprisingly, the US provides the greatest amount of incentive dollars at $68.5b from 2014-18. The corresponding number of deals is, of course, much larger as well.

Turkey and Brazil come in behind the US but ahead of Canada, having spent $12.5b and $5.7b, respectively, in that same period. When looking at the number of deals, though, it's important to note that the Turkish incentive dollars were awarded to only six companies. Brazil distributed its incentive funds to only 83 companies.

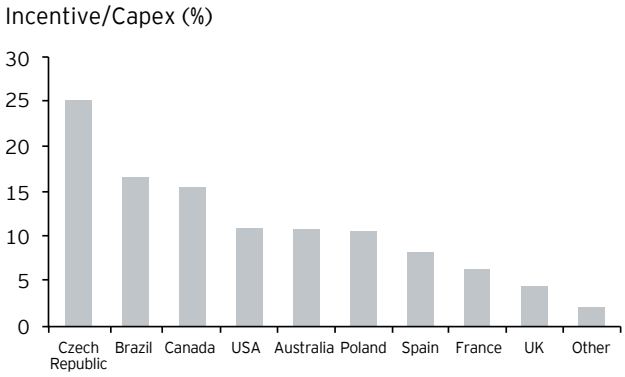
Table 7: Incentive deals by country (2014-18)

Destination country	Incentives	Avg incentive	Deals sample
US	$68.5b	$3.7m	18,408
Turkey	$12.5b	$2.1b	6
Brazil	$5.7b	$68.2m	83
Canada	$5.2b	$3.9m	1,307
Czech Republic	$2.8b	$6.8m	406
India	$2.1b	$686.3m	3
Italy	$1.9b	$7.3m	265
Hungary	$1.8b	$6.5m	271
China	$1.7b	$16.1m	105
UK	$1.6b	$0.9m	1,745

Source: Wavteq, 2019.

Although Canada ranks fourth in the world in terms of incentives and third in the number of deals, it's more important to use a normalized figure such as the average amount of incentive awarded per dollar of capital expenditure incurred by the receiving company (as in Figure 2). Comparing the top 10 countries in terms of incentives awarded, we see that that ratio of incentive to capital expenditure ranges from 9.3% to 25%. Canada ranks 3rd in the world (behind the Czech Republic and Brazil) with 14.7%, well above the average.

Figure 2: Incentives/capex percentage by country (2014-18)



Source: Wavteq, 2019.

Q6 How effective are incentives?

In 2011, the report *Innovation Canada: A Call to Action* (aka the Jenkins report)[5] stated: "The total benefit of any given [incentive] program should be greater than the cost of funding, administering and complying with the program. Support programs should reduce the subsidy amount provided – or move to a repayable basis – the closer the activity being supported is to market, and therefore the more likely it is that the recipient firm will capture most of the benefit for itself."

The question is how is that benefit measured?

For incentive programs that reward job creation or the establishment of consortia with government or academia, the number of jobs created or the number of alliances established can be easily quantified.

As noted in the Jenkins report, programs with the goal of increasing job opportunities, increasing partnerships and collaboration, establishing networks to retain researchers in Canada or advancing the commercialization of new products and processes can be quantified. Each in their own way can contribute to increasing the ability of companies to be competitive by offering products and services more effectively and efficiently. The cost to administer each program can also be determined.

What has been more difficult to determine are some metrics, such as companies' increased ability to compete in international markets and the impact on company revenues, among others. It would be useful on a national scale if we could better measure things like the impact of the spending on Canada's export market or whether the incentive was more effective in certain sectors compared to others.

However, this presents a significant challenge to governments because there are no clear methods to evaluate an incentive's performance and determine if it actually had the impact for which it was designed. Demonstrating the definite link between the results and the incentive is, as Andrei Sulzenko writes, "a heroic exercise."[6]

As stated in the Jenkins report "adequate tools do not exist to comparatively assess relative program effectiveness. Therefore, the evidence base is lacking for a regular and systematic reallocation of resources among programs to achieve the most cost-effective support for business innovation."

The Jenkins report also concluded that "... the linkage to such ultimately desired outcomes is usually indirect and long term. In the end, the linkage must be assessed based on a combination of econometric analysis, anecdote, accumulated experience and intuitive plausibility."

To truly evaluate the effectiveness of incentives, a holistic approach to the analysis is ideal and can more readily be achieved if measurable outcomes are identified at the outset.

[5] Government of Canada, *Innovation Canada: A Call to Action, Review of Federal Support to Research and Development – Expert Panel Report*. Ottawa: Industry Canada. 2011.

[6] Andrei Sulzenko, *Canada's Innovation Conundrum: Five Years after the Jenkins Report*, Institute for Research on Public Policy, Montréal, 2016.

Q7 Future – what can we expect?

The sheer number of programs makes navigating the landscape a daunting task. Several programs may actually intend to incentivize the same behaviour. Knowing where to focus efforts for obtaining incentives can be difficult.

We have seen recent attempts to create a coordinated approach at the federal level through the development of the six economic strategy tables.[7] These tables represent the six sectors that the federal government believes have the greatest potential for growth — agri-food, resources of the future, health and biosciences, clean technology, digital industries and advanced manufacturing.

These strategy tables have been tasked with creating long-term, sector-specific action plans aimed at meeting economic growth targets for 2025. These action plans include:

- An approach to identify sector strengths, overcome obstacles, and improve competitiveness and growth
- The development of business-led solutions, policy recommendations and public-private partnerships based on short-, medium- and long-term actionable areas
- Emphasis on the inclusion of underrepresented groups such as Indigenous Peoples, women, Canadians with disabilities and older workers
- A mechanism to champion and monitor sector growth strategies and results

This increased attempt to focus incentives and work together to achieve common targets that involve provinces and municipalities will make it easier for companies to maneuver through the incentives landscape and increase the chances of meeting the growth targets and overall competitiveness on a national scale. However, evaluations based on results are even more important than analyses based on projections, so ensuring that the necessary data are collected and available, and that the appropriate evaluation methods exist, are key factors in being able to truly evaluate the effectiveness of an incentives strategy.

[7] ic.gc.ca/eic/site/098.nsf/eng/home.

Summary

Comprehensive data on discretionary incentive programs are difficult to obtain given the sheer number of programs (82 over the last five years) that are developed and administered by various levels of government in different geographical regions.

Although not all encompassing, the Wavteq database has shown us that levels of discretionary funding in Canada have varied over the last five years, with greatest amount going to the basic materials sector. The highest amount of discretionary funds were awarded in Ontario and Québec.

From a global perspective, we see that Canada ranks fourth in the world in terms of total discretionary incentive dollars and third in the world when looking at the ratio of incentive dollars awarded to recipients' capital expenditure outlay.

However, the lack of good models to truly evaluate the effectiveness of these programs remains a challenge. Incentive program strategies that identify specific economic and/or socio-economic objectives and employ specific methodologies for measuring effectiveness will improve our ability to truly assess the value of incentive programs in Canada.

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