

July 2022

# 2021 **Economic Contribution** of Public Pension Plans in Alberta



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This report was jointly commissioned by LAPP, ATRF, PSPP, and SFPP. No identifiable membership data was used in this analysis.

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# Executive Summary

## Introduction

With more than 400,000 active, deferred vested, and retired members living in Alberta, LAPP, ATRF, PSPP and SFPP (the “Plans”) make up a significant proportion of the defined benefit pension plan membership in Alberta. Members of the Plans include union and non-union employees of municipalities, health services, schools, transit systems, electrical utilities, emergency services, the provincial government, children’s aid societies and other public service organizations across Alberta. The contributions of members and employers are invested around the world by the Plans to provide each member with a stable and secure source of retirement income. The impacts of the Plans’ investments can be found across Alberta, and Albertans benefit from the economic capacity and activity generated by local investments and pension recipients.



## Objectives and Approach

This study quantifies and describes the 2021 economic contribution of the Plans' activities to Alberta, including regional breakdowns. These contributions include all the economic activity generated from the following sources:

1. Plan members spending their retirement benefits payments in Alberta.
2. Plan operations and investments in Alberta, including salaries and wages to employees residing in Alberta.

These economic activities generate demand for labour and subsequent spending, which ripples through the economy. Using the long-term growth trend of the economy as a baseline for 2021, the Plans' economic contributions are reported in terms of Gross Domestic Product (GDP), jobs and government revenue supported in Alberta and regionally.

## Total Economic Contribution and its Sources

The Plans contributed over \$4.8 billion to provincial GDP in 2021 through their activities in Alberta, equivalent to 1.5% of Alberta's economy. This supported over 43,700 jobs and \$2.2 billion in wages for Albertans, and over \$1 billion in combined federal and provincial government revenue through corporate, income, and consumption taxes.

The impact of the Plans' activities on Alberta's population is widespread and supports many local jobs. This provides a benefit to the people with whom they share a household since the employment supported by the Plans contributes to each household's total income. In total, there were almost 504,000 Albertans who benefitted from the Plans' activities in 2021, counting those living in households with a person whose wage is supported by the Plans and those who are Plan members.

The industries that received the most significant GDP benefit from the Plans' and members' activities in Alberta in 2021 included the manufacturing (which includes the production of consumer staples such as food products) and retail sectors.

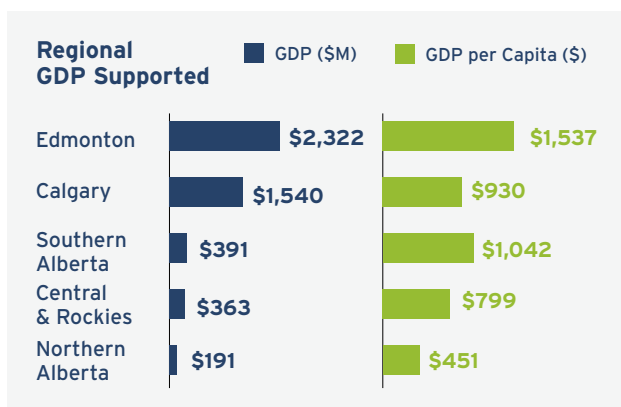
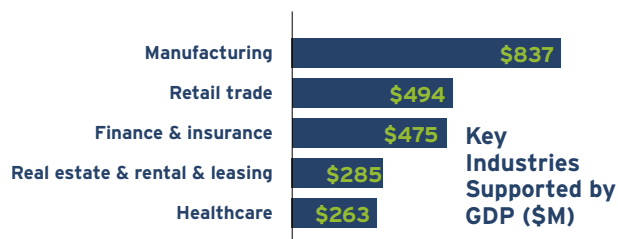
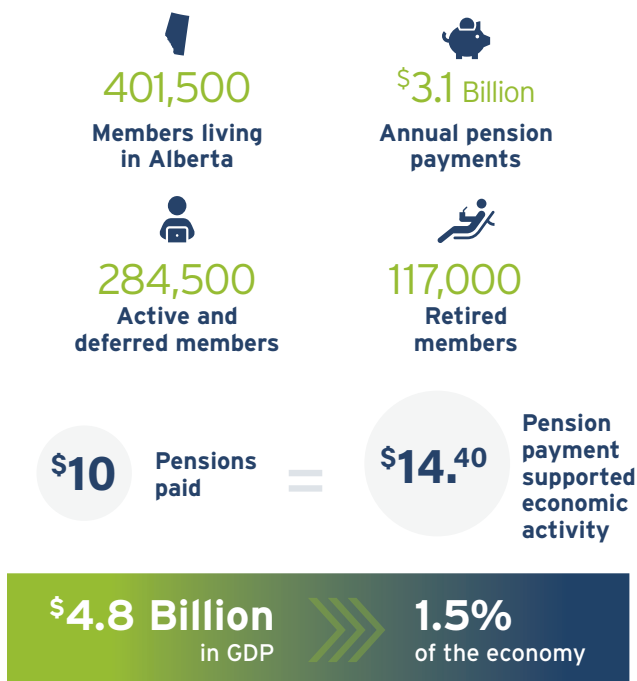
## Sources of Total Economic Contribution

**Pension spending:** The Plans' retirement benefits represented an important source of retirement income in Alberta in 2021, accounting for 27% of all private retirement income<sup>1</sup> in the province. Retired members live across Alberta and spend much of their retirement benefits payments in their local communities and surrounding areas. Pension spending alone supported over 41,000 jobs across the province (94% of the total job contribution of the Plans) and contributed over \$4.4 billion to Alberta's GDP. This is equivalent to \$14.40 of GDP for every \$10 of retirement benefits payments received in 2021.

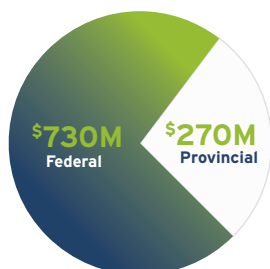
**Operations and investments:** The Plans' operations and investments in Alberta also make a contribution to economic activity in the province. In 2021, the Plans' investments were found in almost 100 locations across Alberta and included physical assets such as office space, apartment buildings, industrial buildings, shopping malls, and utilities. Together, the Plans' operations and its investments supported over 2,700 jobs in Alberta (6% of the total contribution of the Plans) and over \$400 million in GDP. Beyond this economic contribution, the investments of the Plans in Alberta provide economic capacity for other businesses to operate through their real estate and infrastructure investments. The real estate portfolio provides space for enterprises and homes to Albertans, including 2,700 homes, 8.3 million square feet of office and retail properties and 6.5 million square feet of industrial properties. In addition, the energy investments provide gas to households in over 90 communities in the province.

<sup>1</sup>Private retirement income comprises all formal retirement savings vehicles utilized by Albertans, including defined benefit and contribution plans, Tax-Free Savings Accounts (TFSA) and Registered Retirement Savings Plans (RRSP). It excludes public supports such as CPP, GIS, and OAS.

# Alberta Economic Activity Supported by the Plans



**\$1 Billion**  
in taxation revenues



## Members

There are 401,500 members that live in Alberta, of which 117,000 are retired members receiving pension payments, and 241,600 are currently contributing. The remaining 42,900 members are deferred members who are not yet retired but are not contributing (employed elsewhere). Total annual retirement payments amount to \$3.1 billion, a significant source of private retirement income in the province (27%). These payments have important direct, indirect, and induced contributions to the economy.

## GDP Supported

Economic activity supported by the Plans amounts to \$4.8 billion, representing about 1.5% of the Albertan economy.

\$4.4 billion of this activity is due to the way the pension payments are spent and the resulting indirect and induced economic activity. For every \$10 of pension payment, \$14.40 of economic activity is supported.

The balance of economic activity, \$400 million, is from the Plans' operations and investments in Alberta.

Economic activity is distributed across all industry sectors with key contributions to manufacturing, retail trade, health care, finance and insurance and retail trade.

The Plans' retirement benefits were an important source of income for rural regions, comprising no less than 23% of the population's private retirement income across all regions of the province. Such a contribution is essential for the sustainability of many rural areas in Alberta.

## Tax

The economic contribution of the Plans generates about \$1.0 billion of tax revenues for the governments, of which \$730 million is federal government revenue and \$270 million is provincial government revenue.

# Alberta Employment Supported by the Plans

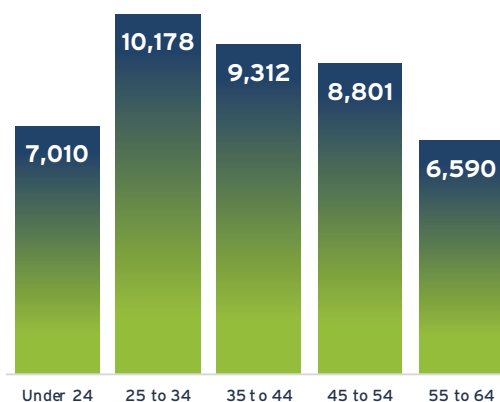
The Plans' activities support over 43,700 jobs (2.1% of jobs in Alberta) and \$2.2 billion in total wages. It would take the province about two years<sup>2</sup> to generate the same number of jobs supported by the Plans.

Total employment contribution is distributed across all industries. The industries that are the largest source of jobs include retail trade, accommodation and food services and the manufacturing sector.

Jobs supported by the Plans' activities are held by individuals ranging in age and family composition. Of the people whose employment is supported, almost 12,000 are filled by people under 30 years of age (27% of all jobs).



## Jobs Supported under 65



## Top 5 Industries by Jobs Supported:



Employment supported by the Plans' activities contributed to the wages of almost 40,000 households which included over 19,000 households with children. The number of people that the Plans' activities affect beyond the 401,500 active, deferred and retired members is considerable, amounting to 102,500 additional Albertans that are not members of the Plans.

**39,400** Households

**401,500** Active, deferred, and retired members

**504,000** Albertans

## Alberta Economic Capacity Supported by the Plans

The Plans' operations and investments in Alberta contribute to economic activity in the province. In 2021, investments were found in over 100 communities across Alberta and included physical assets such as office space, apartment buildings, warehouses, shopping malls, and utilities.



<sup>2</sup> Based on 10 year average of job creation in Alberta



# Regional Economic Contributions of the Plans

The size of the contribution of the Plans and the primary industries benefitting from the contribution differ between regions depending on each region's economic base and on the type of investments that are present in each region. The following tables summarize the key contributions of the Plans in five regions of Alberta in 2021<sup>3</sup>. Each region is a grouping of census divisions, which are defined in Section 2.4 of the report.

	Calgary	Central and Rockies	Edmonton	Northern Alberta	Southern Alberta
# of Members living in Alberta	<b>130,400</b>	<b>34,900</b>	<b>175,400</b>	<b>28,700</b>	<b>32,000</b>
	<b>94,400</b> active & deferred	<b>23,600</b> active & deferred	<b>124,300</b> active & deferred	<b>21,500</b> active & deferred	<b>20,700</b> active & deferred
	<b>36,000</b> retired	<b>11,300</b> retired	<b>51,100</b> retired	<b>7,200</b> retired	<b>11,300</b> retired
Retirement Benefits Paid (\$M)	<b>\$950M</b>	<b>\$270M</b>	<b>\$1,360M</b>	<b>\$170M</b>	<b>\$300M</b>
	<b>23%</b> of private retirement income	<b>23%</b> of private retirement income	<b>32%</b> of private retirement income	<b>25%</b> of private retirement income	<b>28%</b> of private retirement income
	<b>1.1%</b> of total regional income	<b>1.3%</b> of total regional income	<b>1.9%</b> of total regional income	<b>0.8%</b> of total regional income	<b>2.1%</b> of total regional income
Jobs supported	<b>14,000</b>	<b>3,400</b>	<b>20,900</b>	<b>1,800</b>	<b>3,700</b>
	<b>\$690M</b> in wage income	<b>\$160M</b> in wage income	<b>\$1,060M</b> in wage income	<b>\$90M</b> in wage income	<b>\$180M</b> in wage income
GDP Supported	<b>\$1,500M</b>	<b>\$400M</b>	<b>\$2,300M</b>	<b>\$200M</b>	<b>\$400M</b>
	<b>\$15.06</b> of pension-supported GDP per \$10 of pension payments	<b>\$13.38</b> of pension-supported GDP per \$10 of pension payments	<b>\$15.00</b> of pension-supported GDP per \$10 of pension payments	<b>\$10.87</b> of pension-supported GDP per \$10 of pension payments	<b>\$12.95</b> of pension-supported GDP per \$10 of pension payments

<sup>3</sup> Note that numbers in these summary charts and throughout the report have been rounded for clarity. Therefore, there may be slight discrepancies due to rounding between the reported totals and the sum of regional breakdowns.

# Economic Contributions of Individual Plans

The relative economic contribution for each of the four plans in the study is primarily driven by the relative size of each plan. With LAPP membership in Alberta comprising 61% of all plan members and 55% of the retirees, it has the largest economic contribution of the group. However, differences in where retirees live and average pension benefits received also affect the relative contribution of each plan. The table below summarizes some of the key statistics for each of the four plans. Additional detail can be found in Section 2.5.

		 Alberta Teachers' Retirement Fund	 PSPP CORPORATION	 Special Forces Pension Plan
# of Members living in Alberta	<b>244,000</b> 179,900 active & deferred 64,100 retired	<b>77,600</b> 50,100 active & deferred 27,500 retired	<b>73,300</b> 50,200 active & deferred 23,100 retired	<b>6,700</b> 4,400 active & deferred 2,300 retired
Retirement Benefits Paid (\$M)	<b>\$1,510M</b> 13.5% of private retirement income 0.7% of total provincial income	<b>\$930M</b> 8.2% of private retirement income 0.4% of total provincial income	<b>\$500M</b> 4.4% of private retirement income 0.2% of total provincial income	<b>\$120M</b> 1.0% of private retirement income 0.1% of total provincial income
Jobs supported	<b>21,800</b> <b>\$1090M</b> in wage income	<b>13,000</b> <b>\$650M</b> in wage income	<b>7,300</b> <b>\$370M</b> in wage income	<b>1,600</b> <b>\$80M</b> in wage income
GDP Supported	<b>\$2,400M</b> <b>\$14.38</b> of pension-supported GDP per \$10 of pension payments	<b>\$1,430M</b> <b>\$14.37</b> of pension-supported GDP per \$10 of pension payments	<b>\$800M</b> <b>\$14.51</b> of pension-supported GDP per \$10 of pension payments	<b>\$180M</b> <b>\$14.76</b> of pension-supported GDP per \$10 of pension payments

# 1.0 Introduction

## 1.1 Background

Alberta has over 600 pension plans registered within the province, with 470,000 active (contributing) members. The pensions received by retirees and the investments made by the plans play a critical role for retirees and the province overall. In Alberta, over 85% of active members belong to two primary types of pension plans:

- **Defined Benefit (DB) Pension Plans:** With over 60% of active members in the province, defined benefit plans provide a guaranteed retirement benefit based on an established formula commonly based on factors such as age, earnings and years of service.
- **Defined Contribution (DC) Pension Plans:** Almost 25% of active members in the province belong to defined contribution plans where pension benefits paid are a function of accumulated contributions and investment returns.

The remaining 15% belong to hybrid or other types of registered plans.

## 1.2 Participating Pension Plans

This study aims to quantify the contribution that four public sector defined benefit plans make to the Albertan economy. Throughout the report, these four plans will be referred to simply as the “Plans.” The Plans provided aggregate non-identifiable statistics on their membership for this analysis. Of the active members of DB pension plans in Alberta, the four plans include 85% of the total.

### 1.2.1 Local Authorities Pension Plan

The Local Authorities Pension Plan (LAPP) is a jointly-sponsored defined benefit pension plan. It was established in 1962 for the employees of local authorities in Alberta. The employers include organizations from the health care sector, cities, towns, villages, municipal districts, colleges, school boards and other affiliated public sector entities. The membership of the plan includes 274,000 active, retired and deferred members. Of those, 244,000 members lived in Alberta in 2021. It comprises 61% of the total membership of the plans included in the analysis and 54% of the retirees.



### 1.2.2 Alberta Teachers' Retirement Fund

The Alberta Teachers' Retirement Fund (ATRF), established in 1939, is an independent corporation governed by Alberta's Teachers' Pension Plans Act. ATRF is the trustee, administrator, and custodian of the pension assets of the Teachers' Pension Plan as well as the Private School Teachers' Pension Plan. This encompasses Alberta teachers employed in school jurisdictions and charter schools and teachers employed by participating private schools. The membership of the plan includes 84,400 members. With over 77,500 active, retired and deferred members living in Alberta, it comprises 19% of the total membership of the plans included in the analysis and 24% of the retirees.



### 1.2.3 Public Service Pension Plan

The Public Service Pension Plan (PSPP) is a DB pension plan that offers a secure, lifetime pension to its members. It was established in 1947 for employees of the Alberta government and other public service organizations and has expanded in the past 75 years. The membership of the plan includes 85,000 active, retired and deferred members. With over 73,300 active, retired and deferred members living in Alberta, it comprises 18% of the total membership of the plans included in the analysis and 20% of the retirees.



### 1.2.4 Special Forces Pension Plan

The Special Forces Pension Plan (SFPP) was established in 1979 as a DB pension plan for Alberta municipal police officers, including police chiefs and deputy police chiefs. The membership of the plan includes 7,300 active, retired and deferred members. With 6,700 active, retired and deferred members living in Alberta, it comprises 2% of the total membership of the plans included in the analysis and 2% of the retirees.



## 1.3 Objective and Approach

The objective of the analysis is to quantify the economic contribution that the Plans make to Alberta's economy. These contributions are quantified in terms of economic metrics, including GDP, jobs, and federal and provincial government revenue supported. When the report refers to the number of people and households sharing in the economic contributions, it is important to remember that these are statistical estimates of person and household equivalents. This means that a contribution that is partially split over many people or households will be added together to form one person or household equivalent. For example, if 10% of the incomes of 10 individual households are supported by the Plans, this makes one household equivalent. Note that the objective is not to quantify what would occur if the Plans did not exist but to understand the current effects that the Plans have on the Albertan economy.

### 1.3.1 Economic Contribution Explained

The economic contribution of an organization's activities is the economic footprint of the company in the region. It includes the economic activity directly generated by operations and investment activities ("direct effects"), as well as the economic activity generated indirectly through business-to-business transactions with other companies that provide goods and services to the first company ("indirect effects"). Finally, it includes the contribution that people whose incomes are supported by these economic activities make to the regional economy through spending their wages ("induced effects").

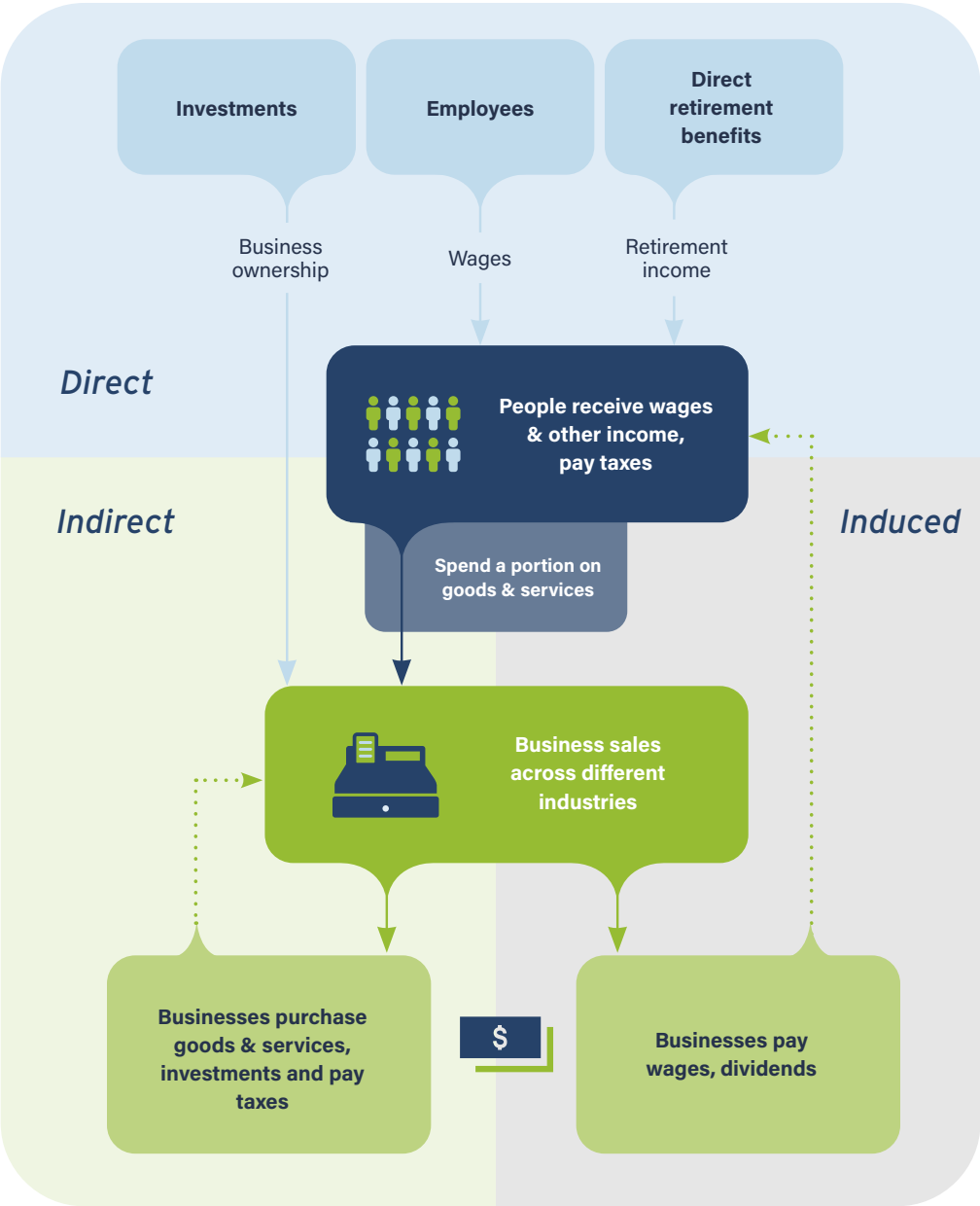
More detailed information about the economics underpinning the methodology of this study can be found in the Appendices.



The interactions between people and businesses that enable economic activity to spread throughout the economy are presented in Figure 1. In general terms, the economy can be described as consisting of people, businesses and governments who interact with one another through financial transactions.

<b>People</b>	Receive wages from the organizations for which they work. They spend these wages with businesses on goods and services and pay part of their wage to their governments in taxes.
<b>Businesses</b>	Pay wages and dividends to people, they purchase goods and services from other businesses and make investments, and they pay taxes to the government.
<b>Governments</b>	Collect revenue through income, corporate and consumption taxes.

*Figure 1* Interactions between people and businesses in an economy



### 1.3.2 Sources of Economic Contribution

The primary sources of the total economic contribution of the Plans to Alberta are the following:



The Plans' retirement benefits paid to members, which are spent by Albertan households in their local communities and within the province.



The operations of the Plans include salaries and wages to employees in Alberta of the Plans along with a portion of Alberta Pension Services (APS), based on a percentage of total APS membership, and AIMCO (based on a percentage of assets under management).



Private investments made by the Plans in companies, utilities, and properties in Alberta that generate economic activity, which can take the form of investments, wages, goods and services purchased and intellectual property. Investment-driven contributions are adjusted for percentage ownership by the Plans.

In addition to the operations and investments, this study focuses on the retirement benefits paid to Plan members. It follows the conservative assumption of not including death benefits, transfers to other plans and commuted value payments.

### 1.3.3 Economic Capacity Provided by Plan Investments

The investments made by the Plans in Alberta provide economic capacity to the provincial economy in the form of energy, technology, infrastructure, homes, and commercial space for firms and employees. The use of these investments supports the regional economy by providing necessary infrastructure and services to households and businesses.

The use of these assets does not enter into the calculations of economic contribution since any contribution to the economy originates from the businesses and households that use these assets. The capacity provided by the Plans' investments in 2021 is highlighted in qualitative terms throughout the report.

## 2.0 Findings of the Contribution Analysis

The findings of the analysis are presented in the following sections. Section 2.1 describes the characteristics of the Plans, their membership, and their investments. Section 2.2 presents the role that the Plans play in supporting employment in Alberta and who is affected. Section 2.3 takes a closer look at the broader economic activity (GDP) supported by the Plans and their investments. Finally, Section 2.4 looks at the regional differences across the province.

### 2.1 Provincial Overview

In 2021, the Plans had over 401,500 members living in Alberta. Of those, 117,000 are retirees receiving regular retirement payments from the pensions. 242,000 are active members contributing to their plan. With an average amount received of \$26,000 per retiree, the four plans provide over \$3 billion in annual pension payments amounting to 27% of the total private retirement income<sup>5</sup> in the province. This is equivalent to 1.4% of the total income from all sources, including wages and salaries, in the province. As a result, the pension payments that Plan retirees receive play a significant role in the Albertan economy.

#### 2.1.1 Investments

The Plans have investments worth over \$2.5 billion in Alberta. While only a small percentage of the Plans' total portfolio as they look to diversify investments to reduce risk, these investments help support the functioning of Alberta's economy by providing key support for the operation of other businesses and households in the province.

In particular, the portfolio of real estate investments provides<sup>6</sup>:

- Over 8 million square feet of office and retail space supporting almost 30,000 employees and 4,000 businesses
- About 6.5 million square feet of industrial space supporting 12,000 employees and 425 businesses
- About 2,700 apartment units providing housing for 3,900 people

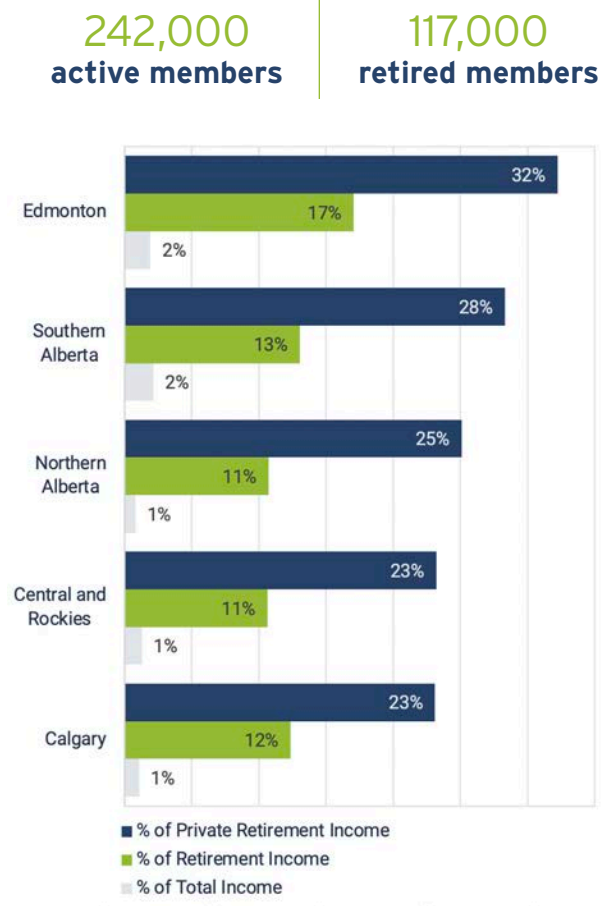
Infrastructure investments provide:

- Natural gas to over 82,000 households in 90 communities across Alberta
- 90 km of pipeline in Fort McMurray to transport bitumen and diluent products

<sup>5</sup>Private retirement income is any retirement income excluding CPP, GIS, and OAS.

<sup>6</sup>Based on average number of employees per square foot by industry, and distribution of business sizes

*Plan Members in Alberta*



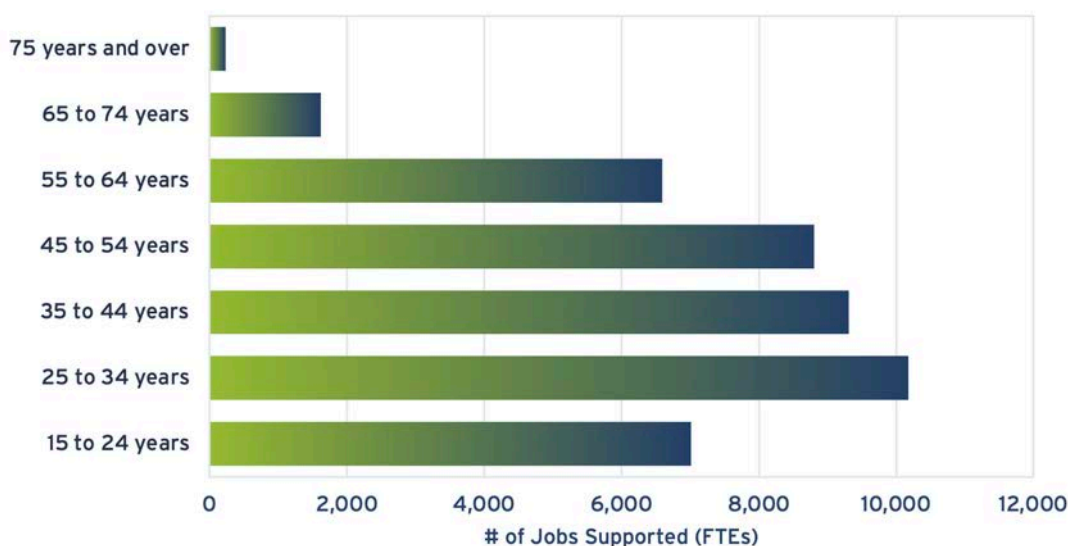
## 2.2 The Plans' Support of Alberta Employment

The economic contribution of the Plans to employment in Alberta occurs through members spending their retirement benefits payments in Alberta and through the economic activity generated by Plan's operations and local investments. This section reports the aggregate economic contributions of the Plans to employment in Alberta. These effects are further broken down to understand which demographic groups, regions and industries<sup>7</sup> in the province are the primary beneficiaries of the employer contribution. All results are reported for the year 2021.

### 2.2.1 People and Households Supported

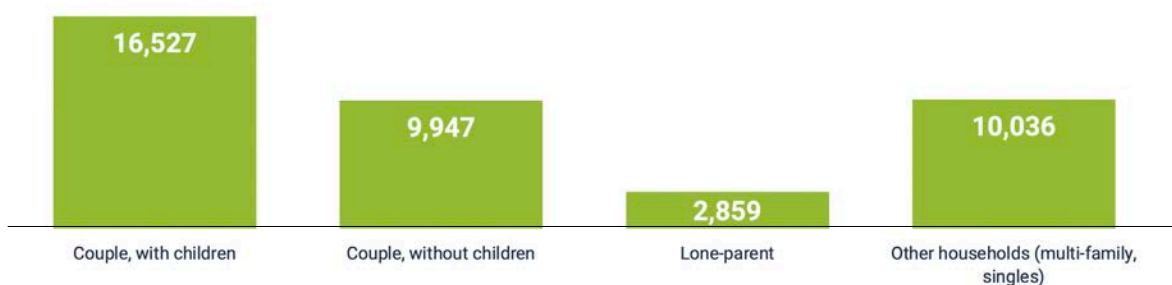
The pension payments made to retirees, the employment of people by the Plans, and the activity associated with their investments support over 43,000 jobs across Alberta. The total wages paid to these employees are in excess of \$2.1 billion annually. A total of 501,000 people are affected by the Plans, whether through active or retired membership, have a job supported by the Plans or benefit from spending by retirees, or belong to a household with a supported job. This is equivalent to over 10% of Alberta's population.

*Figure 2* Employment supported by the Plans, 2021



The employment supported by the Plans is held by people of all ages, highlighting how the Plans affect many more people in the province than just retirees. As shown in Figure 2, of all of the jobs supported by the Plans, over a quarter (12,000) are for those under the age or 30. Additionally, households of all types are supported, including almost 2,900 lone-parent households and another 16,500 households with children (Figure 3).

*Figure 3* Households with wage income supported by the Plans by type, 2021



<sup>7</sup> The full list of Canadian industries used in this report can be found in Table 2 in the Appendices.



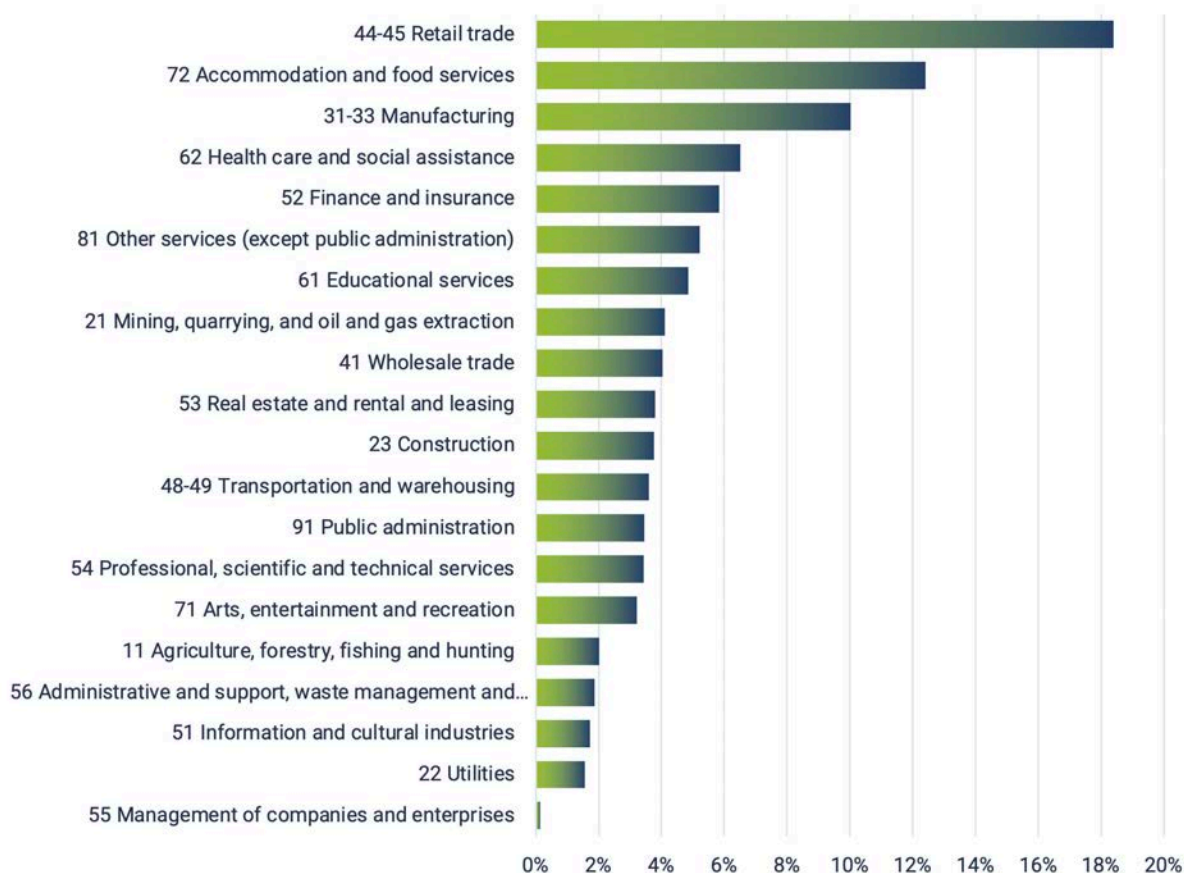
**Figure 4** Households affected by the Plans' contributions through wage income, 2021



### 2.2.2 Industries Supported

The 43,700 jobs supported across the province cover the full range of industry sectors. However, as shown in Figure 5, over 18% of jobs supported are in the retail trade sector. This is followed by accommodation and food services at 12% of the jobs. Retirees' spending in their communities directly supports these two sectors. Over 50% of all jobs are supported in the top five industries, which in addition to the two previously mentioned, include the manufacturing, health care, and finance sectors. The manufacturing and finance sectors are primarily supported indirectly through supply chains to the retail, accommodation, and food sectors.

**Figure 5** Percentage of jobs supported by each industry sector

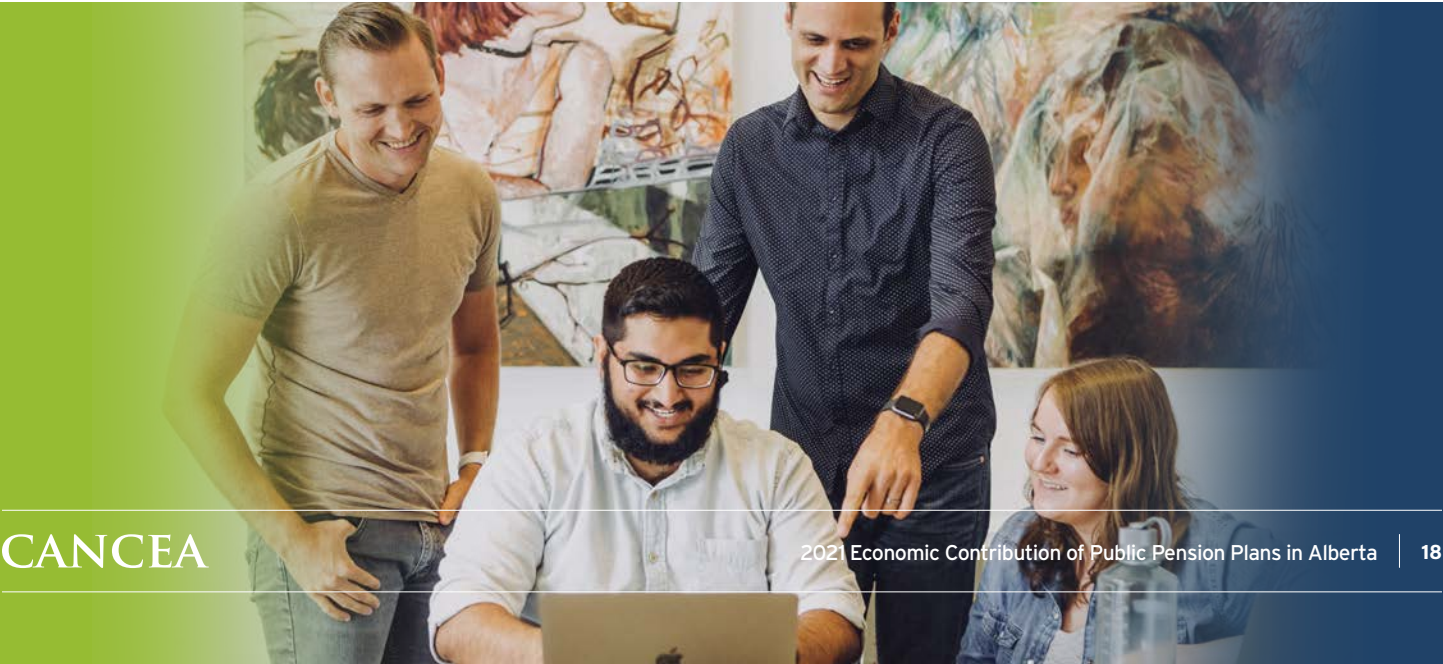
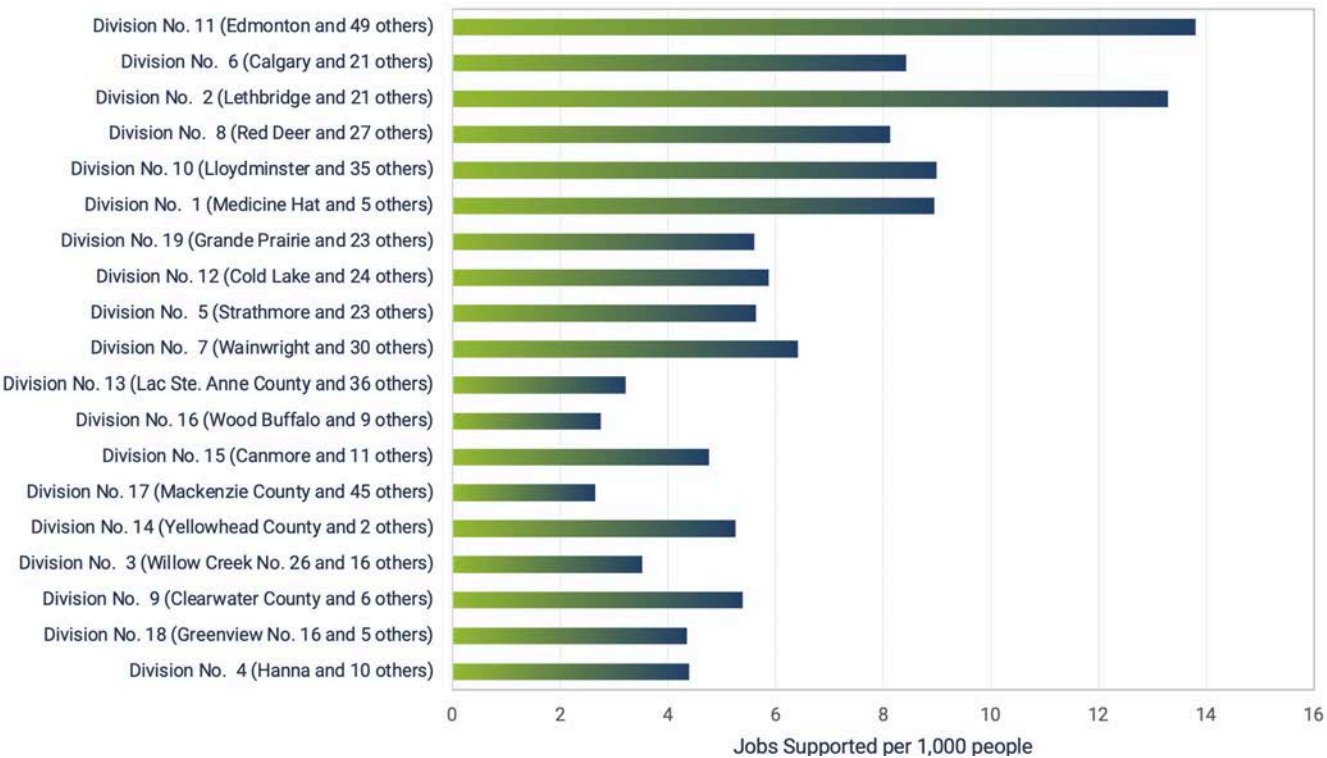


The health care sector also benefits significantly from retirees' spending. The number of health-related issues tends to increase with age and requires greater utilization of health care (private and public) services.

2.2.3 Regional Benefits

The Plans' activities supported employment in municipalities all across Alberta. The number of jobs supported per 1,000 population in each of Alberta's Census Divisions (with the largest community or census subdivision within each census division and the number of other census subdivisions) is shown in Figure 6. With the greatest concentration of Plan retirees, Edmonton has the most significant number of jobs supported with 20,900, followed by Calgary with 14,000 jobs supported. However, 20% of the jobs are supported outside these major centres. For many smaller regions, the jobs supported per capita are significant.

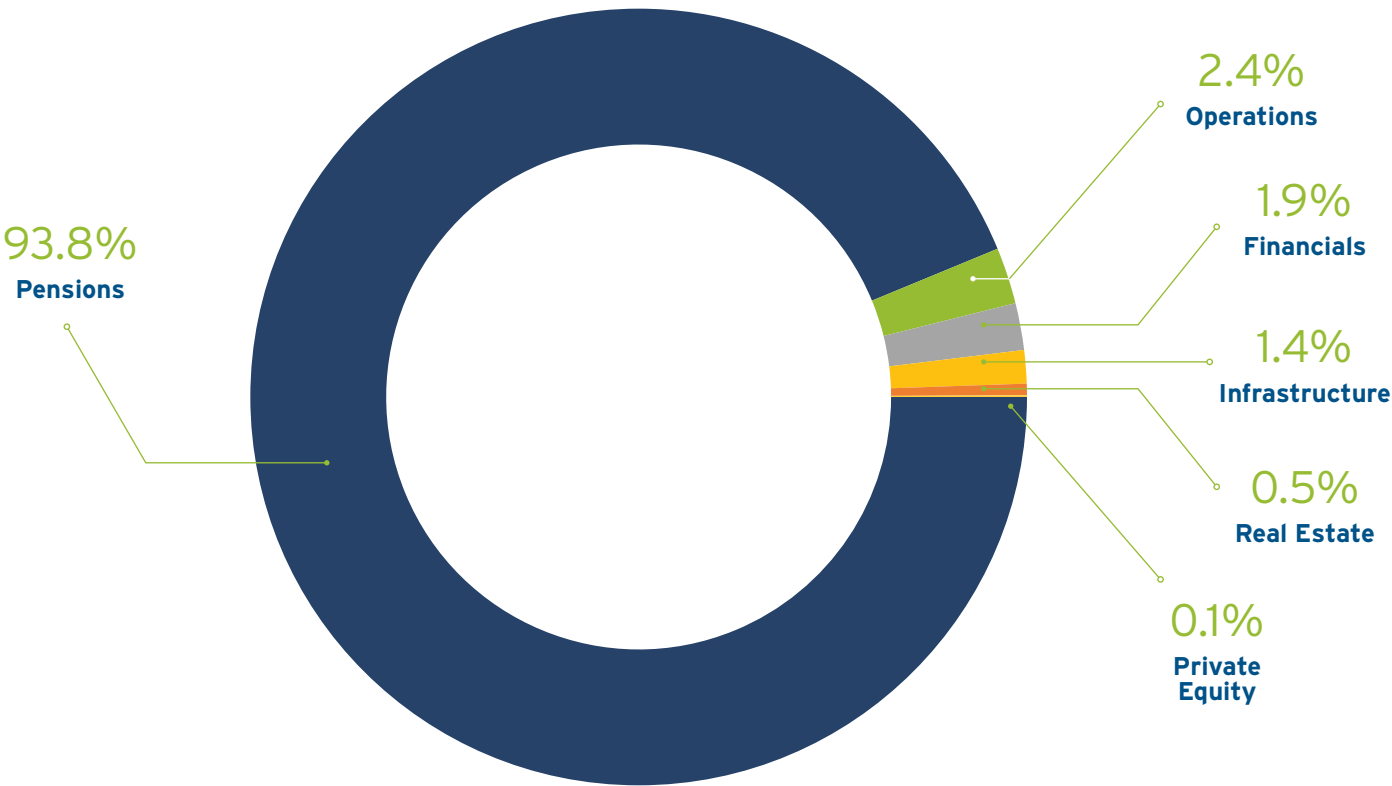
Figure 6 Number of jobs supported per 1,000 population by the Plans across Alberta by Census Division, 2021



2.2.4 Sources of Employment Support

The total employment supported arises from several sources. As shown in Figure 7, almost 94% of the employment supported arises from the pension spending by retirees. This is reflected in the industry sectors supported by retail trade, accommodation and food services, and manufacturing (which includes the production of consumer staples such as food and drinks) being the top industry sectors. Of the remaining 6%, most of the jobs supported arise from the operations and financial management of the Plans. With only a small footprint of infrastructure, real estate, and private equity in Alberta, these economic activity sources only support 2% of the total 43,700 Plan-supported jobs in the province.

Figure 7 Employment contributions by source sector, 2021



It is important to note that there is no mandate for the Plans to invest in Alberta in particular, so the small contribution of investments to the total employment supported should not be viewed as an issue. It is simply a reflection of the Plans’ investment choices to seek safe and reliable returns on their investments and to diversify their exposure to risk. By spreading their investments geographically and across different asset types, they reduce the risk that would come from concentrating investment too heavily in one area.

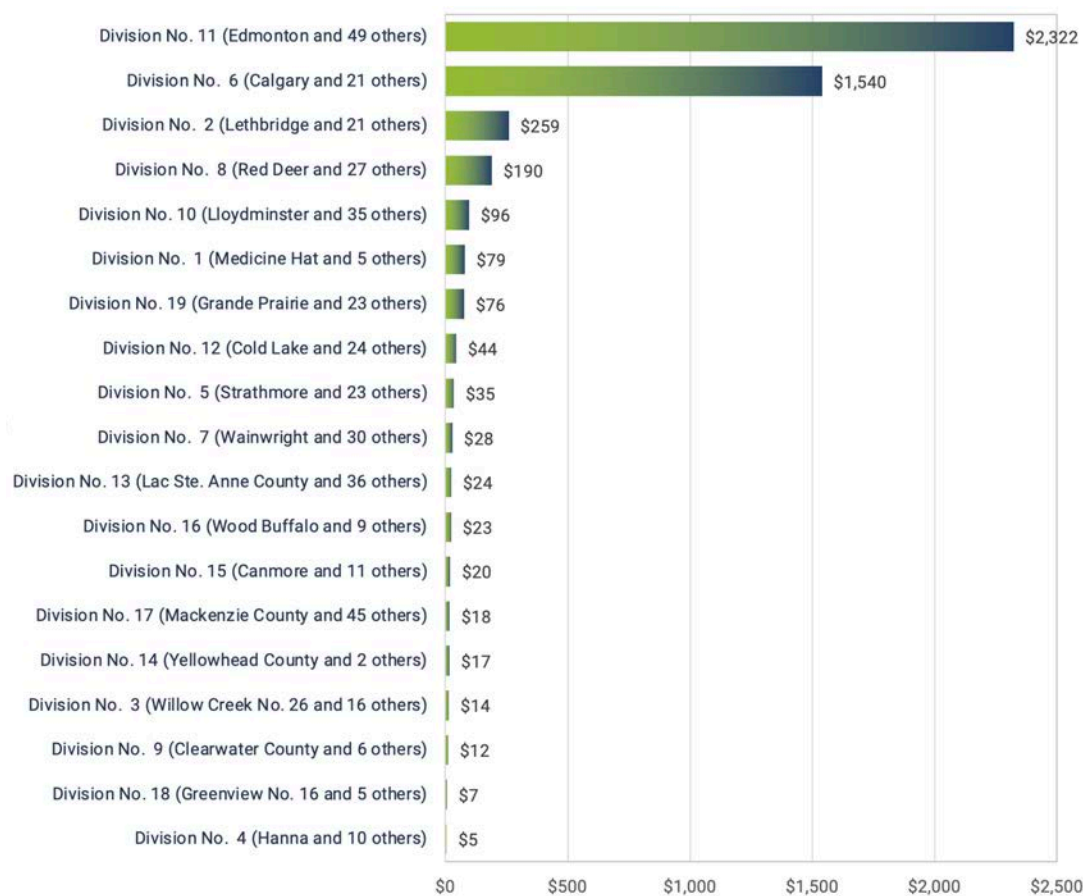
## 2.3 The Plans’ Support of Alberta’s GDP

This section reports the aspects of economic activity, measured by Gross Domestic Product (GDP), which is supported by the Plans, including regional and industry sector

### 2.3.1 GDP Supported

Through its members, investments and operations, the Plans supported \$4.8 billion of economic activity in 2021. As shown in Figure 8, almost half of the activity occurred in the Edmonton area, followed by Calgary. However, all census divisions in the province saw some economic activity supported by the Plans.

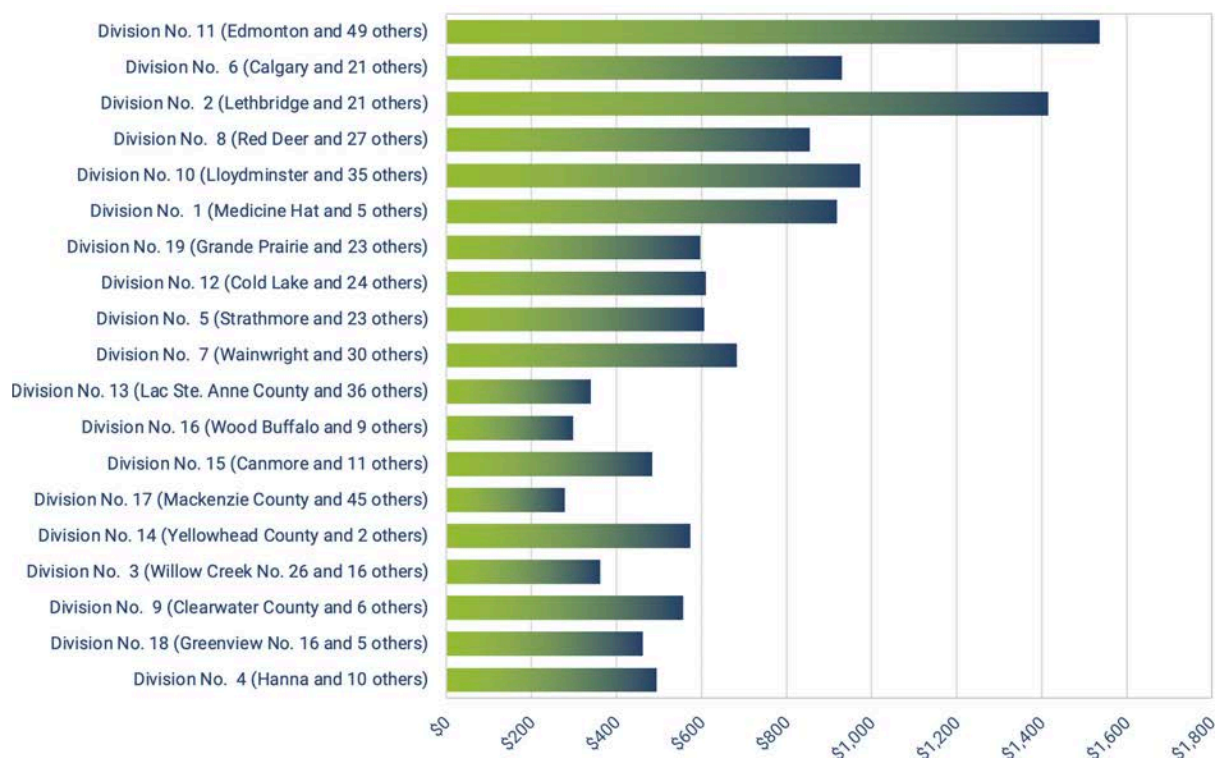
Figure 8 GDP supported by the Plans by census division (\$M), 2021



The variation across the province of the total economic activity within each region is affected by its population. Adjusting for the population of each region, as shown in Figure 9, the GDP per capita shows much less variation. This highlights how the economic benefits are important to smaller communities.



**Figure 9** GDP Per Capita (\$)



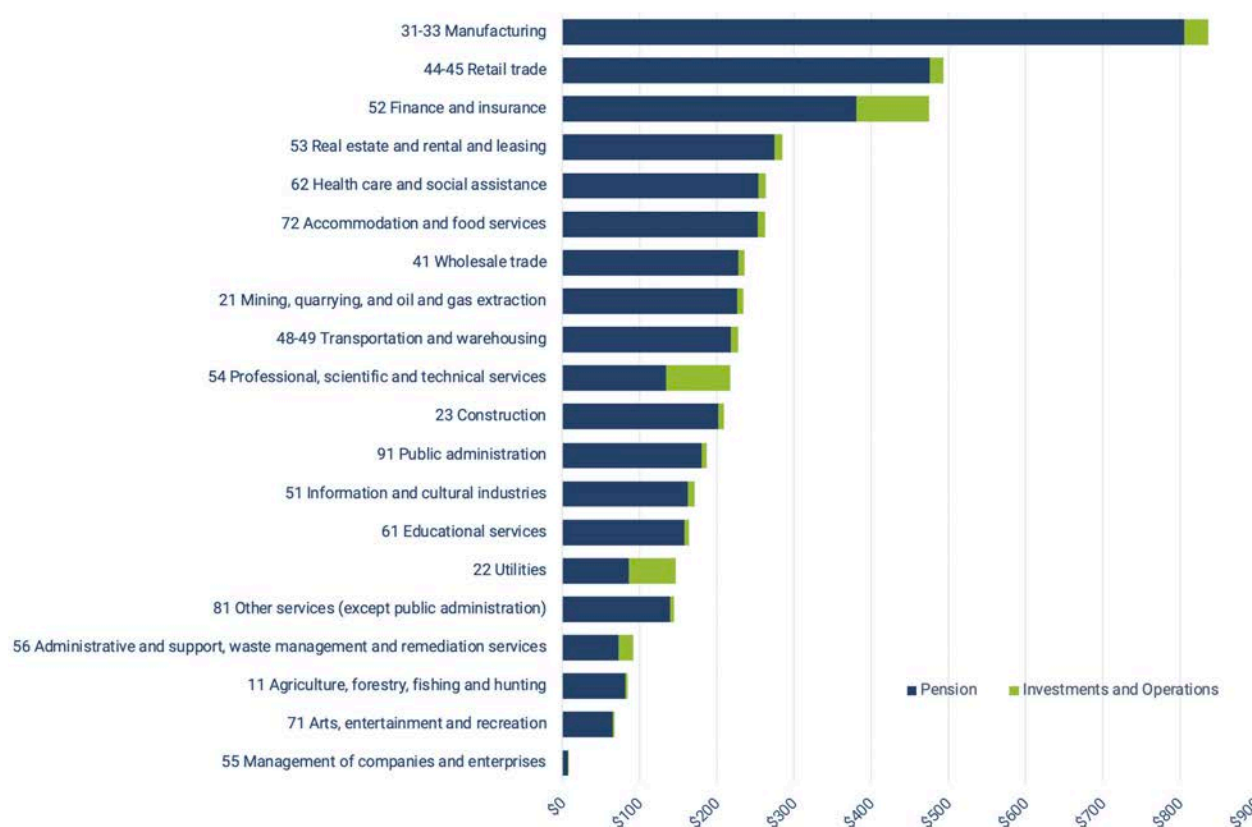
This is particularly important in the face of greater urbanization, with smaller communities having challenges maintaining their local economies. The economic activity supported by the Plans can play a key role in sustaining these regions.

### 2.3.2 GDP Supported by Industry and Source

The primary industries which are supported in Alberta, when measured from the GDP point of view, are the manufacturing sector (\$840 million in 2021), retail trade sector (\$490 million) and finance sector (\$480 million). These differ from the top sectors by employment since each industry has a different economic productivity level. With fewer jobs supported than the retail sector, the manufacturing sector's greater value-add in their business operation results in a larger GDP contribution. The full set of industries are shown in Figure 10.



**Figure 10** GDP supported by the Plans by industry (\$M), 2021



In addition, Figure 10 shows the source of economic activity for each industry - whether it is driven by pension spending or other investment and operations activity. With the exception of utilities, finance sectors and professional services, the vast majority of the economic activity is supported by retirees. In the utility sector, the investments in infrastructure by the Plans contribute significantly. For the finance and professional services sectors, the operations and financial operations of the plans provide a greater share of the economic activity.

### 2.3.3 The Plans' Support of Government Revenue

The economic activity supported by the Plans gives rise to just over \$1 billion in tax revenue annually for the provincial and federal governments. A bit over half arises from personal income taxes, and about a quarter is from consumption taxes.

**Table 1** Tax revenues supported in 2021 (\$M)

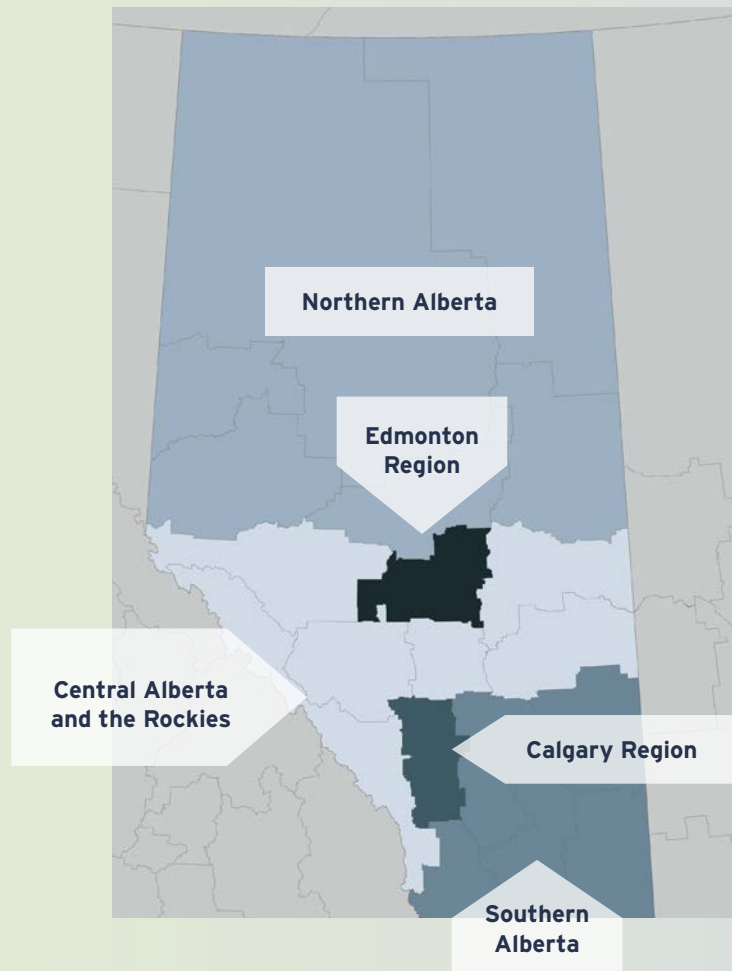
Provincial and Federal Tax Revenues Supported by Plan in 2021 (\$M)				
	Income Tax	Corporate Tax	Consumption	Total
<b>Federal</b>	\$395	\$117	\$217	\$729
<b>Provincial</b>	\$179	\$70	\$24	\$273
<b>Total</b>	\$574	\$187	\$241	\$1,002

Note that while Alberta has no general provincial consumption tax (i.e. provincial sales tax), there are still consumption taxes on a small number of specific goods such as tobacco and gas.

## 2.4 Regional Importance of the Plans' Economic Contribution

Alberta has 19 Census Divisions which are used as the basis for the regional analysis. Plan members live in every one of these regions. As such, the Plans' economic contributions in 2021 were measurable in every community. However, as some divisions have small populations, the regional results are grouped into five major areas, as shown in Figure 11.

*Figure 11* Regional grouping of Alberta Census Divisions



Each of the following sections contains a summary of key statistics and observations for each of the five groupings.

2.4.1 Edmonton Region



The Plans In The Edmonton Region

The Edmonton Region consists of Census Division 11. There are 175,360 members from the Plans residing in the region, of which 51,090 are retirees. The regular retirement benefits paid to retirees amount to 32% of the total private retirement income and 17% of all retirement income in the region.

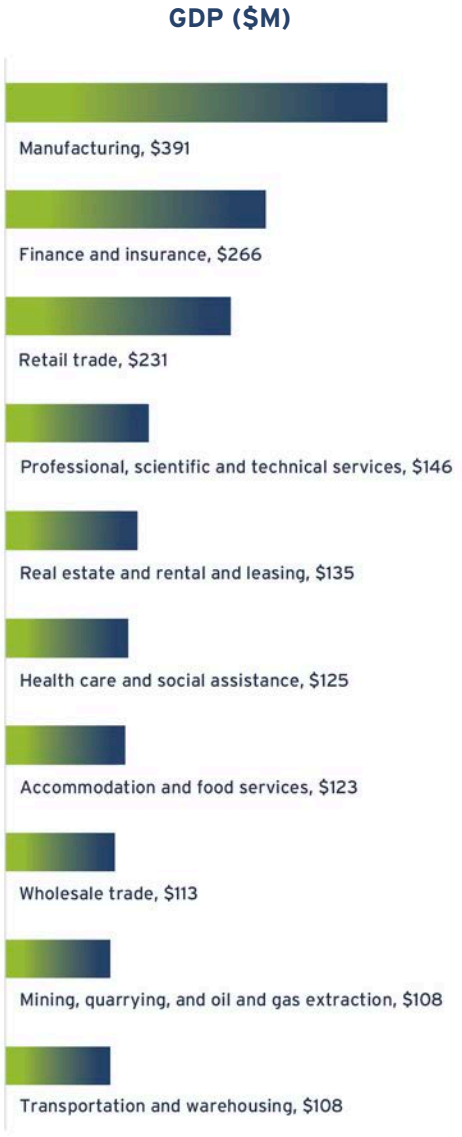
Almost 50,000 other people are affected by the Plans through jobs supported by the Plans' activity, including over 9,000 households with children.

Economic Contribution

The Plans support almost 21,000 jobs in the Edmonton region through the spending of retirees, wages to employees, and their investment activity. Of those jobs, nearly 30% are filled by those under the age of 30, highlighting how the activity of the Plans affects people of all ages. The total economic activity, measured in terms of GDP, amounts to \$2.3 billion annually. This is 48% of the provincial economic activity supported. For every \$10 of pension payments made, over \$17 of economic activity is supported in Edmonton and a total of almost \$15,000 of economic activity per member.

The primary industries impacted, measured by GDP, are the manufacturing, finance and insurance, and retail sector. Note that manufacturing includes many consumer staples such as food and drink.

Investments held in industrial, office, and retail buildings help support the activity of 1,300 businesses employing 12,000 people. Residential investments provide housing to 1,400 families.





2.4.2 Calgary Region

The Plans In The Calgary Region

The Calgary region, Census Division 6, has 130,440 Plan members. 28% are retirees, with their pension income contributing 23% of all private retirement income in the region. The smaller percentage compared to the Edmonton region arises due to the smaller public sector footprint in Calgary compared to Edmonton, rather than any significant difference in retirement benefits received by Plan members.

In addition to Plan members, over 33,000 other people are impacted by the plans through direct, indirect, and induced economic effects.



GDP (\$M)



Economic Contribution

The largest industry sectors within the Calgary region, when measured by GDP, which is supported by the Plans, include Manufacturing, Retail Trade, and Finance and Insurance. In total, \$1.5 billion of economic activity is supported, including almost 14,000 jobs. On average, \$13,200 of economic activity is supported for every plan member in the region. This gives rise to a total of \$320 million in tax revenue for the provincial and federal governments. For every \$10 of pension payments paid into the region by the Plans, \$16.2 of economic activity is supported.

Investments held in industrial, office, and retail buildings help support the activity of 3,200 businesses employing 30,000 people. Residential investments provide housing to 1,300 families.

2.4.3 Southern Alberta



The Plans In Southern Alberta

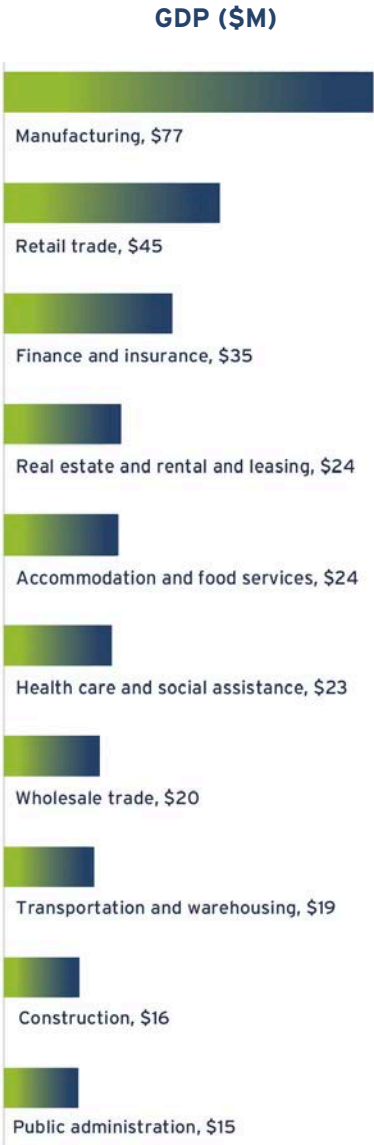
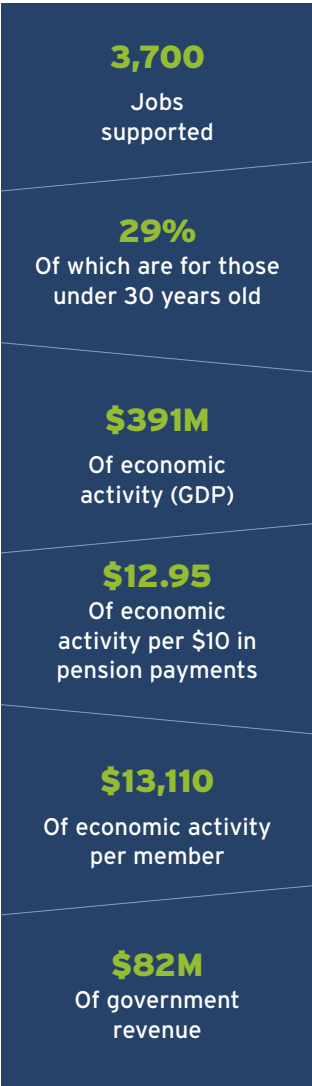
The Southern Alberta region, which includes Census Divisions 1 through 5 and encompasses the cities of Medicine Hat, Lethbridge, Pincher Creek, Hanna, and Drumheller, among others, has 20,660 non-retired Plan members and 11,320 retiree Plan members. Pension payments made by the Plans contribute 28% of the private retirement income in the region. With over 2% of the region's total income arising from the pension payments (the highest of the five regions), pensions play a key role in maintaining the local economies.

Economic Contribution

The Plans support almost \$400 million of GDP in Southern Alberta. This is coupled with 3,700 jobs, including 1,100 for those under 30 years old. The economic activity gives rise to \$82 million in tax revenue. On average, almost \$13 of economic activity is generated for every \$10 of pension payments made in the region.

The economic activity supported per member is in the middle of the regional grouping - lower than Calgary or Edmonton but greater than the other regions.

As with other regions, manufacturing and the retail trade sectors are the largest supported sectors (by GDP) driven by the spending of retirees.

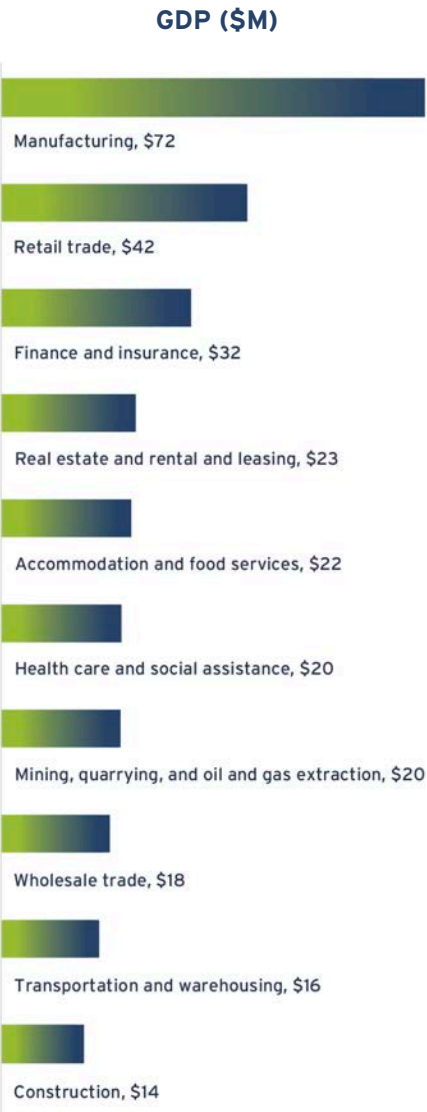


2.4.4 Central Alberta and The Rockies

The Plans In Central Alberta and the Rockies

The Central Alberta and Rockies Region includes the Census Divisions 7 through 10 and 14, and 15. Key cities in the region include Red Deer, Jasper, Banff, Edson, Stettler and Lloydminster. A total of 11,350 retired members of the Plans live in the region, with 23,580 non-retired members. The Plans provide 23% of all private retirement income and 11% of total retirement income in the region.

In addition to the Plan members, the economic activity supported by the Plans affects 7,700 people in the region.



Economic Contribution

The economic activity supported by the payments of pensions and the operations and investment of the Plans supports 3,400 jobs in the Central Alberta and Rockies Region. Of these jobs, over a quarter are for people under the age of 30.

With \$360 million of economic activity supported every year, this is equivalent to \$11,700 per member living in the region. This is the second lowest of the five regions due to some of the economic activity flowing from more rural regions into the larger cities. For example, some more significant retail purchases may occur in the city centres.

The main industries supported in the region include manufacturing and the retail trade sector. Financial businesses and real estate also contribute to the economic activity.

2.4.5 Northern Alberta



The Plans In Northern Alberta

The Northern Alberta Region includes the Census Divisions 12, 13, and 16 through 19. Key cities in the region include Fort McMurray, Peace River, Grande Prairie, and Athabasca. With a total of 28,680 members living in the region, only 25% are retired. This is well below the average of 29% for the entire province, reflecting the lower likelihood that retirees remain in the region. Nonetheless, the Plans still contribute 25% of the region's private retirement income.

Economic Contribution

Due to the fewer retirees living in the region, the economic activity supported per member in Northern Alberta is only \$7,500 per member, for a total of \$191 million in regional GDP. This is generated by 1,800 jobs, of which 29% are for those under 30. The fraction of jobs filled by this younger group is higher than the provincial average, reflecting both the primary industries supported, (manufacturing and retail sectors) as well as the younger average population in Northern Alberta.

For every \$10 of pension payments made in the region, just over \$11 of economic activity is generated. This reflects that a considerable portion of the retirement income that retirees do receive flows into other parts of the province.



## 2.5 Economic Contributions of Individual Plans

Each of the plans in the study contribute to the overall economic contribution. While the primary differences between the plans are driven by the number of retirees, the location where retirees live, and the average pensions received, also contribute to differences among the Plans' contributions.

### 2.5.1 Local Authorities Pension Plan

#### Membership Profile

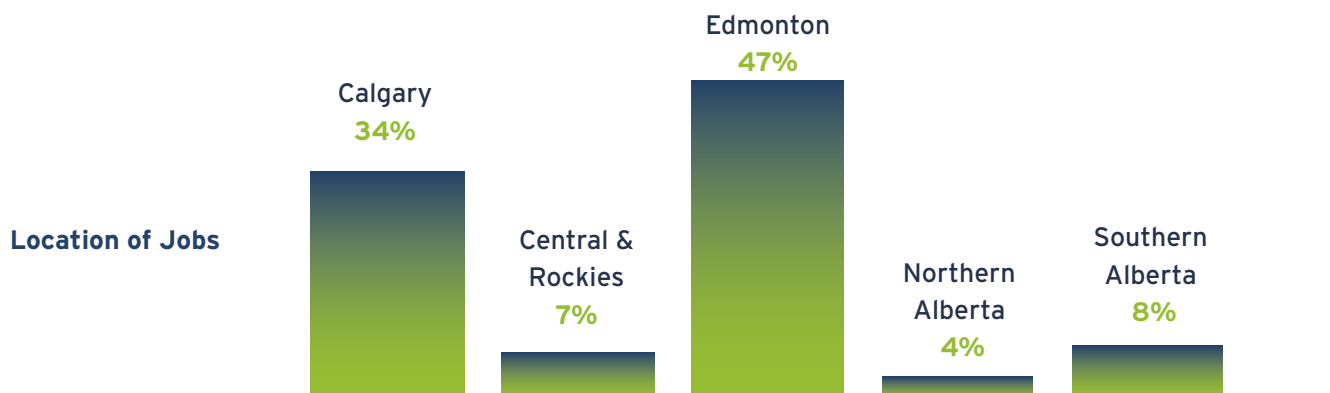
The Local Authorities Pension Plan (LAPP) has 274,300 members, of which 243,960 live in Alberta. Across the province, it provides 13% of all private retirement income and almost 7% of total retirement income. In addition to the LAPP members, the plan affects over 51,000 other people in the province, including almost 10,000 households with children.



#### Economic Contribution

LAPP supports 21,800 jobs in the province through the retirement spending of retirees and the operations and investments of the plan. Of the jobs supported, over a quarter are filled by those under 30 years old. While the majority of the jobs are located in the Edmonton and Calgary regions, 20% of the jobs supported are outside those areas. This reflects the diverse municipal base of employers who participate in LAPP.

The economic activity supported by LAPP in 2021 amounts to \$2.4 billion. This is equivalent to \$9,800 per retiree and \$15.84 of economic activity for every \$10 of pension payments made by the Plan. This economic activity generates \$500 million of tax revenue every year.





2.5.2 Alberta Teachers' Retirement Fund

Membership Profile

The Alberta Teachers' Retirement Fund (ATRF) has 84,400 members, including 50,060 active or deferred members and 27,520 retirees who live in the province. ATRF provides 8.2% of the private retirement income in the province and 4.2% of the total retirement income in the province.

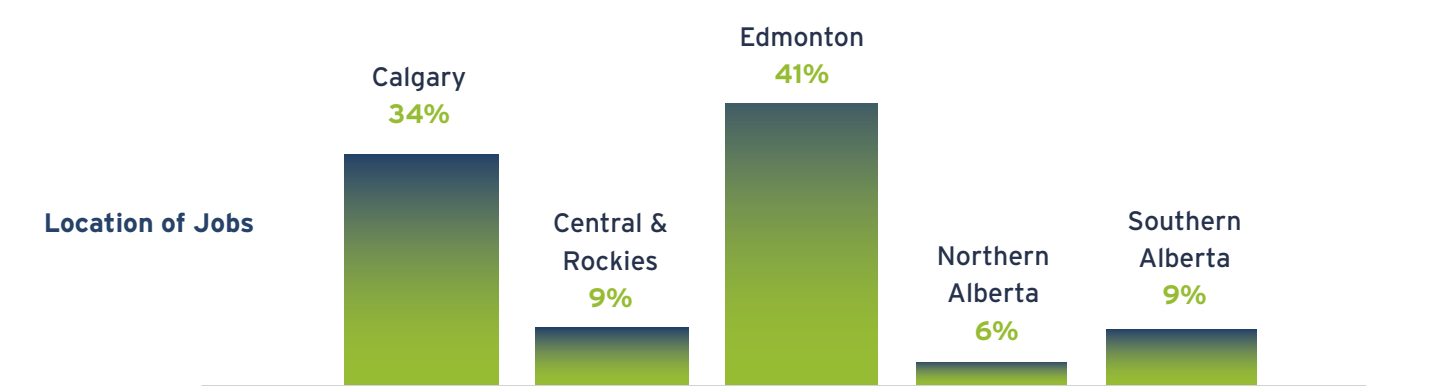
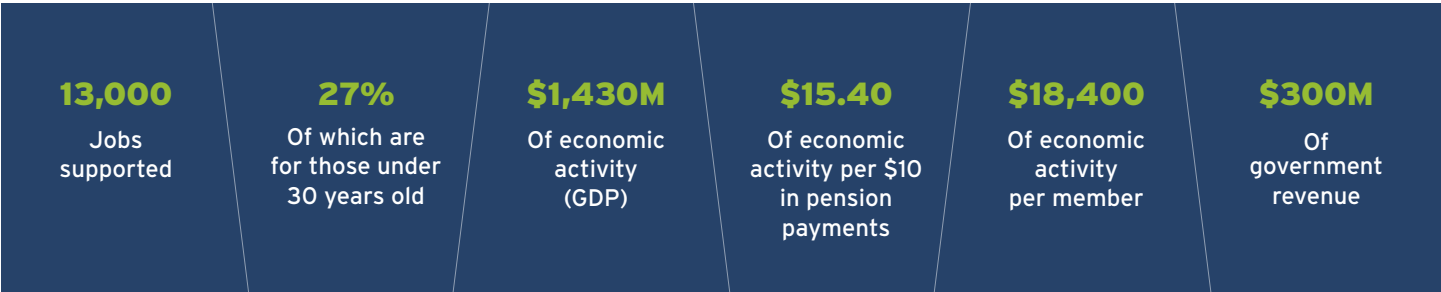
In addition to the plan membership, an additional 30,600 people in the province are affected by the plans, whether through supported employment or being a member of a household with a supported employee.



Economic Contribution

Across Alberta, ATRF's retirees, operations, and investments help support 13,000 jobs. Of these, 27% are filled by people under 30 years old. 24% of the jobs supported are located outside of the Edmonton and Calgary regions - the highest among the four plans. This broad geographic support is a consequence of the wide distribution of teachers (their primary members) across the province rather than more centralized provincial or municipal government occupations.

The Plan supported \$1.4 billion in economic activity in 2021, or \$18,400 per plan member. For every \$10 of pension payments ATRF makes, \$15.40 in economic activity is supported. This economic activity supports \$300 million of provincial and federal tax revenue.



2.5.3 Public Service Pension Plan

Membership Profile

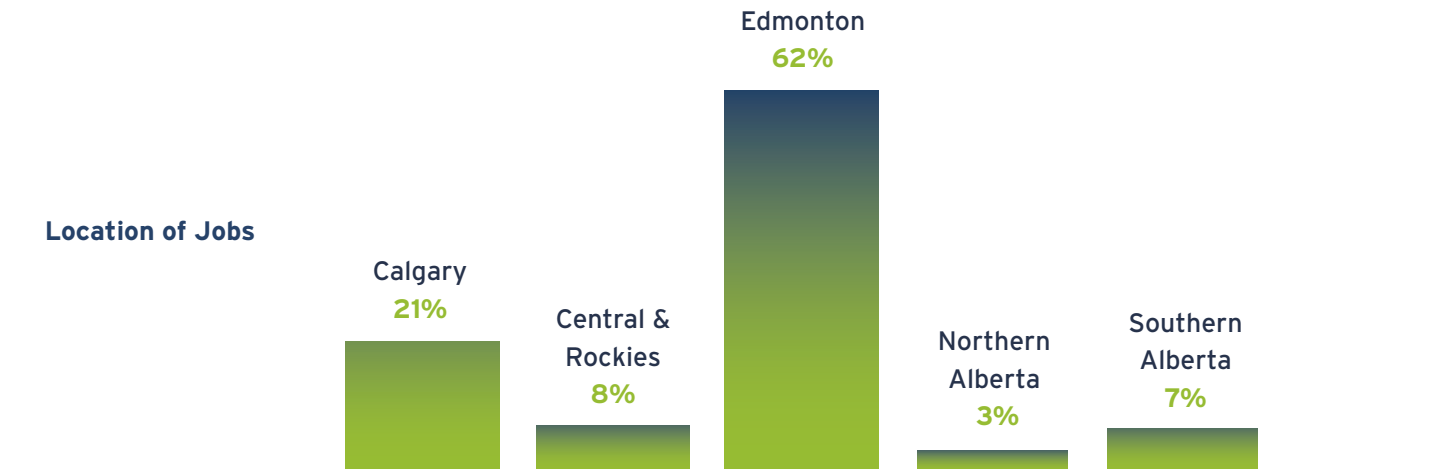
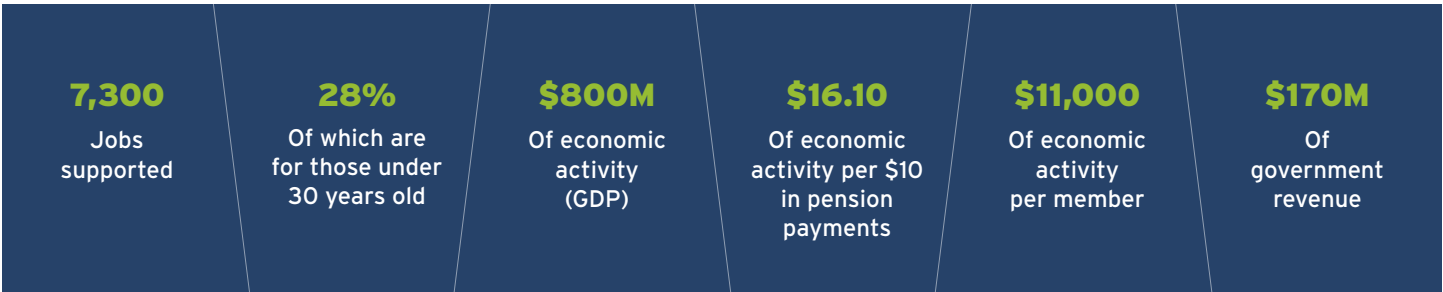
The Public Service Pension Plan (PSPP) has 85,100 active, deferred, and retired members. Of those, 50,210 active or deferred members live in the province, along with 23,090 retirees. Pension payments by the Plan province 4.4% of the private retirement income in Alberta and 2.3% of the total retirement income. Over 17,000 additional people who are not members of the Plan are affected by its activities, whether through supported employment or being a member of a household with a supported employee.



Economic Contribution

PSPP, through its payment of pension, operations, and investments, supports 7,300 jobs across Alberta. Due to the high concentration of retirees of the provincial government and related organizations in the plan, PSPP has the highest percentage among the plans (62%) of the jobs supported in the Edmonton area.

The total economic activity supported by the Plan is \$800 million annually. This is equivalent to \$16.10 of activity for every \$10 of pension payments made. On a per member basis, PSPP supports \$11,000 of economic activity per member. This activity generated \$170 million of tax revenue for the provincial and federal governments.



2.5.4 Special Forces Pension Plan

Membership Profile

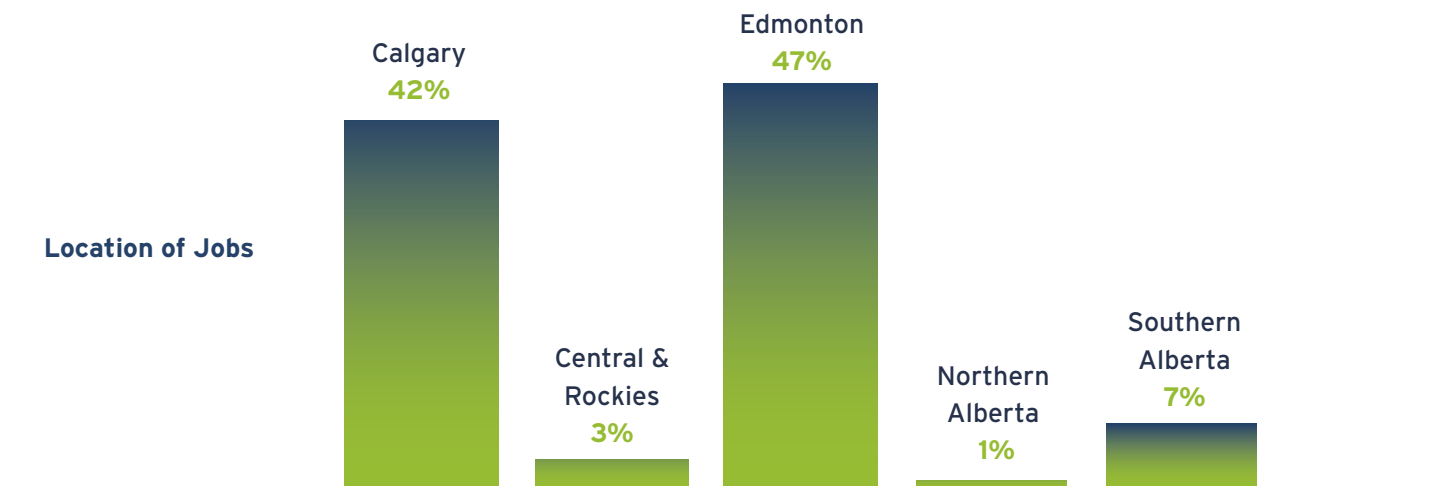
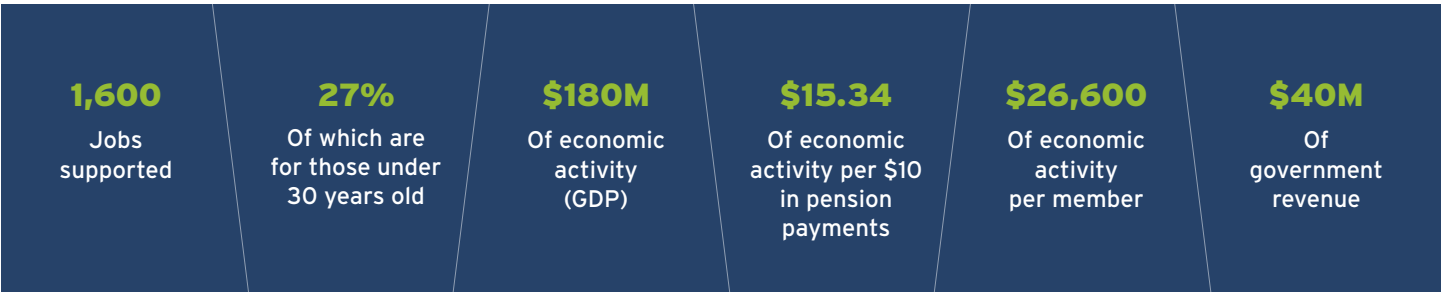
The Special Forces Pension Plan (SFPP) has 7,300 members. Of those, 6,690 reside in Alberta. While the plan is smaller than the others, it still provides 1% of the private retirement income in Alberta and 0.5% of the total retirement income in the province. A total of 3,800 other people in the province are affected by the plan, whether through supported employment or being a member of a household with a supported employee.



Economic Contribution

The pension payments and operations of SFPP support 1,600 jobs across the province. The jobs are concentrated in the Calgary and Edmonton regions, with 89% of jobs supported in those two regions. As retired members of SFPP primarily live in those two areas, and the majority of spending and associated economic activity remains concentrated in those regions.

The total economic activity supported amounts to \$180 million. While the size of the economic activity supported reflects the smaller size of the pension plan, SFPP has the highest economic activity supported per member, at \$26,600. However, the economic activity supported per \$10 of pension payments remains similar to the other plans at \$15.34.



## 3.0 Conclusions

Across Alberta, through their investments, operations and 117,000 retired members, the Plans supported over 43,700 jobs and over \$4.8 billion in provincial GDP in 2021. Through the economic activity they supported by spending their pension income, retired plan members alone supported more than 41,000 jobs and \$4.4 billion in provincial GDP. The Plans also contributed to Alberta's prosperity through their Alberta-based investments found in over 100 communities across the province. These investments generated an additional 2,700 jobs across the province and contributed \$400 million to GDP.

The economic activity supported by the Plans generated revenue for the provincial and federal governments through personal, corporate and consumption taxes, which amounted to just over \$1 billion annually that helped pay for local public services.

The industries most supported by the Plans' pension and investment activities in terms of economic activity were the manufacturing and retail trade sectors. The mix of industries supported by the Plans varies according to each region's economic base and the types of investments present, although retail trade, accommodation and food services, health care, and manufacturing were among the five industries in which the most jobs were supported in every region.

At the regional level, the plans play an important role in supporting the GDP and employment contributions across the province. In all regions of the province, there is more economic activity generated than pension payment received, highlighting the multiplying that occurs as retirees spend their income. Given that rural regions in Alberta tend to have difficulties retaining their younger population, this is an important source of support which helps to sustain the vitality of these communities.

**The magnitude of these economic, employment and government revenue contributions highlight the significant and unique impact that the activities of the Plans have in the province.** While the Plans have investments in commercial, industrial and retail investments, and these play a significant role in supporting employment and economic activity where they are located, the Plans' members living all over the province have an even larger impact. Having spent their careers building their communities, this study shows that the members of the Plans continue to support them through their pensions in their retirement years.

# Methodology

## A.1. Economic Contribution Analysis

Economic contributions arise from three main effects by economic convention:

### Direct Effects

Include all economic activity directly attributable to the operations of the Plans and their investments, as well as the expenditures of Plan retirement benefits by their members. These include the direct spending of retirement benefit, employees' wages, as well as the value-added output of investments in Alberta.

### Indirect Effects

Include all the economic activity supported by business-to-business interactions within the supply chain. They include spending on the goods and services required to conduct business by the Plans and their investments and the business-to-business transactions in local communities where Plan members spend their retirement benefits. The latter would include additional wages paid to salespeople working in shops where families spend their retirement benefits and the inputs required to produce and supply the additional goods bought by these families.

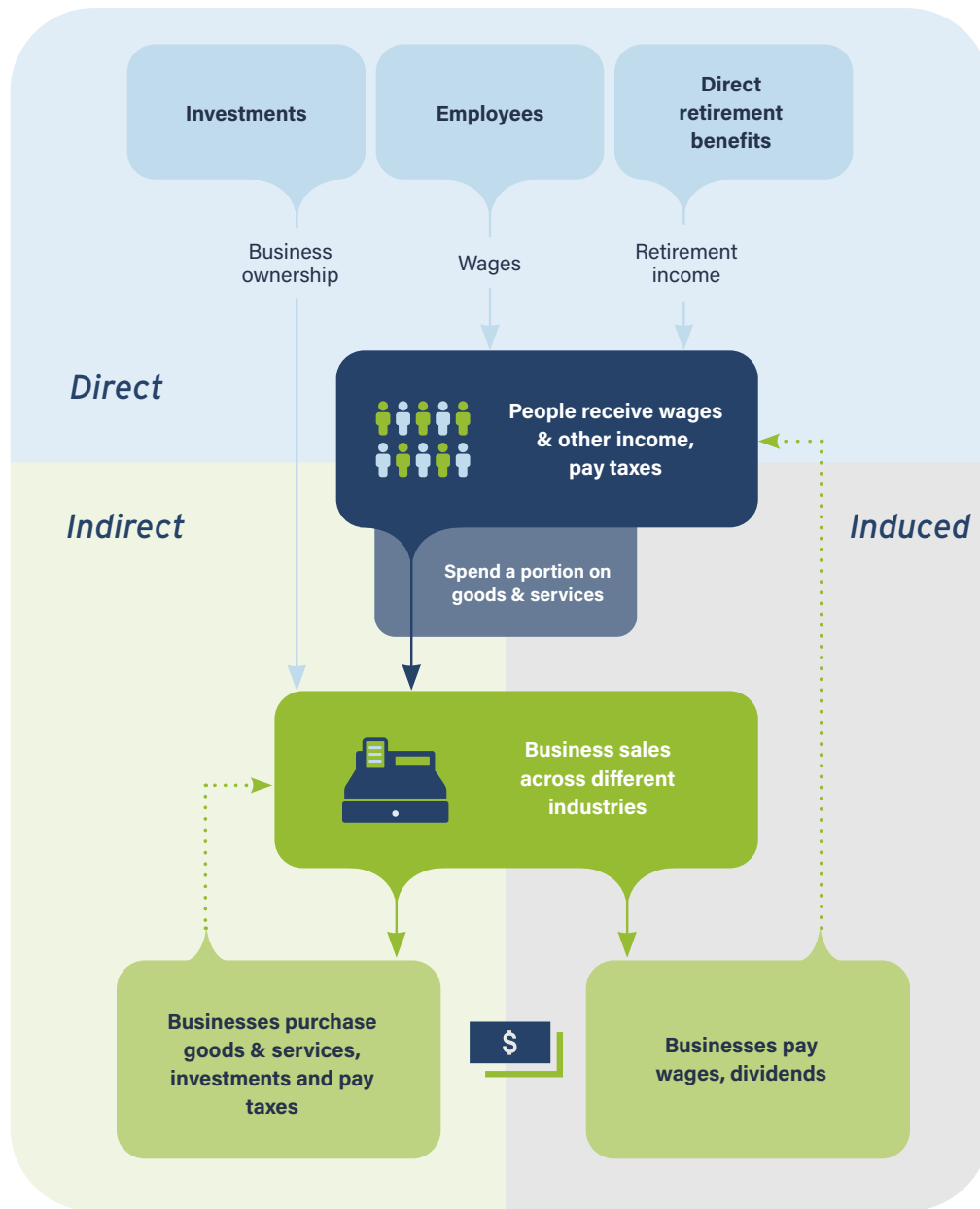
### Induced Effects

Include all economic activity supported by the spending of wages earned by workers whose employment is supported by the Plans' economic activity. Induced effects also include expenditures on increased capacity or the replacement of depreciating capital stock that result from reinvesting business profit. These purchases or activities can lead to further hiring, resulting in income and tax revenues.

The diagram in Figure 13 shows how the sources of Plans' economic activity enter into the calculation of economic contribution by the type of economic effect.



**Figure 12** Sources of the Plans' economic activity, interactions and economic effects



## A.2. Computational Approach

Data provided by the Plans on pension payments<sup>8</sup>, operations and assets were used as inputs for this analysis. Where data was not available, e.g. the number of employees hired by certain Plan assets, CANCEA generated estimates using Alberta-specific industry averages.

This analysis was conducted through an agent-based model developed by CANCEA and housed in their statistical analysis platform. This model simulates Alberta's economy by tracking how representative individuals, firms and governments interact with one another, given a set of characteristics and behavioural rules. Individuals are organized into households and work for firms. Individuals conduct financial transactions with firms, firms pay wages to individuals, and firms transact with one another. The government collects taxes from households and firms. The model is calibrated and regularly updated using primarily Statistics Canada data and other relevant publicly available data.

<sup>8</sup>No identifiable membership data was used in this analysis.

For this analysis, anonymous membership data was used to give specific individuals and firms in the model the characteristics of Plan members who receive retirement benefits (e.g. location and income) and firms the characteristics of the Plans' operations and their investments (e.g. location, industry, number of employees). The economic activity generated by these "agents" is then tracked to see how it affects employment and economic activity in the system as a whole, i.e. the whole of Alberta's economy. This activity generates direct, indirect and induced effects in the system, which are added up to obtain the total effect.

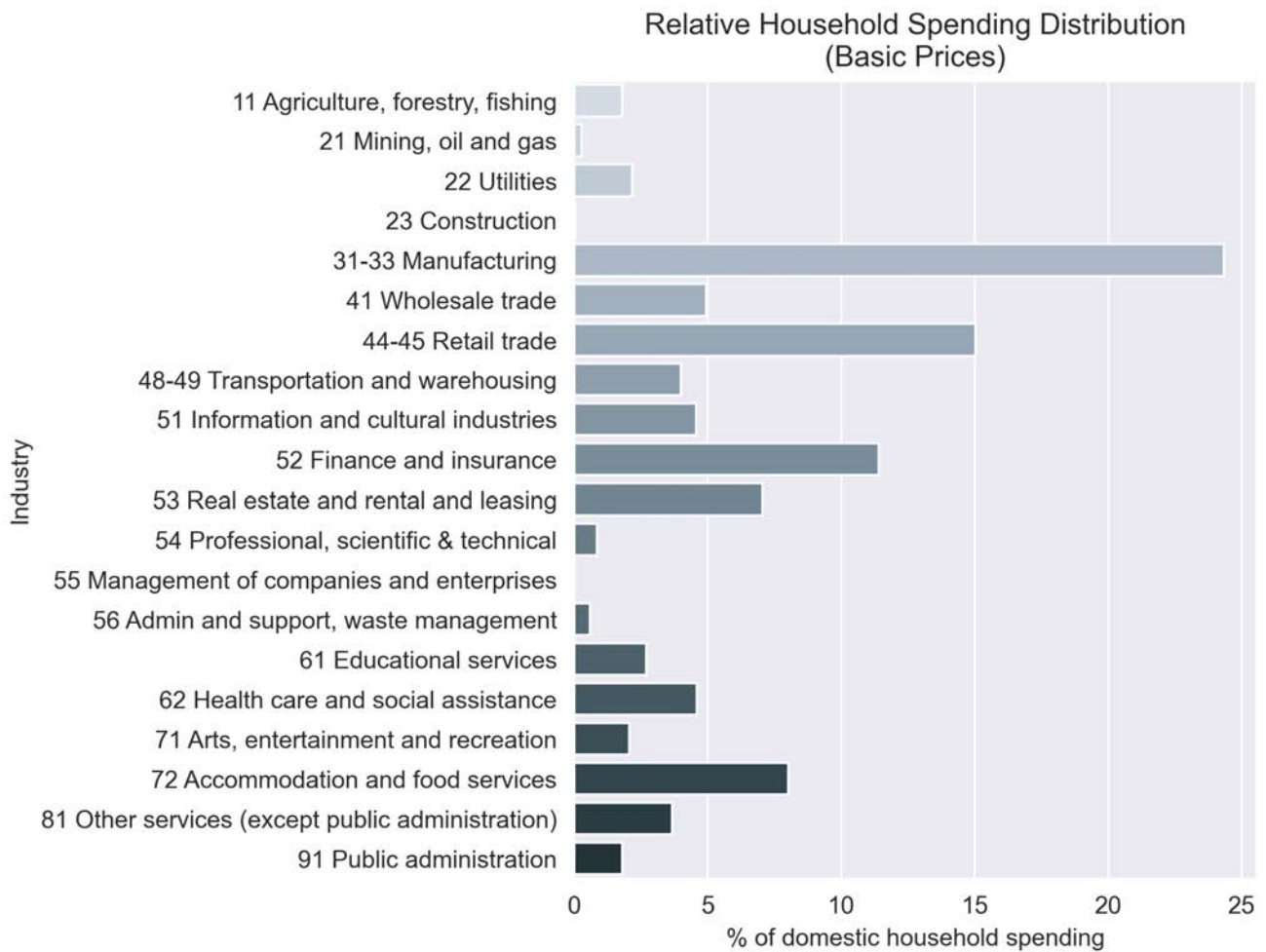
To calculate **direct effects**, the economic value of the direct output of Plan-owned assets is estimated using the number of employees by industry and standard industry multipliers provided by Statistics Canada (see Figure 14). Household expenditures by industry are estimated based on household spending patterns (see Figure 15) and total income, whether from retirement benefit payments or the wages of Plan employees.

**Indirect effects** are the economic activity generated by the Plans, their retired members and their investments in other industries through business-to-business interactions. The inputs used by the Plans and Plans-owned assets and those required to supply the goods and services purchased by retired Plan members (including the labour required to supply these inputs) are calculated using Statistics Canada symmetric input/output and multiplier tables. Jobs, i.e. labour, are filled in geographical proximity to the source of the original expenditure (Figure 16) based on the geographical distribution of jobs by industry (Figure 17). Wages, which generate additional economic activity called **induced effects**, are calculated using industry averages (Figure 18). The resulting government revenue from income, consumption and corporate taxes are then estimated using current tax rates.

**Figure 13** Alberta economic multiplier factors by industry



**Figure 14** Distribution of household spending by industry in Alberta



**Figure 15** Regional relative proximity matrix for Alberta Census Divisions

### Relative Proximity Matrix

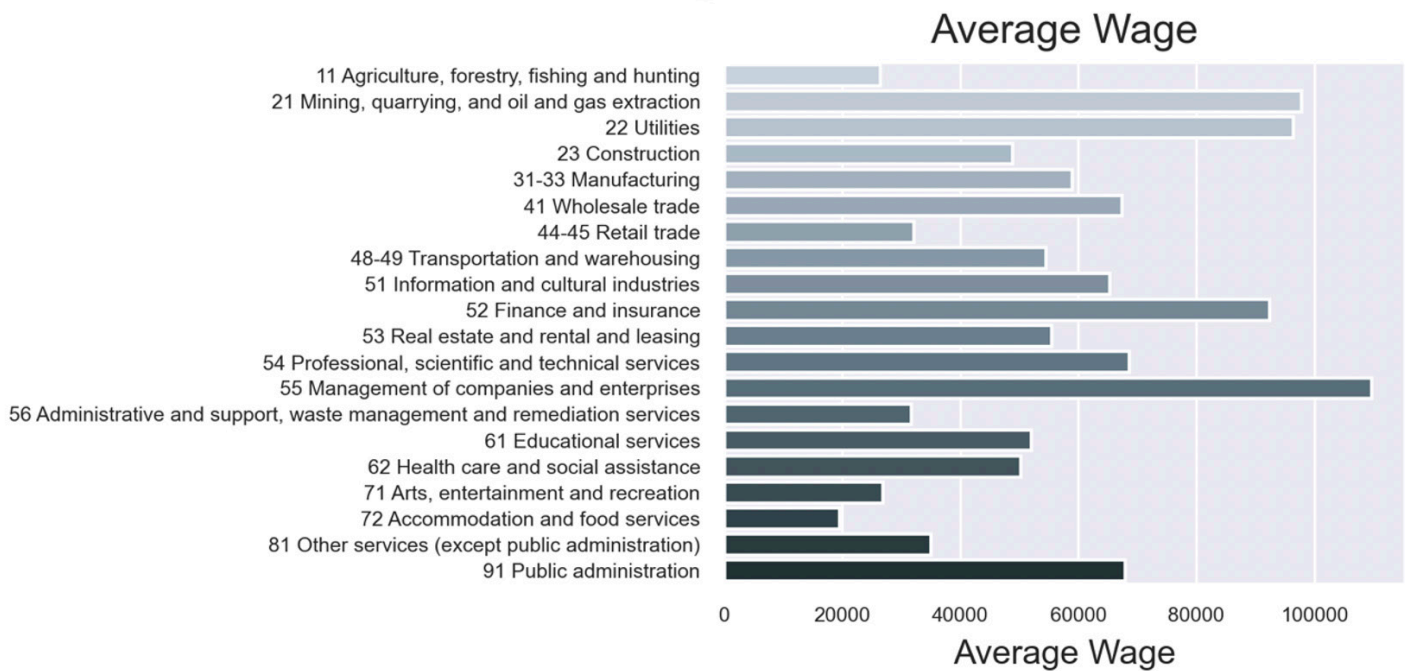
Division No. 1	1.0	0.4	0.0	0.6	0.1	0.0	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 2	0.2	1.0	0.2	0.2	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 3	0.0	0.1	1.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 4	0.5	0.3	0.0	1.0	0.2	0.0	0.7	0.0	0.0	0.4	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 5	0.0	0.3	0.2	0.0	1.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 6	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 7	0.1	0.1	0.0	0.7	0.1	0.0	1.0	0.0	0.0	0.8	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0
Division No. 10	0.0	0.0	0.0	0.3	0.1	0.0	0.8	0.0	0.0	1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
Division No. 11	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	1.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Division No. 12	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.6	0.0	1.0	0.0	0.0	0.0	0.1	0.0	0.0
Division No. 13	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	1.0	0.0	0.0	0.0	0.0	0.0
Division No. 14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	1.0	0.4	0.0	0.1	0.6
Division No. 15	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.3	1.0	0.0	0.0	0.0
Division No. 16	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	1.0	0.0	0.0	0.0
Division No. 17	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	1.0	0.1	0.1
Division No. 18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.7	0.2	0.0	0.2	1.0
Division No. 19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.2	0.9

**Figure 16** Geographic distribution of jobs in Alberta by industry (thousands)

		# of Jobs by Region and Industry (x 1,000)																			
Census Division	Division No. 1	2.3	2.0	0.2	3.7	1.7	1.1	5.0	1.7	0.5	0.9	0.5	1.7	0.0	1.2	2.7	5.3	0.8	2.9	2.1	2.9
	Division No. 10	5.2	3.6	0.5	4.4	2.3	1.6	5.4	2.1	0.4	1.2	0.7	1.9	0.0	1.4	3.2	5.6	0.7	2.5	2.5	2.2
	Division No. 11	7.9	23.4	8.0	86.4	46.4	31.9	87.8	37.3	11.5	26.2	15.3	53.4	1.1	29.0	55.8	93.7	14.2	53.4	37.3	57.7
	Division No. 12	1.9	4.7	0.2	2.9	0.8	0.6	3.0	1.5	0.2	0.6	0.3	1.1	0.0	1.1	2.3	3.4	0.5	1.6	1.5	3.6
	Division No. 13	4.2	2.4	0.3	3.8	2.3	0.9	3.6	1.8	0.2	0.7	0.4	1.2	0.0	1.0	2.1	3.2	0.4	1.6	1.6	1.5
	Division No. 14	0.8	2.4	0.1	1.2	1.2	0.3	1.8	0.9	0.1	0.2	0.2	0.5	0.0	0.5	0.7	1.0	0.2	1.1	0.9	0.7
	Division No. 15	0.2	0.7	0.1	1.3	0.6	0.2	2.0	0.9	0.2	0.3	0.5	1.1	0.0	0.9	1.2	1.9	1.4	3.9	0.7	1.1
	Division No. 16	0.2	12.8	0.3	4.1	1.4	1.4	3.4	2.2	0.2	0.5	1.0	1.6	0.0	2.1	2.0	2.3	0.5	2.2	1.7	2.0
	Division No. 17	2.8	1.9	0.3	1.9	1.7	0.4	2.4	1.4	0.2	0.3	0.2	0.7	0.0	0.8	2.5	2.3	0.2	1.3	1.3	1.9
	Division No. 18	0.8	1.0	0.1	0.7	0.2	0.1	0.6	0.4	0.0	0.1	0.1	0.2	0.0	0.2	0.3	0.5	0.1	0.5	0.3	0.6
	Division No. 19	3.6	7.0	0.5	6.2	3.0	2.5	7.8	3.7	0.7	1.6	1.3	3.3	0.1	2.1	4.2	6.4	0.9	4.1	3.7	2.9
	Division No. 2	7.0	2.5	0.6	7.3	8.0	2.7	10.3	3.7	0.9	2.2	1.1	3.7	0.1	3.1	7.3	10.9	1.4	6.0	4.2	4.4
	Division No. 3	2.3	0.5	0.1	1.3	0.8	0.4	1.4	0.7	0.1	0.4	0.2	0.6	0.0	0.5	1.3	2.4	0.4	0.7	0.7	0.9
	Division No. 4	1.4	0.4	0.1	0.3	0.1	0.1	0.4	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.3	0.5	0.0	0.2	0.1	0.2
	Division No. 5	4.0	1.3	0.2	2.3	1.3	0.7	2.4	1.3	0.2	0.7	0.3	1.0	0.0	0.9	1.7	2.7	0.5	1.6	1.2	1.5
	Division No. 6	8.4	50.5	9.5	79.5	44.9	31.7	95.1	50.3	16.8	32.1	18.0	86.6	4.0	35.8	55.7	96.1	19.4	58.5	37.6	34.8
	Division No. 7	3.3	1.9	0.2	1.8	0.6	0.6	2.4	0.8	0.2	0.4	0.1	0.7	0.0	0.6	0.9	2.1	0.3	0.9	1.0	1.4
	Division No. 8	6.0	7.6	0.6	11.2	7.2	3.5	12.9	3.9	1.0	2.9	1.9	5.2	0.1	3.4	6.5	13.7	1.8	7.6	5.9	5.5
	Division No. 9	1.0	1.1	0.1	0.9	0.4	0.2	1.0	0.4	0.1	0.2	0.1	0.4	0.0	0.3	0.6	0.8	0.2	0.6	0.5	0.4
		11 Agriculture, forestry and fishing	21 Mining, quarrying and oil and gas extraction	22 Utilities	23 Construction	31-33 Manufacturing	41 Wholesale trade	44-45 Retail trade	48-49 Transportation and warehousing	51 Information and communications	52 Finance and insurance	53 Real estate and rental and leasing	54 Professional, scientific and technical services	55 Management of companies and enterprises	56 Administrative and support and waste management and remediation services	61 Educational services and health care	62 Health care and social assistance	71 Arts, entertainment and recreation	72 Accommodation and food services	81 Other services (except public administration)	91 Public administration



**Figure 17** Average wage in Alberta by industry



## B. List of industries

This report follows the North American Industry Classification System (NAICS). Table 5 below lists all industries by full name and NAICS code.

**Table 2** Full industry list

NAICS Code	Industry	NAICS Code	Industry
11	Agriculture, forestry, fishing & hunting	54	Professional, scientific & technical services
21	Mining, quarrying, and oil & gas extraction	55	Management of companies & enterprises
22	Utilities	56	Administrative and support, waste management & remediation services
23	Construction	61	Educational services
31-33	Manufacturing	62	Healthcare and social assistance
41	Wholesale trade	71	Arts, entertainment and recreation
44-45	Retail trade	72	Accommodation and food services
48-49	Transportation and warehousing	81	Other services (except public administration)
51	Information and cultural industries	91	Public administration
52	Finance and insurance		
53	Real estate and rental and leasing		

## C. Data Sources

The Plans provided the data required for this analysis, including:

- Number of members and aggregate pension payment data by location (non-identifiable)
- A detailed list of assets, including estimated market value, and number of employees (where available)
- Average wages and salaries of Plan employees and employees of some investments, where available

Note that no identifiable membership data was used in this analysis.

Statistics Canada CANSIM tables used in this analysis include:

- **11-10-0012** Distribution of income by census type
- **11-10-0019** Economic dependency profile of census families by family type and source of income
- **11-10-0033** Economic dependency profile by income and sex
- **11-10-0223** Household spending by income quintile,
- **11-10-0224** Household spending by household type,
- **17-10-0139** Population estimates, July 1, by census division, 2016 boundaries
- **36-10-0001** Symmetric input-output tables, detail level
- **36-10-0013** Input-output multipliers, summary level
- **36-10-0084** Symmetric input-output tables, summary level
- **36-10-0113** Input-output multipliers, provincial and territorial, summary level
- **36-10-0221** Gross domestic product, income-based, provincial and territorial, annual
- **36-10-0222** Gross domestic product, expenditure-based, provincial and territorial, annual
- **36-10-0438** Supply and use tables, summary level, provincial and territorial
- **36-10-0450** Revenue, expenditure and budgetary balance - General governments, provincial and territorial economic account
- **36-10-0478** Supply and use tables, detail level, provincial and territorial (x 1,000)
- **36-10-0587** Distributions of household economic accounts, income, consumption and saving, by characteristic
- **36-10-0595** Input-output multipliers, provincial and territorial, detail level
- **98-400-X2016120** Income Sources and Taxes (34) and Income Statistics (5A) for the Population Aged 15 Years and Over in Private Households of Canada, Provinces and Territories, Census Divisions and Census Subdivisions, 2016 Census - 25% Sample Data
- **98-400-X2016149** Family MBM Low-income Status (5), Economic Family Structure (9), Family Size of Economic Family (5), Ages of Economic Family Members (18) and Number of Earners in the Economic Family (6) for Economic Families in Private Households of Canada, Provinces and Territories, Census Metropolitan Areas and Census Agglomerations, 2016 Census - 25% Sample Data
- **98-400-X2016227** Age of Primary Household Maintainer (9), Tenure (4), Structural Type of Dwelling (10) and Household Type Including Census Family Structure (9) for Private Households of Canada, Provinces and Territories, Census Divisions and Census Subdivisions, 2016 Census - 25% Sample Data
- **98-400-X2016292** Industry - North American Industry Classification System (NAICS) 2012 (427A), Class of Worker (7A), Labour Force Status (3), Age (13A) and Sex (3) for the Labour Force Aged 15 Years and Over in Private Households of Canada, Provinces and Territories and Census Divisions, 2016 Census - 25% Sample Data

- **98-400-X2016358** Industry - North American Industry Classification System (NAICS) 2012 (425), Employment Income Statistics (3), Highest Certificate, Diploma or Degree (7), Immigrant Status and Period of Immigration (10), Work Activity During the Reference Year (4), Age (5A) and Sex (3) for the Population Aged 15 Years and Over Who Worked in 2015 and Reported Employment Income in 2015, in Private Households of Canada, Provinces and Territories and Census Metropolitan Areas, 2016 Census - 25% Sample Data
- **98-400-X2016390** Census Family Status and Household Living Arrangements (13), Household Type of Person (9), Age (12) and Sex (3) for the Population in Private Households of Canada, Provinces and Territories, Census Metropolitan Areas and Census Agglomerations, 2016 and 2011 Census - 100% data
- **Census Profile 2016 (Census Divisions)**