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ECONOMIC IMPACTS OF *THE LAST OF US* SEASON ONE IN ALBERTA

A REPORT FOR THE MOTION
PICTURE ASSOCIATION - CANADA

NOVEMBER 2023



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EXECUTIVE SUMMARY

“The Last of Us” is a TV series produced by HBO based on a video game that follows a smuggler and a teenager as they navigate a post-apocalyptic world. While the first season of *“The Last of Us”* is set in the United States, the series was filmed in Alberta, Canada. The filming and production of the show generated considerable economic activity across the province. The show’s production also supported activity in a wide range of industries through its procurement, and as those employed by the production and those employed by its supply chain spent money in the wider economy.

This study, commissioned by the Motion Picture Association – Canada (MPA), focuses on the first season of the show, and analyses the production’s total economic impacts in Alberta from July 2021 to June 2022, when the first season was filmed. The study also considers the wider impact on boosting Alberta’s economy.

In 2021/2022, **production of Season One of “The Last of Us” resulted in total spending in Alberta of over C\$141 million.**

Spending on wages and salaries for local production crew and other labour made up slightly over half of the expenditure at over C\$71 million. The other half of spending was with local suppliers of goods and services at approximately C\$70 million.

Oxford Economics calculates that expenditure by **the production of Season One of “The Last of Us” stimulated over C\$182 million of contribution to Alberta’s GDP from 2021-2022.** We find that for every C\$1 million that the production’s own activities contributed to the economy, its expenditure supported a further C\$1.6 million along its supply chain and through the payment of wages.

We find that the expenditure undertaken by **the show’s production stimulated a total of 1,490 full-time equivalent (FTE) jobs across Alberta from 2021-2022.** For every 100 people the production directly employed, its expenditure stimulated another 78 jobs across the province.

C\$182m

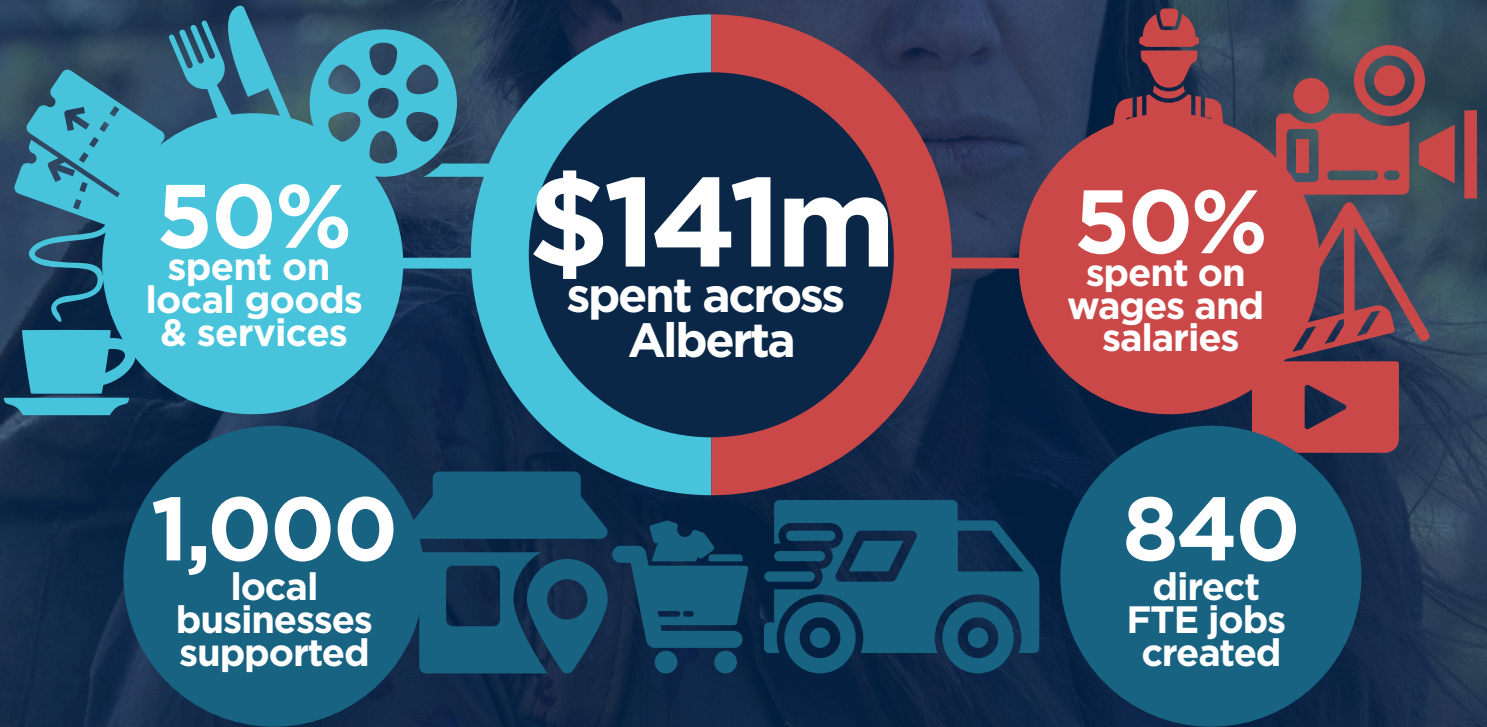
Total contribution to Alberta’s GDP supported by Season One of “The Last of Us”

1,490 FTE

Jobs supported across Alberta as a result of Season One of “The Last of Us”

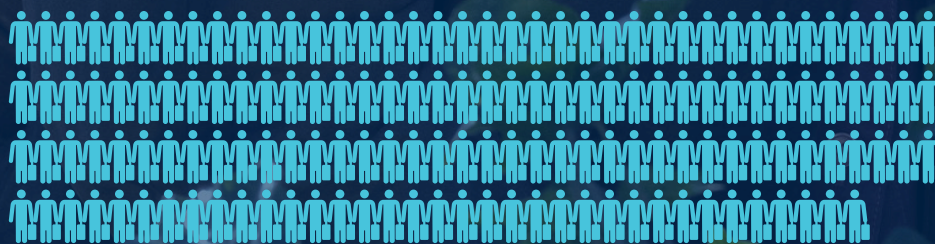
THE ECONOMIC IMPACT OF THE LAST OF US SEASON ONE IN ALBERTA

DIRECT IMPACT OF PRODUCTION



TOTAL IMPACT OF PRODUCTION

\$182m total contribution to Alberta's GDP



1,490 total FTE jobs stimulated by production in Alberta

1. INTRODUCTION

The Last of Us is a TV series produced by HBO based on a video game and set in a post-apocalyptic world. The show chronicles the adventures of survivors in the aftermath of a pandemic, starring a surviving smuggler and an immune teenager. The first season of *The Last of Us* was filmed from July 2021 to June 2022 in Alberta, Canada, and premiered in January 2023. In January 2023,

HBO renewed the show for a second season.

Oxford Economics was engaged by the Motion Picture Association - Canada to conduct an independent economic impact assessment of the production of the first season of the show on Alberta's economy. For the study, Oxford Economics used data from HBO to estimate the economic impacts arising from the production of this season.



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2. PRODUCTION SPENDING

When a TV show shoots on location, it brings with it jobs, revenue, and related infrastructure development. Physical productions provide an immediate boost to the local economy, fostering job creation and innovation in other industries across the production supply chain. In 2021/2022, production of Season One of *“The Last of Us”* resulted in **total spending in Alberta of over C\$141 million.**

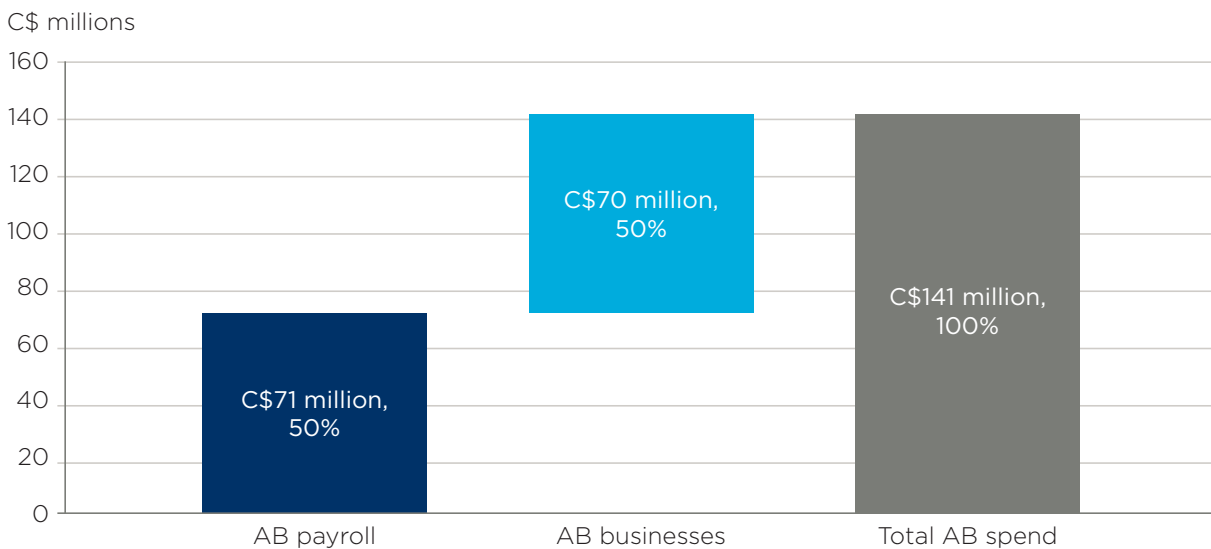
Spending on wages and salaries for local production crew and other labour made up slightly over half of the expenditure at over C\$71 million (see Fig. 1). The other half of spending was with local suppliers of goods and services at approximately C\$70 million.

C\$141m

Direct production expenditure in Alberta

Spending on production crew and qualifying labour was C\$71 million while spending with local vendors on goods and services was C\$70 million.

Fig. 1: Production spend of Season One of “The Last of Us” in Alberta, by type



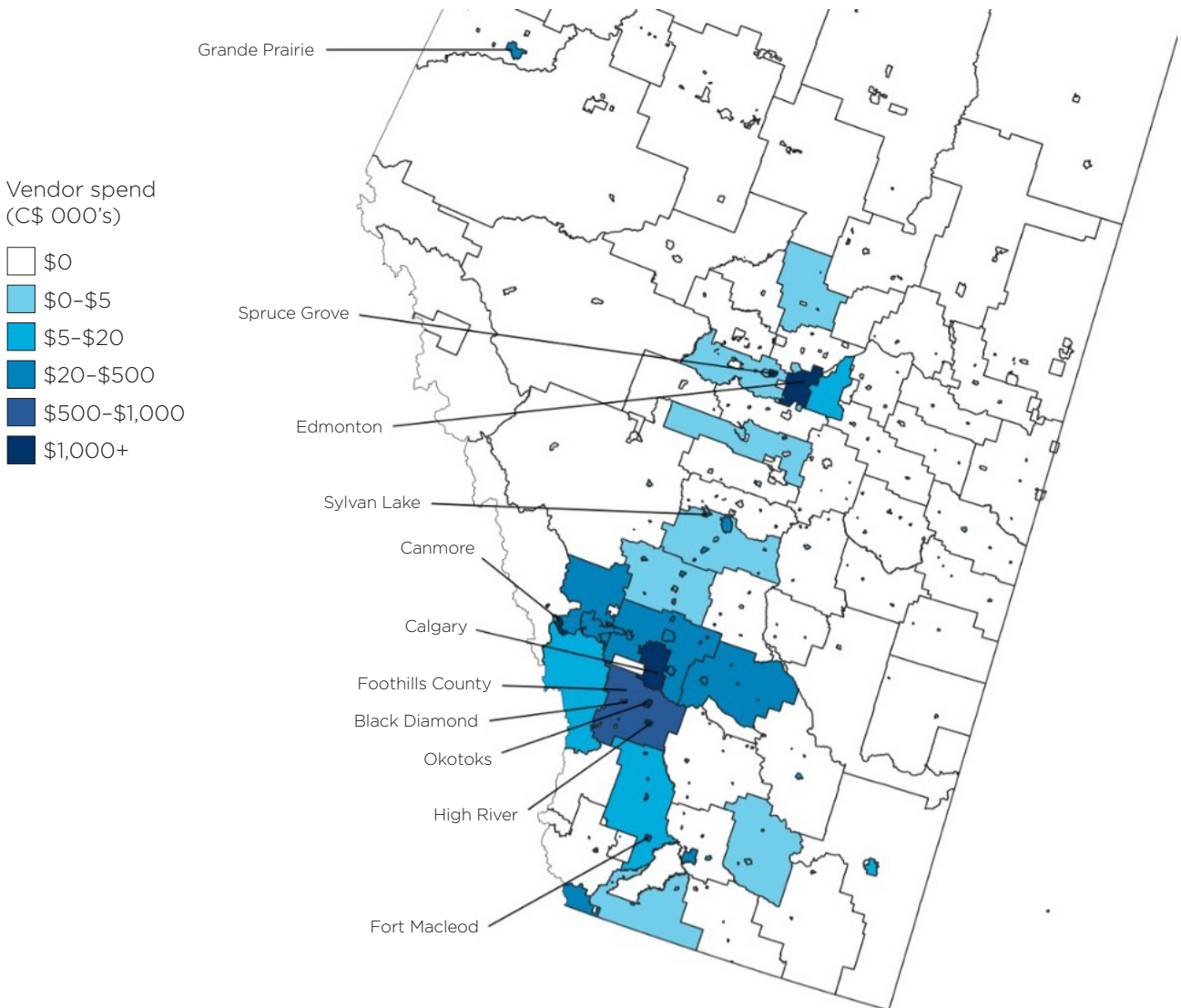
Source: HBO, Oxford Economics

2.1 BUSINESS SPENDING

Season One production spending engaged more than 1,000 businesses all over Alberta. The cities that received the largest amounts in business

spending were Calgary and Edmonton, which together made up over 80% of all business spending. The distribution of spending across the province is shown in Fig. 2 below.

Fig. 2: Map of spending with locally-based businesses by region



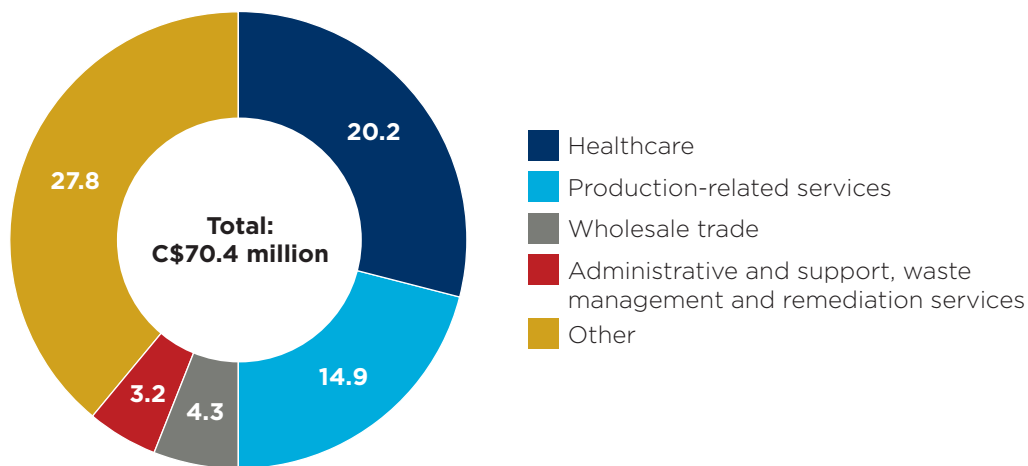
The production of TV shows typically relies on a wide range of goods and services, engaging multiple local businesses across numerous industries (see Fig. 3). The largest category of spending (at over C\$20 million) was in healthcare and went towards COVID-19 related services, such as testing.

The next largest category of spending at just under C\$15 million went towards production-related services. This includes spending with production facilities and the design and building of production sets. Over C\$4 million was spent on procuring the raw materials required to build sets and other large-scale

purchases to support the production. Another C\$3 million went to administrative and support services, such as cleaning and security services, and other facilities support. Other large categories of spending include rental and leasing services, accommodation and food services, and construction services.

Fig. 3: Spend on goods and services in Alberta, by industry

C\$ millions



Source: HBO, Oxford Economics

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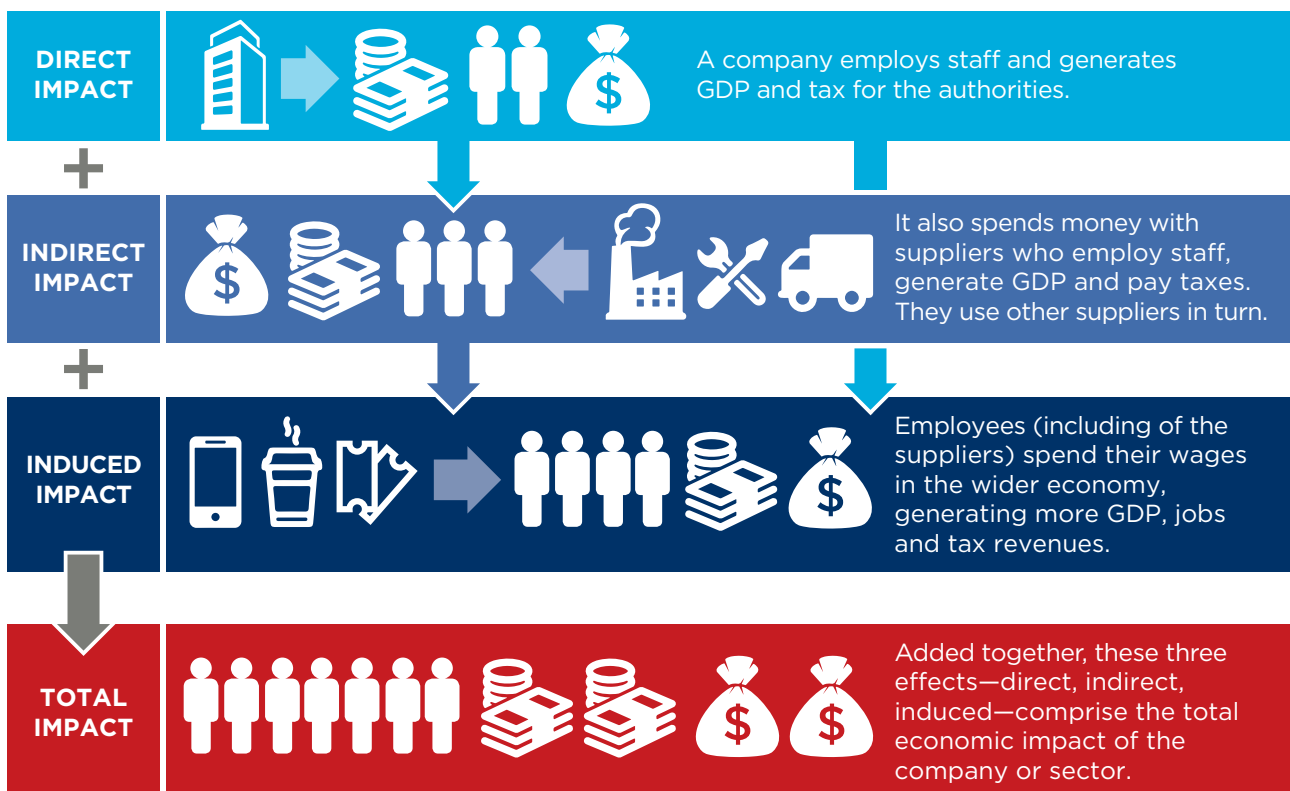


3. ECONOMIC IMPACTS

3.1 CHANNELS OF IMPACT

The impact of the filming of Season One of *“The Last of Us”* on Alberta’s economy is calculated using an economic impact assessment. This

involves quantifying the production’s economic contribution on a provincial level across three channels of expenditure, where the total impact is the sum of the three channels.



Source: Oxford Economics

C\$182m

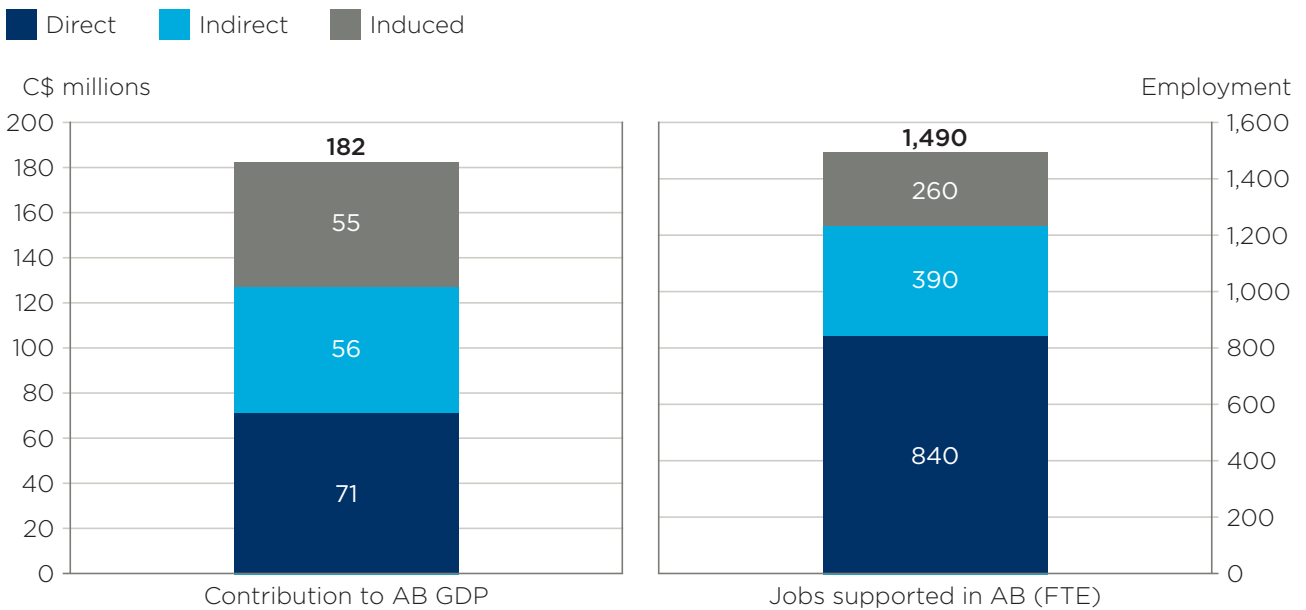
Total contribution to Alberta's GDP supported by Season One of "The Last of Us"

3.2 TOTAL IMPACT

Combining all channels of impact, we find that Season One of "The Last of Us" supported over C\$182 million towards Alberta's GDP in 2021/2022. Approximately C\$71.1 million, or 39%, of this was generated by the production itself (direct).

The local spending on goods and services supported another C\$55.9 million along the supply chain (indirect), which represented 31% of the total.¹ The payment of wages by the production studios and local vendors in the show's supply chain (induced) stimulated a C\$55.0 million contribution to GDP, or 30% (Fig. 4).

Fig. 4: The total GDP and employment contribution supported by Season One of "The Last of Us" in Alberta by channel of impact



Source: Oxford Economics

¹ While production spending with Alberta-based vendors totals approximately C\$70.3 million, these local vendors may spend some part of this with companies outside of Alberta, resulting in an estimated impact of C\$55.9 million.

For Season One of *“The Last of Us,”* for every C\$1 million in direct GDP generated by the production’s own activities, its expenditure supported a further C\$1.6 million across Alberta.²

The production of the show also had a significant impact on employment in the province. In 2021/2022, Season One of *“The Last of Us”* supported over 1,490 FTE workers across the province. The TV series production itself employed an estimated 840 FTE workers, or 56% of the total. The local spending on goods and services supported another 390 jobs along the national supply chain or 26% of the total. A further 260 jobs, or 17% of the total, were supported by the spending of wages across

the province by production crews and by employees of the show’s suppliers.

In 2021/2022, for every 100 people the production directly employed, a further 78 FTE jobs were supported across the province through secondary effects.³

According to HBO, Season One of *“The Last of Us”* is estimated to have benefitted from close to C\$40 million in tax incentives. These incentives are estimated to have produced C\$4.6 in GDP for every dollar of tax incentive received by the production.

The remainder of this section describes the three channels of impact in more detail.

1,490 FTE

Jobs supported across Alberta as a result of Season One of *“The Last of Us”*

² This GDP multiplier effect is calculated by dividing the total impact (C\$182.1 million) by the direct impact (C\$71.1 million) and subtracting 1.

³ This employment multiplier effect is calculated by dividing the total employment impact (1,490) by the direct employment impact (840) and subtracting 1.

3.3 DIRECT IMPACT

During the production period, Season One of *“The Last of Us”* directly employed an estimated 840 FTE workers across Alberta.

We estimate that the production made a C\$71.1 million direct contribution to the province’s GDP in 2021/2022, which came from the payment of employee compensation to locally based staff.⁴

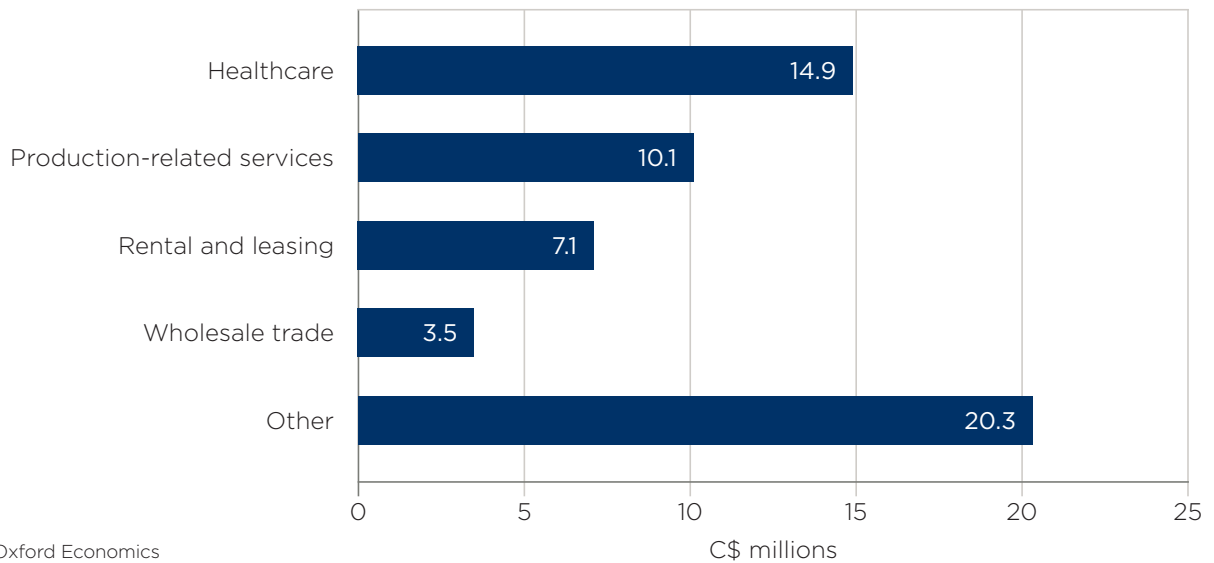
3.4 INDIRECT IMPACT

The production’s positive contribution to Alberta’s economy, however, extends past the contribution it makes directly through its own operations. This is related to the purchases of goods and services made from other firms in order to produce the show. This spending stimulates additional economic activity along the supply chain. This is referred to as the *indirect* impact.

Oxford Economics calculated that the procurement associated with *“The Last of Us”* Season One stimulated a C\$55.9 million contribution to the province’s GDP along the domestic supply chain.

Over one quarter of this indirect impact was in healthcare services, where the show’s supply chain stimulated a GDP contribution of C\$14.9 million (Fig. 5). Approximately 18% of the indirect impact (C\$10.1 million) went towards

Fig. 5: GDP contribution stimulated by engaging local suppliers, by industry



Source: Oxford Economics

⁴ The contribution to GDP generated by a company or a project can be calculated as the sum of its surplus (profits) and employee compensation. This approach, known as the income approach, is consistent with the principles of national accounting. For the purposes of this study, we take a conservative approach to this calculation and focus on the employee compensation of local workers, excluding the profits associated with the production in our calculation of direct contribution to Alberta’s GDP.

production-related services while 13% of the impact (C\$7.1 million) went towards the rental and leasing industry.

The show’s expenditure on inputs of goods and services from locally based suppliers also stimulated 390 full-time equivalent jobs across Alberta.

3.5 INDUCED IMPACT

During the production period, local labour was paid C\$71.1 million in gross wages and salaries. In addition to this,

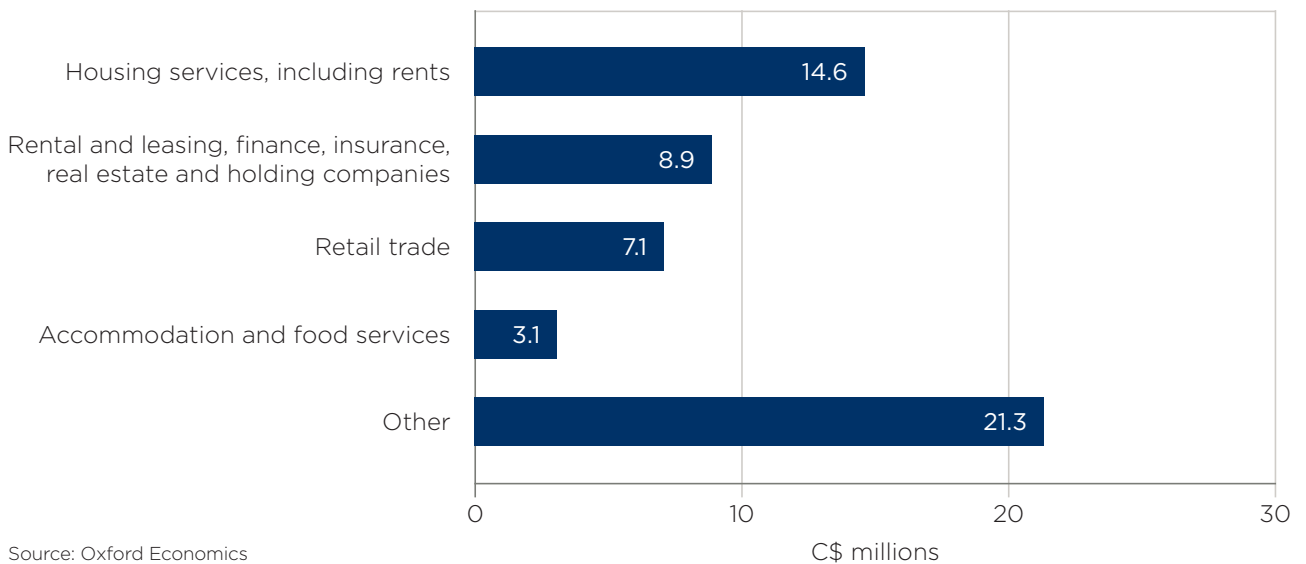
the people whose jobs are stimulated by local spending on goods and services are also paid additional wages and salaries.

Production crews, and workers employed throughout the supply chain, spend a proportion of their wages at retail, leisure, and other outlets across the country. This stimulates economic activity and employment at these firms, but also along their supply chains. This is referred to as the show’s *induced* impact.

We estimate the wage-financed spending of local production crews and workers at locally based suppliers stimulated C\$55.0 million toward Alberta’s GDP during the production period (Fig. 6).

The wage-financed consumer spending of production crews and workers within the show’s supply chain is estimated to have supported 260 FTE jobs across Alberta in 2021/2022.

Fig. 6: GDP contribution stimulated by employing local workers, by industry



Source: Oxford Economics



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4. WIDER IMPACTS

While *“The Last of Us”* was set in multiple cities across the US, it was filmed in Alberta, Canada. As the largest film production in Alberta’s history⁵ and one of the largest ever shot in Canada, the show’s filming brought considerable benefits across the entire province outside of those outlined in this report. The TV series has been acclaimed by critics and broader audience members alike just from its first few episodes.⁶ The success of the show has brought attention to the numerous locales across Alberta where filming occurred, attracting additional positive impacts beyond the GDP and jobs numbers quantified by this study.

Film-induced tourism often follows the production of successful films and TV series, encouraging viewers to visit the sites and locations referenced throughout the movie or show. Travel Alberta,

a one-stop-shop for all tourists to the province, offers a comprehensive guide for fans of *“The Last of Us”* with filming location details outlined for each episode.⁷ As well-known TV series attract tourists to visit popular filming locations, tourism-led spending at restaurants, hotels, and with other local businesses helps to boost the regional economy.

The Alberta Film Commission and the local government played a large role in not only pitching but also providing support during the filming and production of *“The Last of Us”* in Alberta.⁸ The Alberta Film Commission provides tax incentives, world class studios, location packages, and post-production experts, amongst many other services, simplifying the filming and production process from start to finish.⁹ Tailored support to production cast and crew members attracts additional investment opportunities

for the industry, allowing for constantly improving facilities and infrastructure, further encouraging additional film and TV series productions.

The versatility of filming locations across the entire province allowed for the TV series to be filmed primarily in Alberta, even though episodes were set across multiple US cities. One unique feature of *“The Last of Us”* is the production’s preference for relying on real locations and real effects, rather than focusing on deploying special effects in the post-production process. In some cases, the show built custom sets to represent different locations and only relied on CGI for touch ups. As the production built large sets specific to the series, they employed designers, engineers, and excavators, amongst many other specialized professionals, further supporting the local economy.¹⁰

⁵ <https://www.gq-magazine.co.uk/culture/article/the-last-of-us-locations-season-one-hbo>

⁶ <https://www.forbes.com/sites/paultassi/2023/01/18/the-last-of-us-critic-and-audience-scores-are-nothing-short-of-miraculous/?sh=35a9332f64f1>

⁷ <https://www.travelalberta.com/articles/2023/explore-alberta-locations-in-hbos-the-last-of-us>

⁸ <https://macleans.ca/culture/television/the-last-of-us-location-manager-on-how-hbo-transformed-alberta-into-a-zombie-wasteland/>

⁹ <https://www.alberta.ca/alberta-film-commission.aspx>

¹⁰ <https://macleans.ca/culture/television/the-last-of-us-location-manager-on-how-hbo-transformed-alberta-into-a-zombie-wasteland/>



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APPENDIX: METHODOLOGY

The impact of the filming of Season One of *“The Last of Us”* on Alberta’s economy is calculated using an economic impact assessment. This involves quantifying the production’s economic contribution to the country across three channels of expenditure. The channels of impact are:

- **Direct impact** relates to the employment and economic activity generated at the filming locations across Alberta.
- **Indirect impact** captures the economic activity stimulated by the procurement of inputs of goods and services from the locally based supply chain.
- **Induced impact** comprises the wider economic benefits that arise from the payment of wages by the television series, and the firms in its local supply chains, to staff who spend a proportion of this income in local retail, leisure, and other outlets.

The total impact is the sum of the three channels. This enables us to build a picture of the series’ overall contribution to the country across two key metrics:

- The gross value-added contribution to Alberta’s GDP.¹¹
- Full-time equivalent employment.

The results are presented on a gross basis, ignoring any displacement of activity from other firms or activities. Additionally, the results do not consider what the resources currently used by the show’s production, or stimulated by its expenditure, could alternatively produce in their second most productive usage.

Data on the direct impact of *“The Last of Us”* Season One—including the show’s contribution to GDP and jobs created—were provided directly by HBO. Direct GDP contribution in the region is taken to be equal to local employee compensation.

To estimate the indirect and induced GDP impacts of the show, Oxford Economics used the 2019 Statistics Canada input-output (IO) table for Alberta (the latest available). A basic domestic IO table gives a snapshot of an economy at a given point in time. The model shows the major spending flows 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/provincial 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.

To estimate the indirect impact, we used vendor-level information on the amount spent and type of goods and services purchased from local businesses over the course of the production. In order to calculate the induced impact, we took the figures for wages paid to workers, as provided by HBO, and then allocated those to the sectors where they would have spent those wages in line with the proportions in the Alberta IO table. We then used those figures to show how many dollars of GDP the show’s production supported in the Alberta economy for every C\$1 of direct GDP contribution, and how many jobs were stimulated across the province for each 100 people directly employed by the production.

¹¹ Where GDP is the main indicator of economic activity in Alberta. It is used to measure the rate of growth or decline of the economy, and when it enters a recession.

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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 industrial sectors, 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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November 2023

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