



THE ECONOMIC IMPACT OF THE CULTIVATED B.

A REPORT FOR TORONTO GLOBAL

AUGUST 2023



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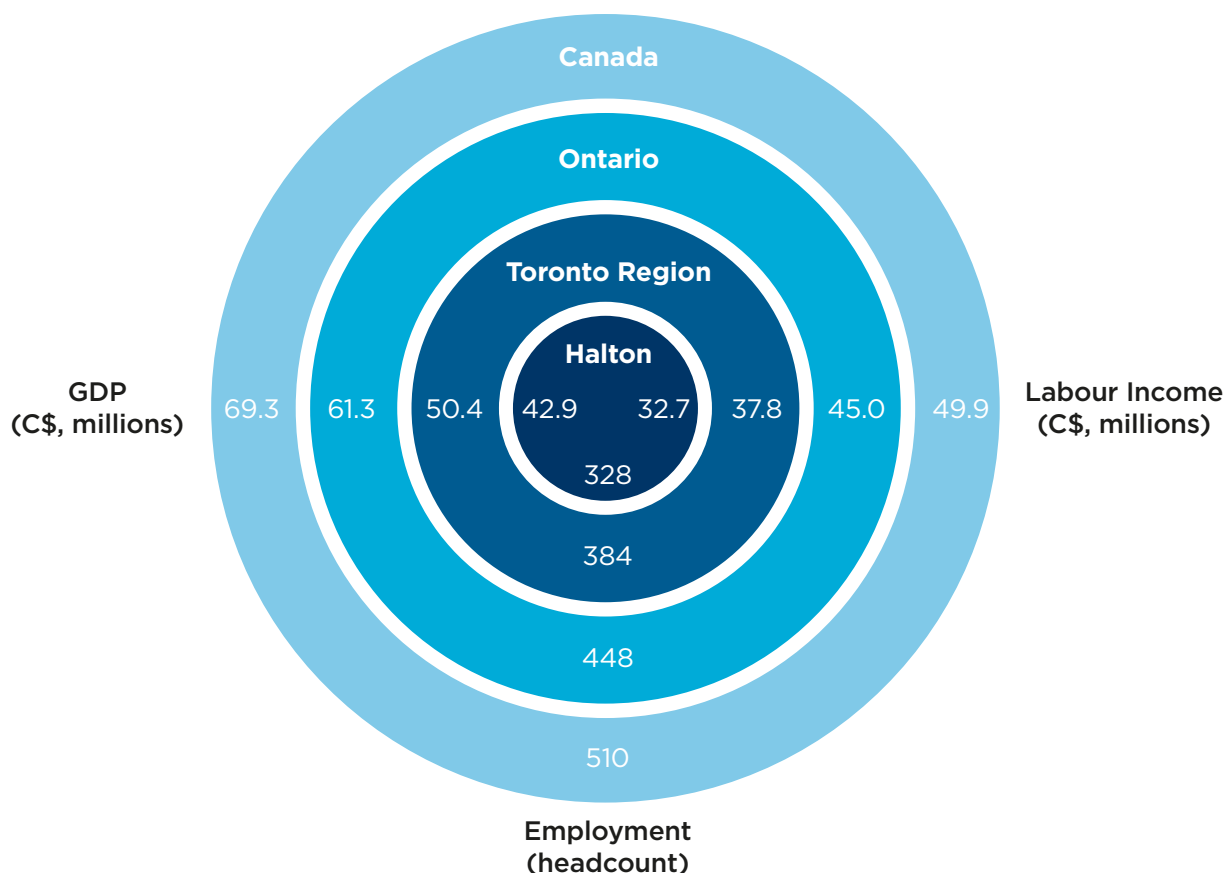
EXECUTIVE SUMMARY

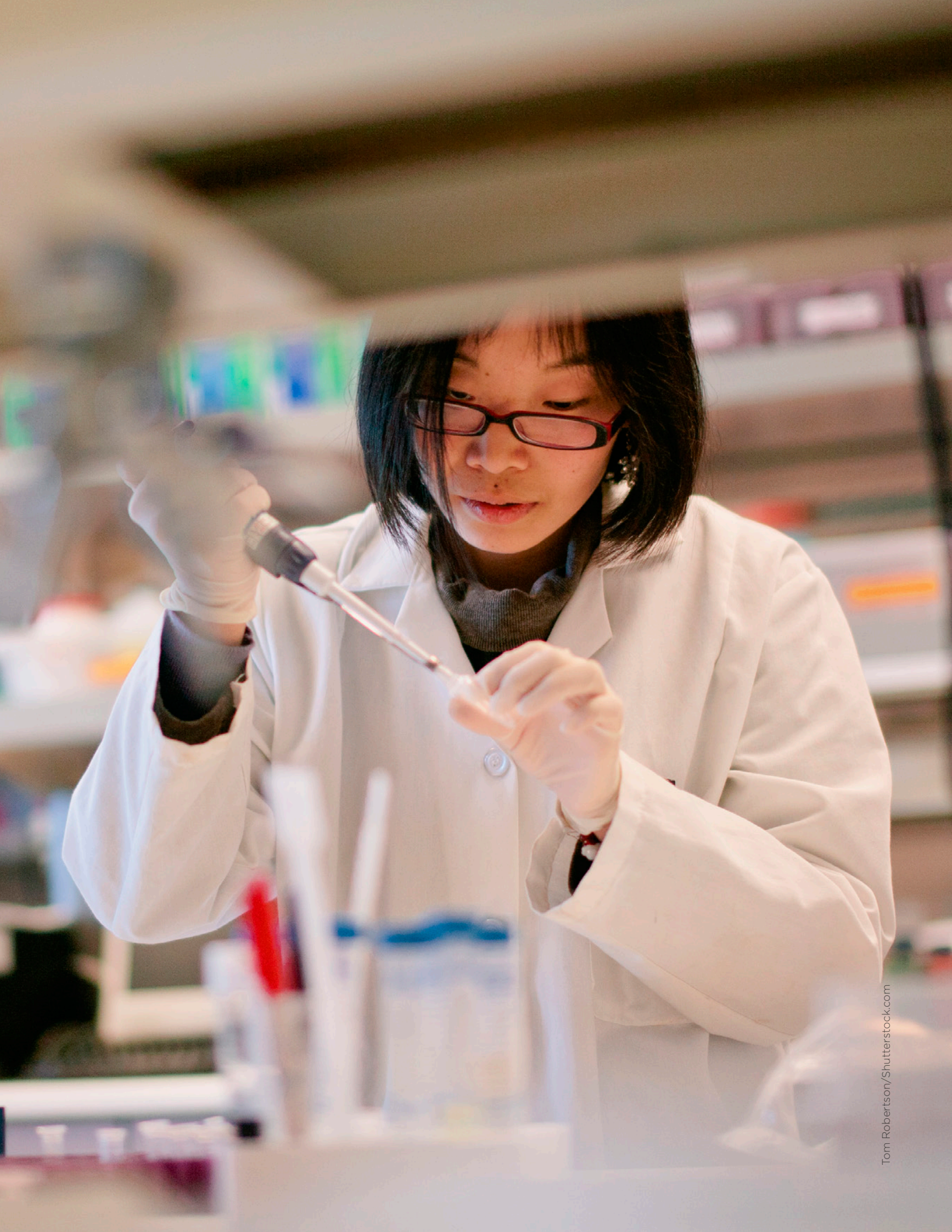
Oxford Economics was commissioned by Toronto Global's SCORE Program to assess the estimated 2023 economic impacts of The Cultivated B's (TCB) first Canadian facility located in Burlington, Ontario, in the Regional Municipality of Halton (also referred to as Halton Region). This Oxford Economics study includes the impacts of TCB's investment and forecasted employment of 200 workers at the facility in the Regional Municipality of Halton, the Toronto Region, Ontario, and Canada.

The total estimated economic impacts at all four geographic levels are summarized in the diagram below.¹

The Cultivated B's activities in the Halton region impacts all geographies. Most notably, the company's activities are expected to contribute C\$69.3 million towards GDP, support 510 jobs with C\$49.9 million in labour income, and generate C\$33.5 million in tax revenues across Canada.

The Cultivated B's stated goal is to unlock the potential of biotechnology and to transform the food/beverage industry by converging technologies. The ambition of the partner organizations behind the investment is that it will pave the way for future innovation in the food and pharmaceutical industries and help to boost Ontario's position as a leader in biotechnology. This means that as well as the estimated benefits to all geographies in 2023, the impacts of the companies that will be attracted to the Toronto Region will both enhance the existing business infrastructure but also ripple across its sectors and wider geographies.





1. INTRODUCTION

The Toronto Region is Canada's business and financial capital. With robust recent economic growth, and a strong diversified base of economic activity, the region provides opportunities for expanding companies to tap into a diverse and innovative workforce, operate in a competitive business landscape, and serve as a gateway to further opportunities across Canada and North America.

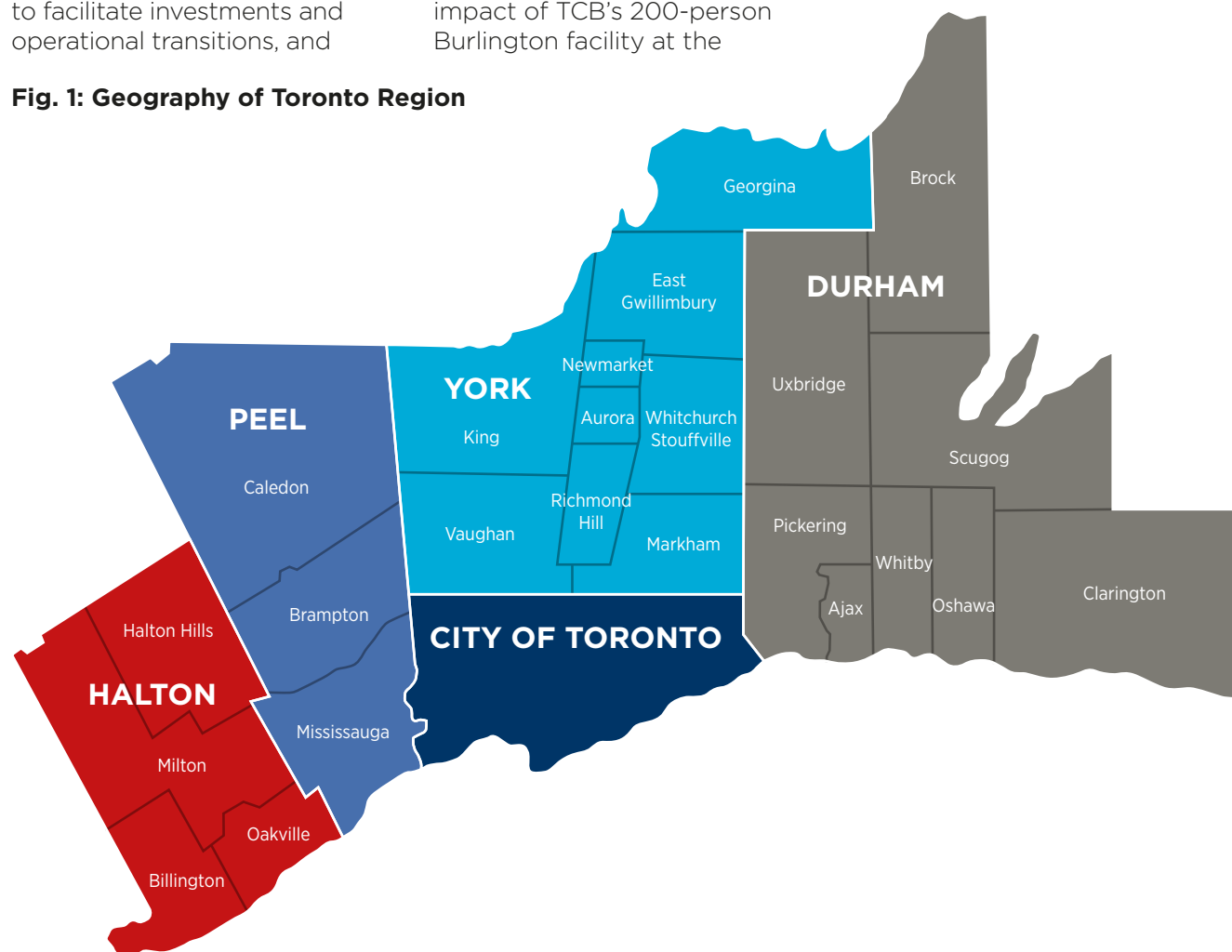
Toronto Global works with companies looking to expand their footprint into the Toronto Region, providing services to facilitate investments and operational transitions, and

connections to regional and national resources. The **Supply Chain Onshoring, Resilience, and Expansion (SCORE)** program is an initiative funded by FedDev Ontario and executed by Toronto Global to help better understand the impact of the supply chain gaps, risks, and opportunities caused by global disruption from an economic development perspective.²

Oxford Economics was commissioned by Toronto Global's SCORE Program to estimate the full economic impact of TCB's 200-person Burlington facility at the

municipal (Regional Municipality of Halton), regional (Toronto Region), provincial (Ontario), and national levels. The Toronto Region is made up of five municipalities, see Fig. 1 below. The Regional Municipality of Halton resides on the west side of the region and the City of Burlington is located within the Regional Municipality of Halton. Toronto Global represents the entire region and works with economic development partners across the region to help secure investments in their jurisdictions.

Fig. 1: Geography of Toronto Region



One of Toronto Global's clients is **The Cultivated B. (TCB)**, a bioengineering company based in Heidelberg, Germany, and expanding its reach globally. TCB leverages cellular agriculture as it aims to enable the production of and enhance access to alternative protein sources.³

In 2022, The Cultivated B. opened its first Canadian location in Burlington, Ontario, a city within Halton Region. Toronto Global supported The Cultivated B. in identifying and selecting Burlington, Ontario from a number of jurisdictions as its first Canadian location in 2022. Toronto Global led a coordinated effort, along side its economic development partners, Invest in Canada, Halton Region, and the City of Burlington Economic Development to secure this investment. The Cultivated B's new facility is expected to directly employ approximately 200 well-paid workers at the facility itself, which will produce bioreactors and other high-precision devices for cellular agriculture and precision fermentation.

While there has been significant research and innovation done in the synthetic biology and cellular agriculture space in the Toronto Region, lack of infrastructure has driven companies to expand their operations south of the Canadian border. TCB's investment in the Toronto Region allows these companies to keep their operations in Canada as they scale up their businesses. As traditional pharmaceutical, cosmetics, and food companies including TCB process Canadian raw materials in-house without relying on selling these materials to other countries, dependence on other countries declines. Specific to TCB, maintaining the bioreactor production line locally allows the company to avoid overreliance on global leaders such as China. The broader effects of this investment is expected to far exceed the economic impact numbers highlighted in this report. Ontario's Minister of Economic Development, Vic Fedeli, lauded the plant's potential to "pave the way for future innovation in the food and pharmaceutical industries... help[ing] to secure Ontario's position as a leader in biotechnology".⁴

As described in the box in chapter 3, the economic impact analysis in this report includes the activity at the facility itself (the direct impact), along with the full supply chain (indirect) impact, and the economic activity supported by the spending of direct and indirect workers (induced impact). Impacts are measured in terms of GDP, labour income, employment, and taxes generated.

The remainder of this report is organized as follows:

- Chapter 2 describes the modelling inputs around TCB's direct activity and **TCB's supply chain spending**.
- Chapter 3 presents the **economic impact results** by geography:
 - 3.1 presents results for the municipality (**Halton Region**)
 - 3.2 presents results for the region (**Toronto Region**)
 - 3.3 presents results for the province (**Ontario**)
 - 3.4 presents results for **Canada**.
- Chapter 4 concludes.
- The Appendix provides additional technical details.

³<https://www.thecultivatedb.com/about-us/>

⁴<https://www.areadevelopment.com/newsitems/10-31-2022/the-cultivated-b-burlington-ontario-canada.shtml>





2. THE CULTIVATED B'S SUPPLY CHAIN

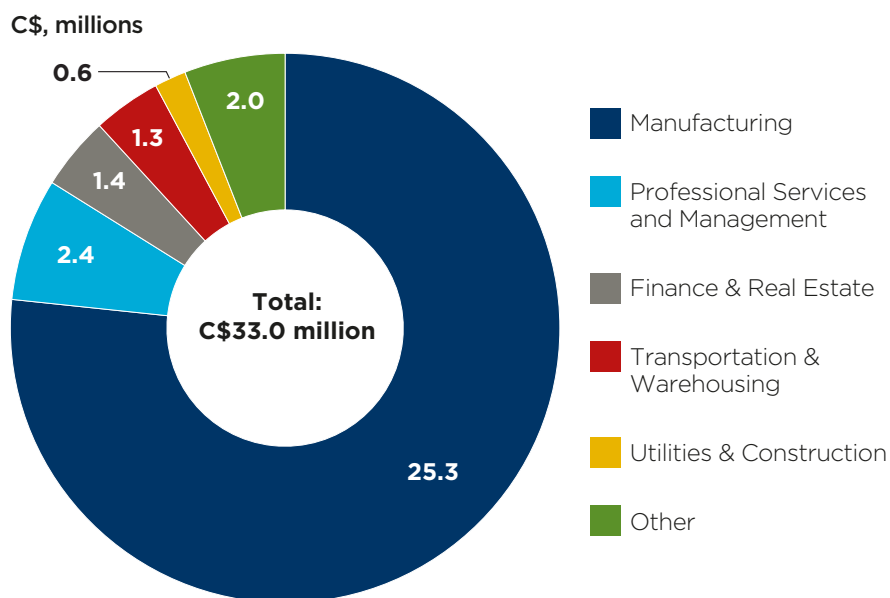
TCB's new Burlington facility is expected to employ 200 workers and engage in advanced manufacturing and R&D related to plant-based and cell-based alternative protein sources.

For this analysis, Oxford Economics profiled the economic activity taking place at TCB's Burlington facility using industry-level macroeconomic data. According to TCB, of the 200 workers expected to be employed at its Burlington location, 125 are expected to work in industrial machinery manufacturing and another 75 in scientific research and development (R&D). The economic impacts presented below are thus calculated as the sum of the 125 workers worth of output in the Industrial Machinery Manufacturing industry (North American Industrial Classification System—NAICS code 3332) and 75 workers in the Scientific R&D Services (NAICS 5417) based on industry profiles for Ontario from Statistics Canada.⁵ No additional assumptions particular to the Burlington facility were made other than its employment and industry designations.

Based on these assumptions, we estimate the facility's supply chain spending to total approximately C\$33.0 million (Fig. 2). This supply chain spending includes the broad array of goods and services that the facility purchases as inputs to its production.

The majority of this supply chain spending at over 75% went to the outputs of the manufacturing industry (over C\$25 million).⁶

Fig. 2: Estimated total global procurement spend, 2023⁷



Source: Oxford Economics

⁵ See <https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1181553> and the Appendix for additional details. Note that it is a basic tenet of NAICS that each establishment (i.e. physical location of economic activity) is assigned a single official industry classification based on its primary economic activity. However, for the purpose of estimating the economic impacts of the Burlington facility, we use a mix of industries to better reflect the mix of economic activity taking place.

⁶ The largest category of spending within the Manufacturing sector was in Machinery Manufacturing (C\$12.1 million), followed by Fabricated Metal Product Manufacturing (C\$3.7 million), and Computer and Electronic Product Manufacturing (C\$3.2 million).

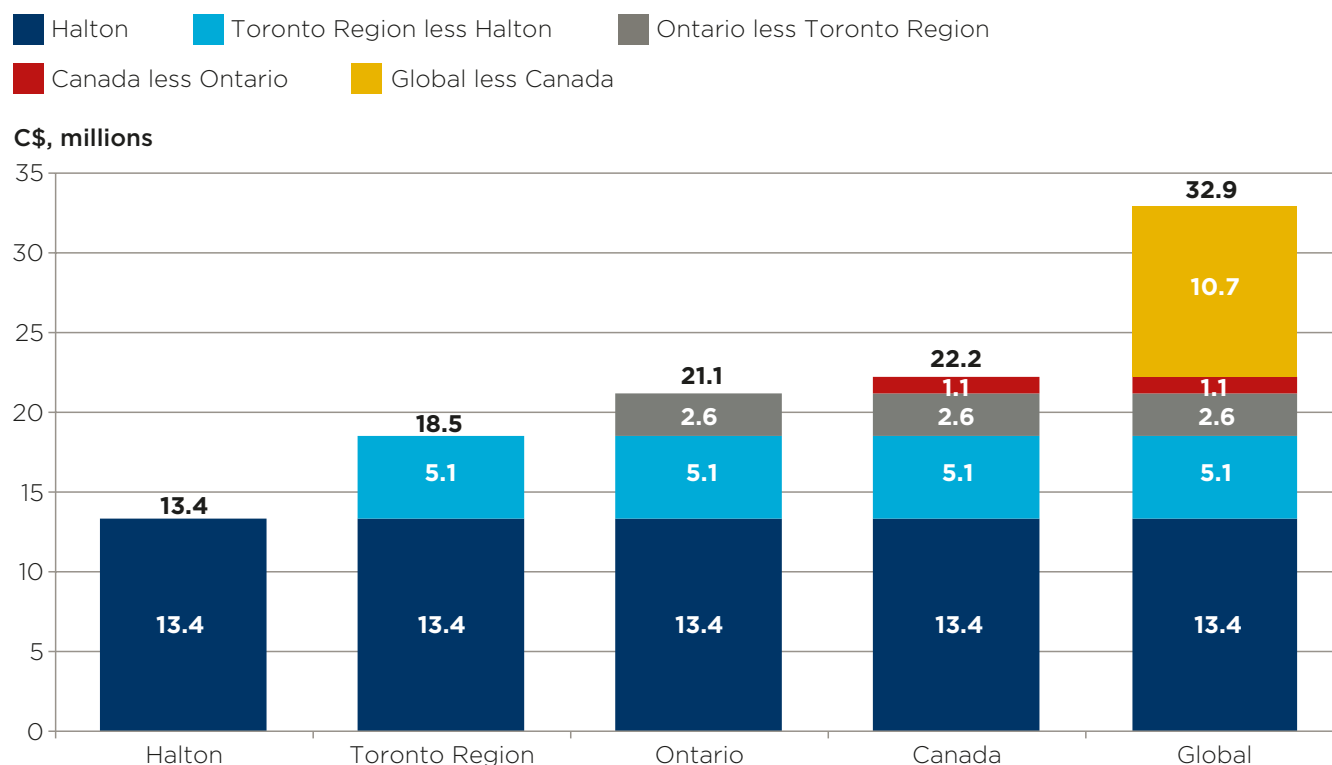
⁷ These values are in purchaser prices rather than producer prices and include relevant taxes paid on products. Thus, for example, trade and transport margins on manufactured goods are included here under manufacturing. See the Appendix for more details.

In order to calculate the economic impacts of The Cultivated B.'s activities specifically within the Regional Municipality of Halton, Toronto Region, and Ontario, it is necessary to apportion TCB's supply chain spending by these geographies as well. Fig. 3 shows the breakout of the total supply chain spending of C\$33.0 million. The total spending is based on the spending data in the 2019 Ontario Input-Output table provided by Statistics Canada, portioned out by employment in the Industrial Machinery Manufacturing industry and the Scientific R&D Services industry, and adjusted to reflect 2023 dollars.

Of the C\$33.0 million in total global supply chain spending for TCB's Burlington facility, we estimate that approximately 41% of this (C\$13.4 million) will be spent on goods and services produced within Halton, approximately 56% (C\$18.5 million) on goods and services produced in the Toronto Region, approximately 64% (C\$21.1 million) on goods and services produced in Ontario, and 67% (C\$22.3 million) on goods and services produced across all of Canada.

The intermediate input spending that is spent locally within each region is based on the relevant import shares in the IO table for each region. The regional spending is derived from the underlying Ontario IO model and leverages techniques originally pioneered by Flegg et. al. (1995)⁸ among others (see Appendix for further information).

Fig. 3: Estimated supply chain spending by region



Source: Oxford Economics

⁸ A. T. Flegg, C. D. Webber & M. V. Elliott (1995) On the Appropriate Use of Location Quotients in Generating Regional Input-Output Tables, *Regional Studies*, 29:6, 547-561





3. ECONOMIC IMPACT RESULTS

This chapter presents the estimated economic impacts of The Cultivated B. in the Regional Municipality of Halton (section 3.1), the Toronto Region (3.2), Ontario (3.3), and Canada (3.4). The impacts presented in this chapter are measured in terms of GDP, labour income, employment, and tax revenues supported by TCB, and the total impacts are broken out by direct, indirect, and induced channels where possible. These concepts are explained in further detail in the box on the following page.

The **direct impacts** are identical across all four geographic regions as they represent the economic activity taking place at the TCB facility itself.

By contrast, the **indirect impacts**, which represent the economic activity of TCB's full supply chain, and the **induced impacts**, which represent the economic activity supported by the spending of direct and indirect workers out of wages, vary by geographic region.

Larger regions will have larger indirect and induced impacts than the smaller regions they contain because the impacts in the larger region include all of the activity in the smaller region plus additional indirect and induced activity in the remainder of the larger region. With some caveats, the difference between the economic impacts in the larger region and those in the smaller region are close to, and can be thought of as, the impacts in the remainder of the larger region—for example, the difference between TCB's impacts (whether measured in GDP, labour income, employment, or taxes) in the Toronto Region and its impact in Ontario can be considered as the impact in Ontario outside the Toronto Region.⁹

In addition to the GDP, labour income, and employment impact, each of the four regional subsections below presents TCB's **tax impact**. These tax impacts include taxes supported by the direct, indirect, and induced economic activity, and include federal, provincial, and municipal taxes. The total tax impacts are broken out within each region by tax type: corporate taxes, taxes on products, income taxes, and municipal taxes.

Taxes on products are based on tax data that is integrated into the Statistics Canada IO data that underly the impact modeling. Corporate taxes, and income and social insurance taxes, are calculated by applying effective tax rates from Statistics Canada data to the capital income and labour income, respectively, from the impact results. Municipal tax estimates are based on Statistics Canada data on the ratio of municipal property tax receipts to GDP for the province of Ontario (except for the national results, where a Canada-wide ratio is used for the portion outside Ontario). This ratio is applied to the GDP impact results from each of the regional models to estimate municipal tax receipts in that region.

⁹ The caveat with this oversimplification is that the IO model used to calculate impacts in the smaller region will not capture supply chain spending that leaves the region before returning. For example, if TCB purchases inputs from a supplier outside the Toronto Region but in Ontario, and that supplier purchases inputs from a supplier inside the Toronto Region, the impact of the economic activity at this second-tier supplier will be captured as part of TCB's indirect impact in the Ontario model but will be lost in the Toronto Region model, even though it does take place in the Toronto Region. However, these effects are small in magnitude.

AN INTRODUCTION TO ECONOMIC IMPACT METHODOLOGY

An input-output model follows the flow of spending through the economy. The model captures and quantifies the estimated impact of the economic activity of The Cultivated B.'s operations on supply chains, wage-induced spending, economic leakages, and taxes paid to federal, provincial, and local governments.

The economic impacts of TCB are measured through three channels:

- **Direct impact:** economic activity at The Cultivated B. itself.
- **Indirect impact:** economic activity along TCB's full supply chain.
- **Induced Impact:** economic activity resulting from direct and indirect workers spending their wages in the broader economy.
- **Total impact:** the sum of direct, indirect, and induced impacts.

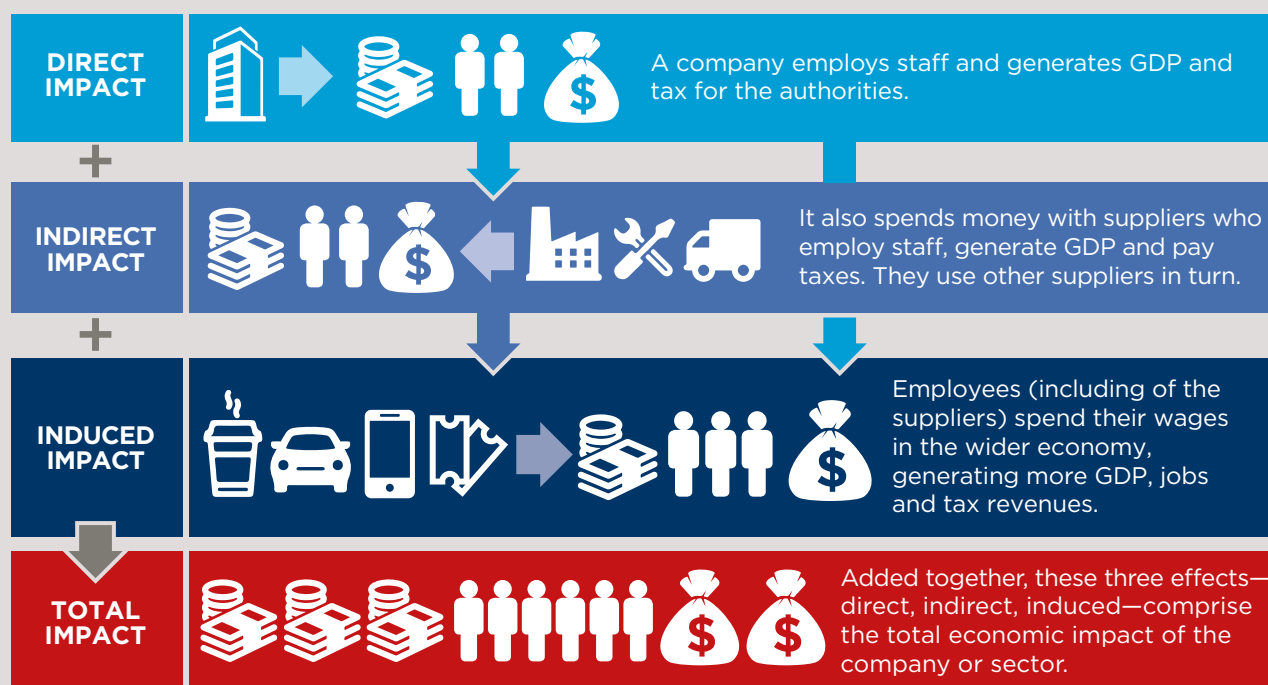
Oxford Economics' model captures the inter-industry relationships, wage-induced spending, and ripple effects that result from the economic activity of TCB.

The economic impact is measured in terms of:

- **GDP:** value-added economic activity.
- **Labour Income:** total compensation (including the cost benefits) of workers.
- **Employment:** total jobs, measured on a headcount basis, including both wage and salary workers and the self-employed.
- **Taxes:** total taxes generated by the direct, indirect, and induced economic activity.

Throughout, all results are for 2023 with monetary results expressed in 2023 Canadian dollars, abbreviated C\$, unless otherwise specified.

Channels of impact



3.1 REGIONAL MUNICIPALITY OF HALTON (HALTON REGION)

The Cultivated B.'s first Canadian facility is located in the City of Burlington, Ontario, within the **Halton Region**. The economic impacts on this region are presented in Fig. 4.

GDP impacts

In 2023, activities at the TCB Burlington facility are expected to contribute C\$27.5 million in GDP to Halton's economy. Supply chain spending (indirect impact) is estimated to support another C\$6.5 million contribution to the municipality's GDP while wage

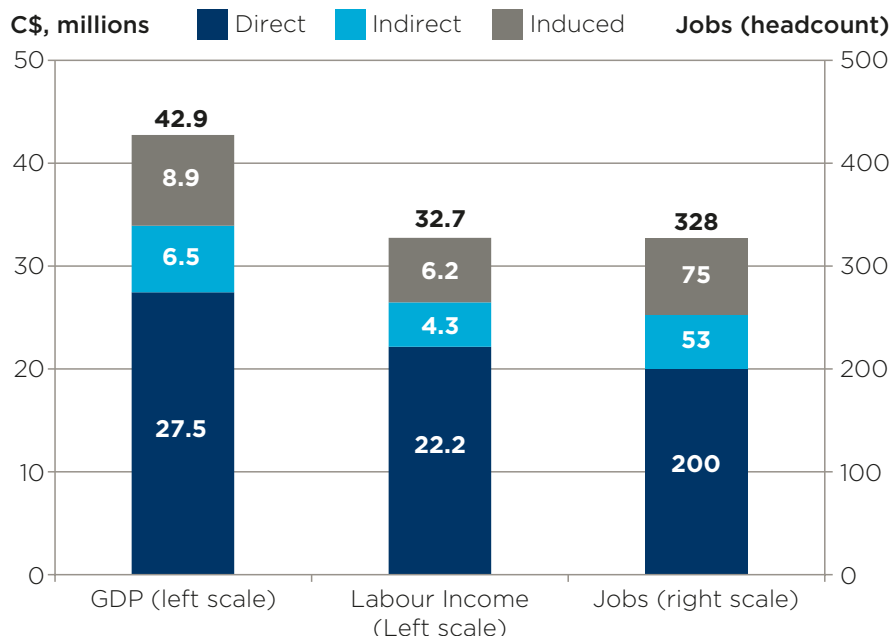
induced spending (induced impact) is estimated to support a C\$8.9 million contribution. In total, this amounts to a C\$42.9 million estimated contribution to Halton's GDP.

Labour income and employment impacts

In 2023, 200 workers are to be employed at TCB's Burlington facility, making up the direct employment impact. They are expected to receive approximately C\$22.2 million in labour income. The activities across the company's

supply chain (indirect impact) are estimated to support another 53 workers receiving approximately C\$4.3 million in labour income. The wage induced spending of the direct and indirect workers makes up the induced impact, which would support another 75 workers and C\$6.2 million in labour income. In total, the activities at the facility, across its supply chain, and the wages of those employed at both are expected to support 328 workers receiving C\$32.7 million in labour income.

Fig. 4: Halton economic impacts of TCB's Burlington facility, 2023

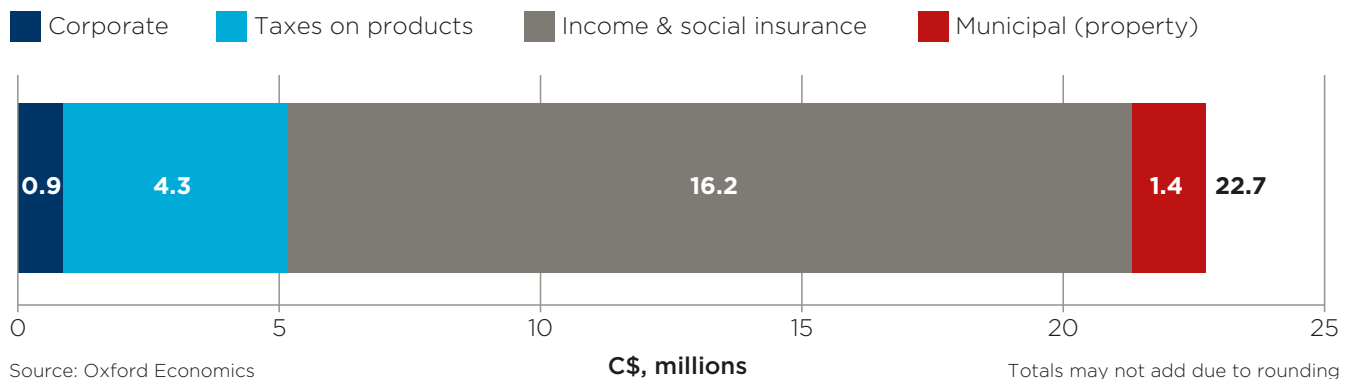


Tax Impacts

The Cultivated B.'s activities are expected to produce C\$22.7 million in tax revenues in the Halton Region. Out of this total tax impact, approximately C\$0.9 million is estimated to go towards corporate taxes, C\$4.3 million towards taxes on products, C\$16.2 million towards income taxes and

social insurance, and C\$1.4 million towards municipal taxes. These tax impacts are calculated based on effective tax rates derived from Statistics Canada data and applied to the above economic impact results—see tax impact notes at the start of chapter 3.

Fig. 5: Halton tax impacts of TCB's Burlington facility, 2023



3.2 TORONTO REGION IMPACTS

The Halton Region, where The Cultivated B. facility is located, is part of the broader **Toronto Region**. As described in the Introduction, the Toronto Region is made up of the following municipalities: Durham, Halton, Peel, York, and the City of Toronto. The economic impacts on this region are presented in Fig. 6.

GDP impacts

In 2023, activities at the TCB Burlington facility are expected to contribute C\$27.5 million in GDP to the Toronto Region's economy. The indirect impact (supply chain activities) is expected to support another C\$11.3 million contribution to Toronto Region's GDP.

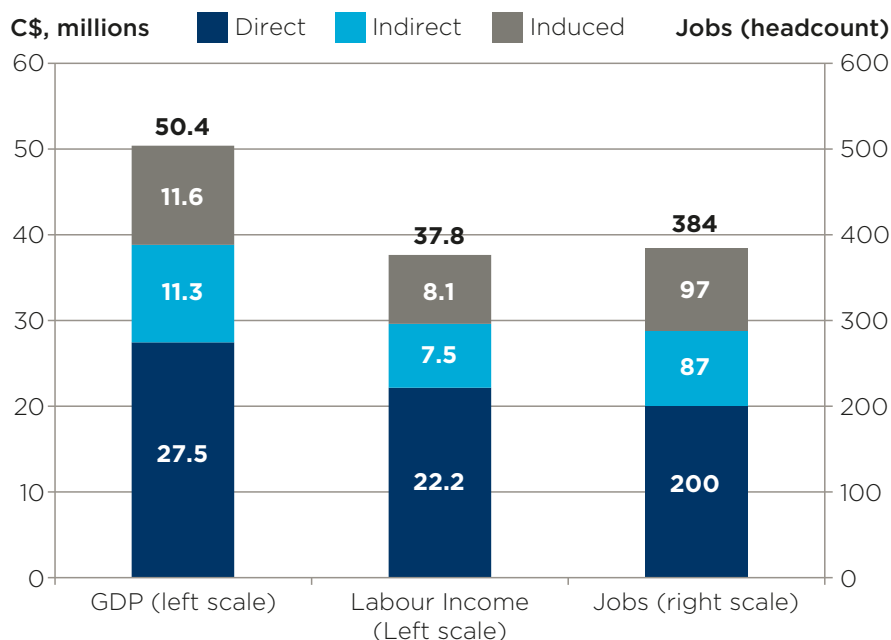
Meanwhile, wage induced spending (induced impact) is estimated to support a C\$11.6 million contribution to the Toronto Region. In total, this amounts to a C\$50.4 million estimated contribution to the region's GDP. The difference in GDP impact between the Toronto Region and Halton represents the impact of the activity that occurs within the Toronto Region outside of Halton, with a minor caveat (refer to footnote 9).

Labour income and employment impacts

In 2023, 200 workers will be hired at TCB's Burlington facility, making up the direct employment impact. They

are expected to receive approximately C\$22.2 million in labour income. The activities across the company's supply chain (indirect impact) are estimated to support another 87 workers across the Toronto Region receiving approximately C\$7.5 million in labour income. The wage induced spending of the direct and indirect workers makes up the induced impact, which would support another 97 workers and C\$8.1 million in labour income across the Toronto Region. In total, the activities at the facility, across its supply chain, and the wages of those employed at both are expected to support 384 workers across the Toronto Region receiving C\$37.8 million in labour income.

Fig. 6: Toronto Region economic impacts of TCB's Burlington facility, 2023



Source: Oxford Economics

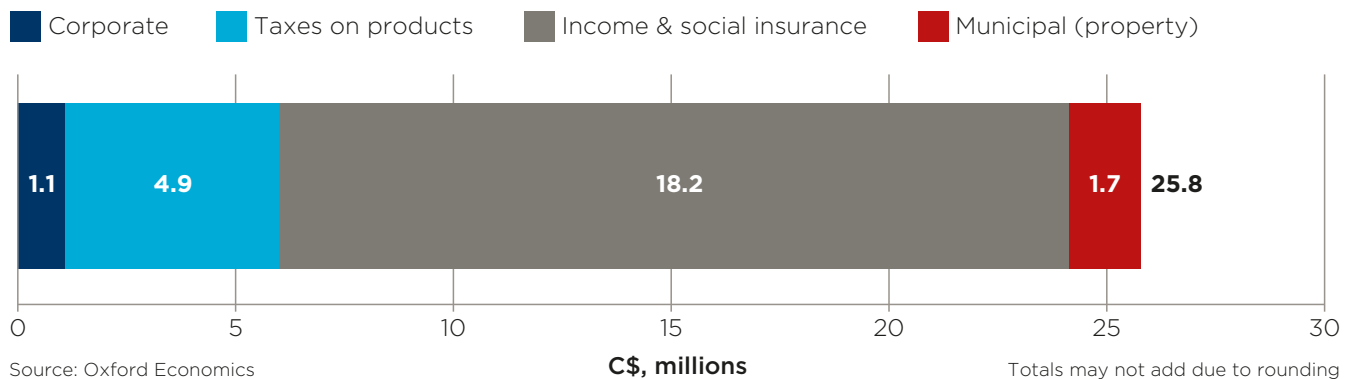
Totals may not add due to rounding

Tax Impacts

The Cultivated B's activities are expected to generate a total of C\$25.8 million in tax revenue in the Toronto Region. Out of this total amount, C\$1.1 million is estimated in corporate taxes, C\$4.9 million is expected in taxes on productions, C\$18.2 million is estimated in income taxes and social insurance, and C\$1.7 million is estimated in municipal taxes. The difference between these municipal

taxes of C\$1.7 million and the aforementioned C\$1.4 million in taxes at the Halton Region consist of the additional municipal taxes collected by other municipalities within the Toronto region. The municipal tax impacts are calculated based on effective tax rates derived from Statistics Canada data and applied to the above economic impact results—see tax impact notes at the start of chapter 3.

Fig. 7: Toronto Region tax impacts of TCB's Burlington facility, 2023



3.3 ONTARIO PROVINCIAL IMPACTS

Fig. 8 presents the estimated economic impact results for TCB's Burlington facility for the province of **Ontario**.

GDP impacts

In 2023, activities at the TCB Burlington facility are expected to contribute C\$27.5 million in GDP to Ontario's economy. The indirect impact (supply chain activities) is expected to support another C\$14.1 million contribution to the province's GDP. Meanwhile, wage induced spending (induced impact) is estimated to support a C\$19.7 million contribution to Ontario. In total, this amounts

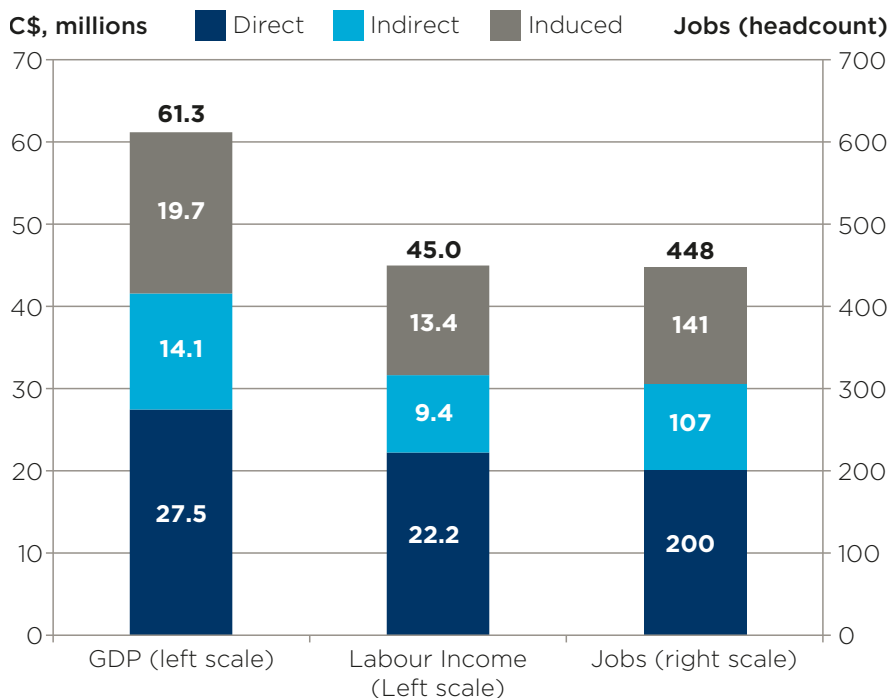
to a C\$61.3 million estimated contribution to the province's GDP. The difference in GDP impact between Ontario and the Toronto Region represents the impact of the activity that occurs within Ontario outside of the Toronto Region, with a minor caveat (refer to footnote 9).

Labour income and employment impacts

In 2023, 200 workers are expected to be employed at TCB's Burlington facility, making up the direct employment impact. They are expected to receive approximately C\$22.2 million in labour income. The

activities across the company's supply chain (indirect impact) are estimated to support another 107 workers across Ontario receiving approximately C\$9.4 million in labour income. The wage induced spending of the direct and indirect workers makes up the induced impact, which would support another 141 workers and C\$13.4 million in labour income across the province. In total, the activities at the facility, across its supply chain, and the wages of those employed at both are expected to support 448 workers across Ontario receiving C\$45.0 million in labour income.

Fig. 8: Ontario economic impacts of TCB's Burlington facility, 2023

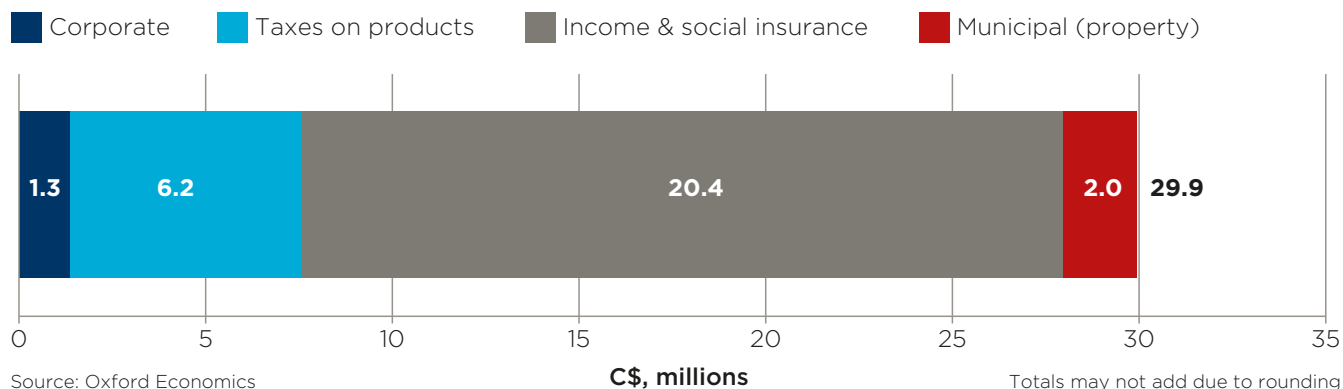


Tax Impacts

The total tax impact of TCB's Canadian operations is estimated to result in C\$29.9 million in revenues in Ontario out of which C\$1.3 million are estimated to be corporate taxes, C\$6.2 million are estimated towards taxes on products, C\$20.4 million are expected to go towards income

taxes and social insurance, and C\$2.0 million are estimated to be municipal taxes. These tax impacts are calculated based on effective tax rates derived from Statistics Canada data and applied to the above economic impact results—see tax impact notes at the start of chapter 3.

Fig. 9: Ontario tax impacts of TCB's Burlington facility, 2023



3.4 NATIONAL IMPACTS

This chapter presents the economic impacts of TCB's Burlington facility for Canada.

GDP impacts

In 2023, activities at the TCB Burlington facility are expected to contribute C\$27.5 million in GDP to the Canadian economy. Supply chain spending (indirect impact) is estimated to support another C\$17.3 million contribution to the country's GDP while wage induced spending (induced impact) is estimated to support a C\$24.5 million contribution. In total, this amounts to a C\$69.3 million

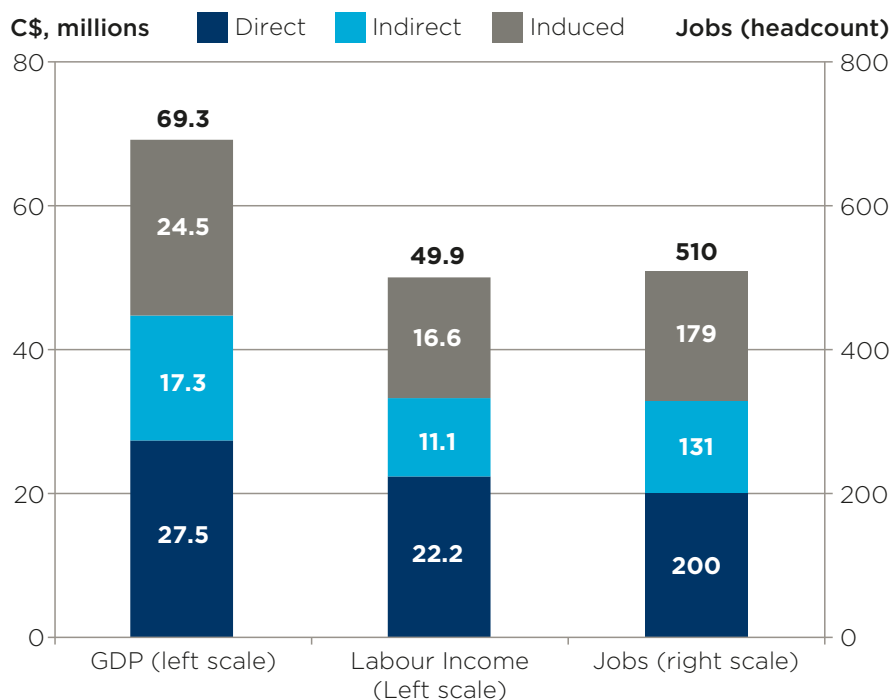
estimated contribution to Canada's GDP. The difference in GDP impact between Canada and Ontario represents the impact of the activity that occurs within Canada outside of Ontario, with a minor caveat (refer to footnote 9).

Labour income and employment impacts

In 2023, 200 workers are to be employed at TCB's Burlington facility, making up the direct employment impact. They are expected to receive approximately C\$22.2 million in labour income. The activities

across the company's supply chain (indirect impact) are estimated to support another 131 workers across the country receiving approximately C\$11.1 million in labour income. The wage induced spending of the direct and indirect workers makes up the induced impact, which would support another 179 workers across Canada and C\$16.6 million in labour income. In total, the activities at the facility, across its supply chain, and the wages of those employed at both are expected to support 510 workers across Canada receiving C\$49.9 million in labour income.

Fig. 10: National economic impacts of TCB's Burlington facility, 2023



Source: Oxford Economics

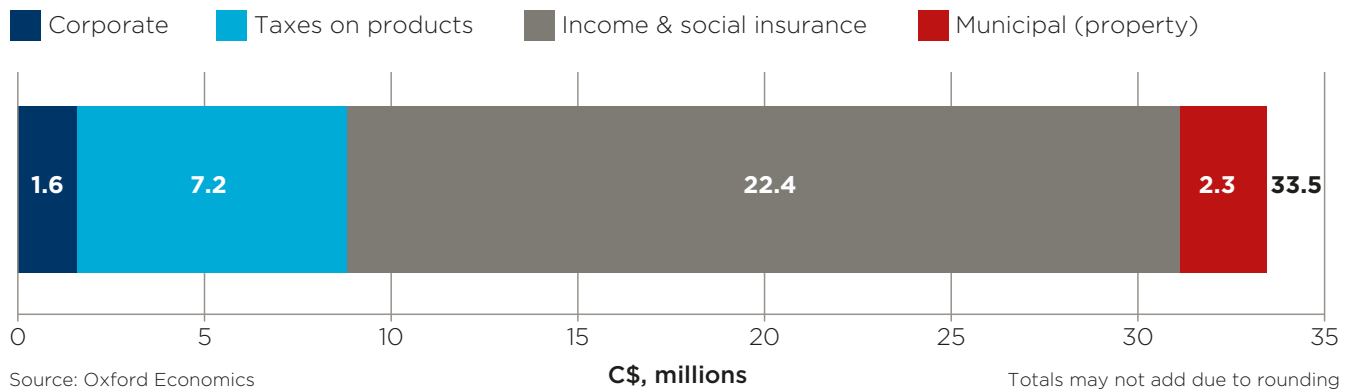
Totals may not add due to rounding

Tax Impacts

TCB's activities in the Burlington, Ontario, facility are expected to result in a total of C\$33.5 million in tax revenues across the country with C\$1.6 million in corporate taxes, C\$7.2 million in taxes on products, C\$22.4 million towards income tax and social insurance, and C\$2.3 towards municipal taxes.

These tax impacts are calculated based on effective tax rates derived from Statistics Canada data and applied to the above economic impact results—see tax impact notes at the start of chapter 3.

Fig. 11: National tax impacts of TCB's Burlington facility, 2023







4. CONCLUSION

As one of Canada's largest business hubs, the Toronto Region is home to a vibrant and robust economy, and a diverse and talented workforce. Facilitating the expansion of global organizations into the country, Toronto Global plays an important role in enabling companies to expand their footprint into the Toronto Region, facilitating investments and operational transitions, while connecting companies to regional and national resources. One of Toronto Global's clients is The Cultivated B., a bioengineering company based in Germany and expanding its global reach. Toronto Global and its partners, Invest in Canada, Halton Region, and the City of Burlington Economic Development, have played an integral role in supporting TCB's investment in the City of Burlington, Ontario.

TCB's first Canadian facility in the City of Burlington is located in the Regional Municipality of Halton and brings 200 jobs along with capital investments that multiply into broader impacts for not only the municipality but the Toronto Region, the province of Ontario, and Canada as a whole. Oxford Economics estimates that procurement spending of C\$33.0 million in Canada in 2023 would contribute C\$69.3 million towards GDP, support 510 jobs with C\$49.9 million in labour income, and generate C\$33.5 million in tax revenues nationally. At a more local

level, the activities of TCB are estimated to contribute C\$42.9 million towards GDP, while supporting 328 workers, C\$32.7 in labour income, and C\$22.7 million in tax revenues within the Halton Region.

The investment also offers the potential to stimulate additional impacts over the medium and long term. Foreign direct investment (FDI) brings direct benefits to the host economy through the introduction of new technologies and skills, improved physical and institutional infrastructure, and enhanced competitiveness and productivity. Additionally, the expansion of companies such as TCB contribute to positive spillover effects both within and across industries.

Investment and job creation at the TCB facility is likely to encourage other enterprises in the cellular agriculture and pharmaceutical industry. The TCB facility in the City of Burlington is much more than a manufacturing facility and functions as an innovation hub providing much needed specialized infrastructure for other cellular agriculture and other biotechnology companies. TCB has partnered with Ontario Genomics and the Canadian government to further their shared public policy goals. Together, they are working to enhance resiliency in food supply chains while meeting common food security and sustainability targets.

As Toronto Global continues to support expansion in the regional economy through their work with companies such as TCB, the impacts of the companies they introduce to the Canadian market not only enhance the existing business infrastructure and further innovative development, but also have economic effects that ripple across sectors and geographies.



5. APPENDIX: METHODOLOGY

An overview of economic impact analysis, including a description of the three channels of impact (direct, indirect, and induced) and the measures of impact (GDP, labour income, employment, and taxes) is presented in the box in chapter 3. This methodology appendix presents additional technical notes on sources and methods.

INPUT-OUTPUT MODELING

The total economic impacts of TCB's Burlington facility were calculated using Oxford Economics' proprietary input-output (IO) models for Canada, Ontario, the Toronto Region, and Halton. An IO model shows the spending flows within an economy from "final demand" (i.e., consumer spending, government spending, investment, and exports to the rest of the world); intermediate spending patterns (i.e., what each sector buys from every other sector—the supply chain in other words); how much of that spending stays within the domestic economy; and the distribution of income between employment income and other income (mainly profits). In essence, an IO table shows who buys what from whom in the economy.

The Canadian and Ontario models were constructed based on national and provincial IO data from Statistics Canada. The Toronto Region and Halton models were constructed from the Ontario data using techniques originally pioneered by Flegg et. al. (1995)¹⁰ among others. These techniques allow one to construct an IO table for a region lacking IO data (e.g., Halton) by adjusting an existing table for a larger region that contains it (Ontario) using data on employment by industry for both regions. These employment data were obtained from Statistics Canada.

The IO data from Statistics Canada are from 2019, the most recent available year. They were augmented with spending/saving and employment/productivity patterns for 2023 and adjusted to reflect monetary results in 2023 Canadian dollars. As 2023 data is not yet available via Statistics Canada, we relied on employment and productivity projections from the Oxford Economics North American Cities databank.

MODELING INPUTS

As described in the text, the inputs to the model are based on a 200-employee establishment out of which 125 workers are employed in the Industrial Machinery Manufacturing industry (NAICS 3332) and 75 workers are employed in the Scientific Research and Development Services industry (NAICS 5417). In addition to this direct employment, the inputs to the IO model include the direct labor income accruing to these workers, the direct capital income to TCB, and the intermediate input spending of the facility, which is profiled in Fig. 2. These are all based on the relevant values for the Industrial Machinery Manufacturing and Scientific R&D Services industries in the Ontario IO table, scaled to an employment of 200 and weighted by industry.

The share of the intermediate input spending that is spent locally within each region, which is profiled in Fig. 3, is based on the relevant import shares in the IO table for each region. This means that, for the Toronto Region and Halton models, these import shares are derived both from the underlying Ontario IO model and from the Flegg et. al. methodology referenced above.

TAX IMPACTS

The tax figures in this report represent the sum of direct, indirect, and induced tax impacts at all levels of government. Specifically included within these tax impacts are federal and provincial level tax contributions to each region, whether the Halton region, Toronto Region, Ontario, or Canada.

Details for specific tax types are as follows: Taxes on products are based on tax data within the Statistics Canada IO data. Corporate taxes, and income and social insurance taxes, are calculated from the capital and labour income impacts respectively from the IO modelling using effective tax rates calculated from Statistics

Canada data. Municipal tax estimates are based on Statistics Canada data on the ratio of municipal property tax receipts to GDP for the province of Ontario (except for the national results, where a Canada-wide ratio is used for the portion outside Ontario). This ratio is applied to the GDP impacts calculated in the model.

OXFORD ECONOMICS

Oxford Economics was founded in 1981 as a commercial venture with Oxford University's business college to provide economic forecasting and modelling to UK companies and financial institutions expanding abroad. Since then, we have become one of the world's foremost independent global advisory firms, providing reports, forecasts and analytical tools on more than 200 countries, 100 industries, and 8,000 cities and regions. Our best-in-class global economic and industry models and analytical tools give us an unparalleled ability to forecast external market trends and assess their economic, social and business impact.

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