

BDM 2203 Project

Study in Canada: A Dashboard for Incoming
International Students

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Agenda

- ▶ Objectives
- ▶ Methodology
- ▶ Demo and Insights

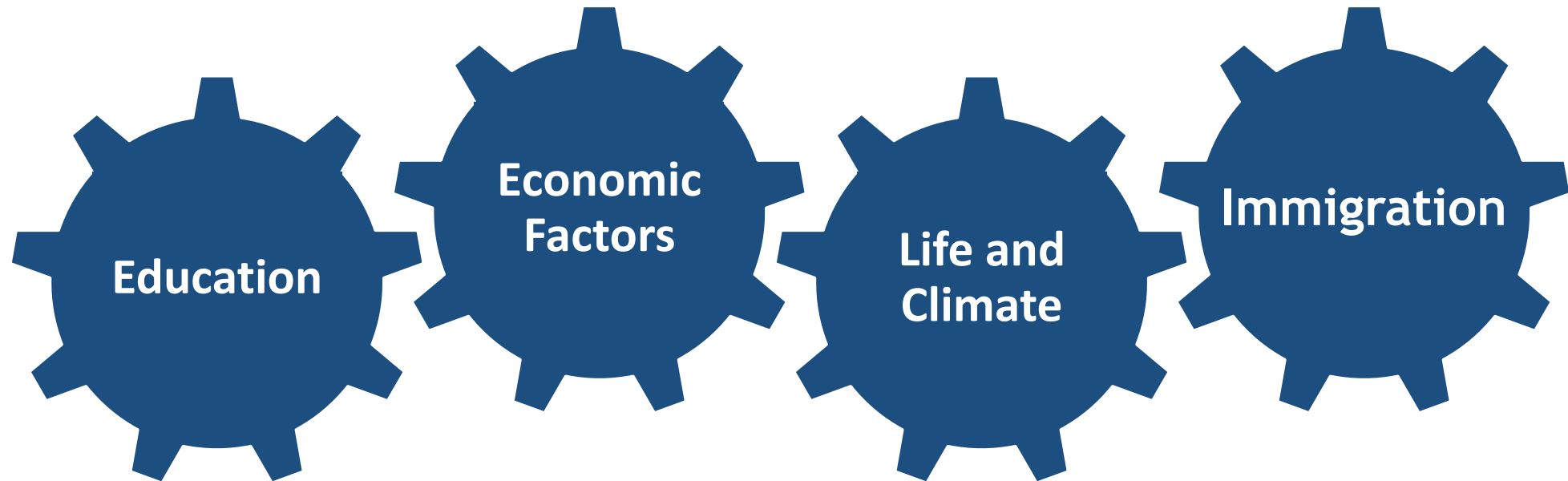
Objectives

- ▶ To create a dashboard that will guide incoming international students in choosing a Canadian province/territory for their education
- ▶ To compare different factors affecting students' decision in choosing international education destination

Methodology

Data Gathering

► Factors



Data Gathering

► Data Sources

- Statistics Canada
- Government of Canada (Canada.ca)

► Tools

- Power BI
- Python

► Data

Education

- Tuition fees for graduate and undergraduate studies
- Designated Learning Institutions

Immigration

- PR admissions
- Cultural diversity
- Inter-provincial migration

Economic Factors

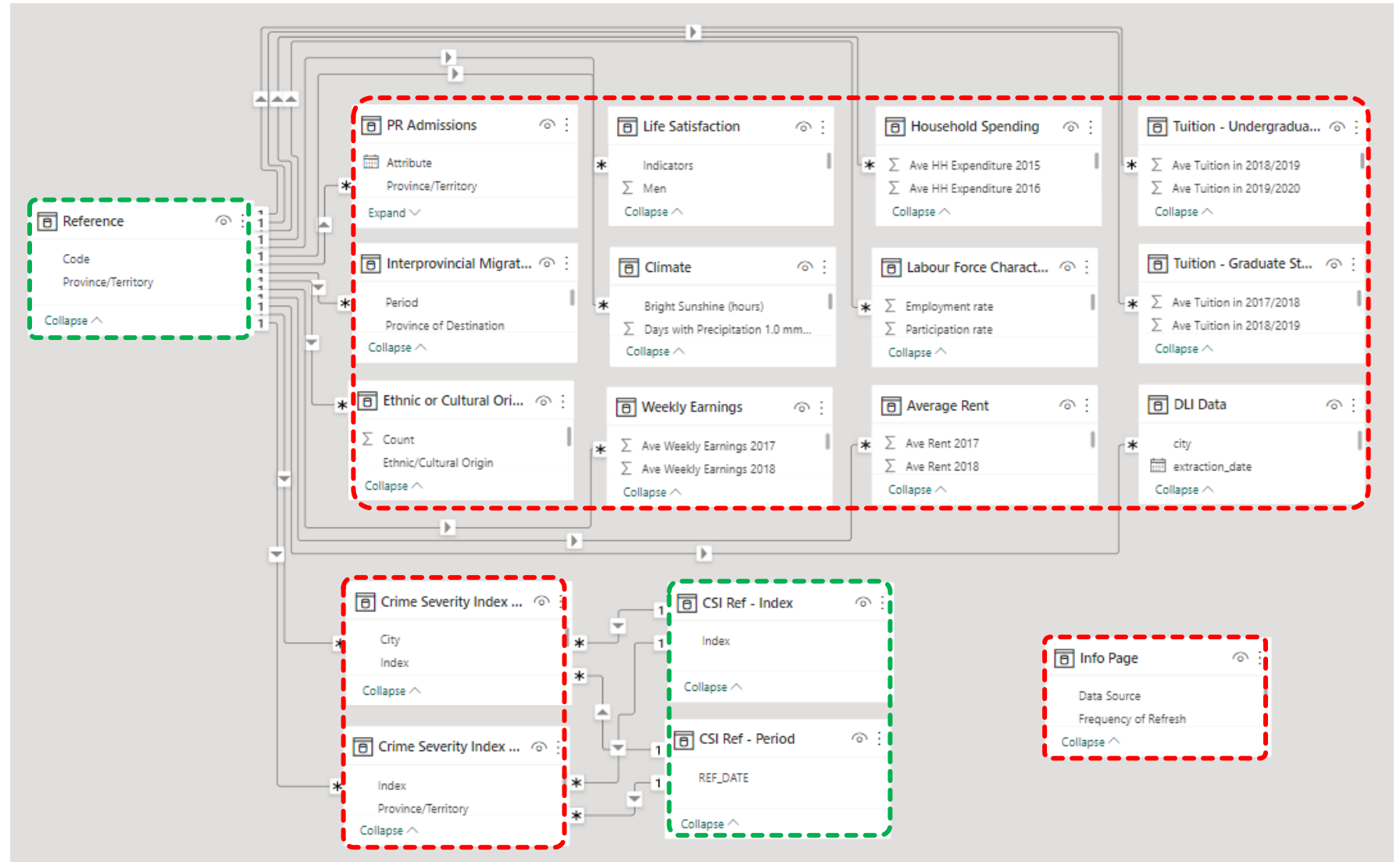
- Household expenditures
- Rent
- Employment, unemployment rates
- Weekly earnings

Life and Climate

- Life Satisfaction Rating
- Crime Severity Index
- Temperature
- Snowfall

Data Model

- ▶ 18 tables
 - **15** data tables
 - **3** reference tables



Demo and Insights

Intro to Dashboard: Pages

► Pages (5):

- Information
- Education
- Economic Factors
- Life and Climate
- Immigration

Study in Canada: A Dashboard for Incoming International Students

Information Page

2023W-T2 BDM 2203 - Big Data Visualization for Business Communications

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Limitation/s

- Due to data source limitations, some charts will appear blank if the data is unavailable.

Data Source

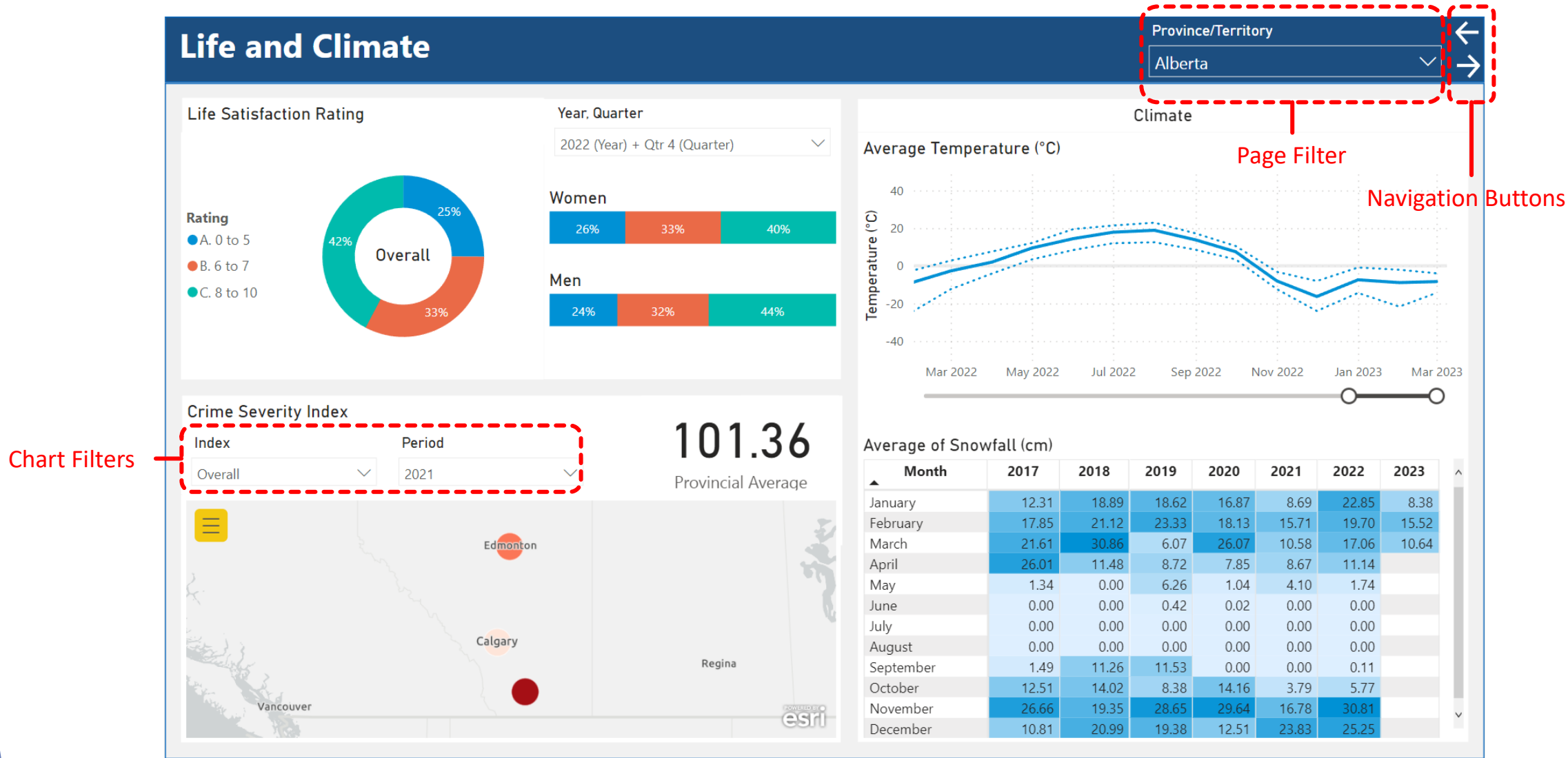
Page	Metric	Frequency of Refresh	Data Source	Source Notes
Economic Factors	Average Weekly Earnings by Industry	Annual	https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1410020401	The data is from the Survey of Employment, Payrolls and Hours (SEPH) which provides a monthly portrait of the amount of earnings, as well as the number of jobs (i.e., occupied positions) and hours worked by detailed industry at the national, provincial and territorial levels.
Economic Factors	Employment Rate, Participation Rate, and Unemployment Rate	Monthly	https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1410028701	The data is from the Labour Force Survey (LFS) which provides estimates of employment and unemployment.
Economic Factors	Household Expenditures	Annual	https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1110022201	The data is from the Survey of Household Spending (SHS) which is conducted to obtain detailed information about household spending, as well as limited information on dwelling characteristics and household equipment.
Economic Factors	Information	Annual	https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=3410013301	The data is from the Canada Mortgage and Housing Corporation (CMHC) which produces a comprehensive database containing more than 14,000 housing series.
Education	Education	As needed	https://www.canada.ca/en/immigration-refugees-citizenship/services/study-canada/study-permit/prepare/designated-learning-institutions-list.html	All primary and secondary schools in Canada are designated learning institutions. They aren't included in this list.
Education	Economic Factors			
Education	Life and Climate	Annual	https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?nid=3710000601	The data is from the Tuition and Living Accommodation Costs (TLAC) survey is conducted to collect tuition fees and living accommodation
	Immigration			

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BDM 2203 Project - Study in Cana... | Data updated 4/21/23

Intro to Dashboard: Navigation and Filters



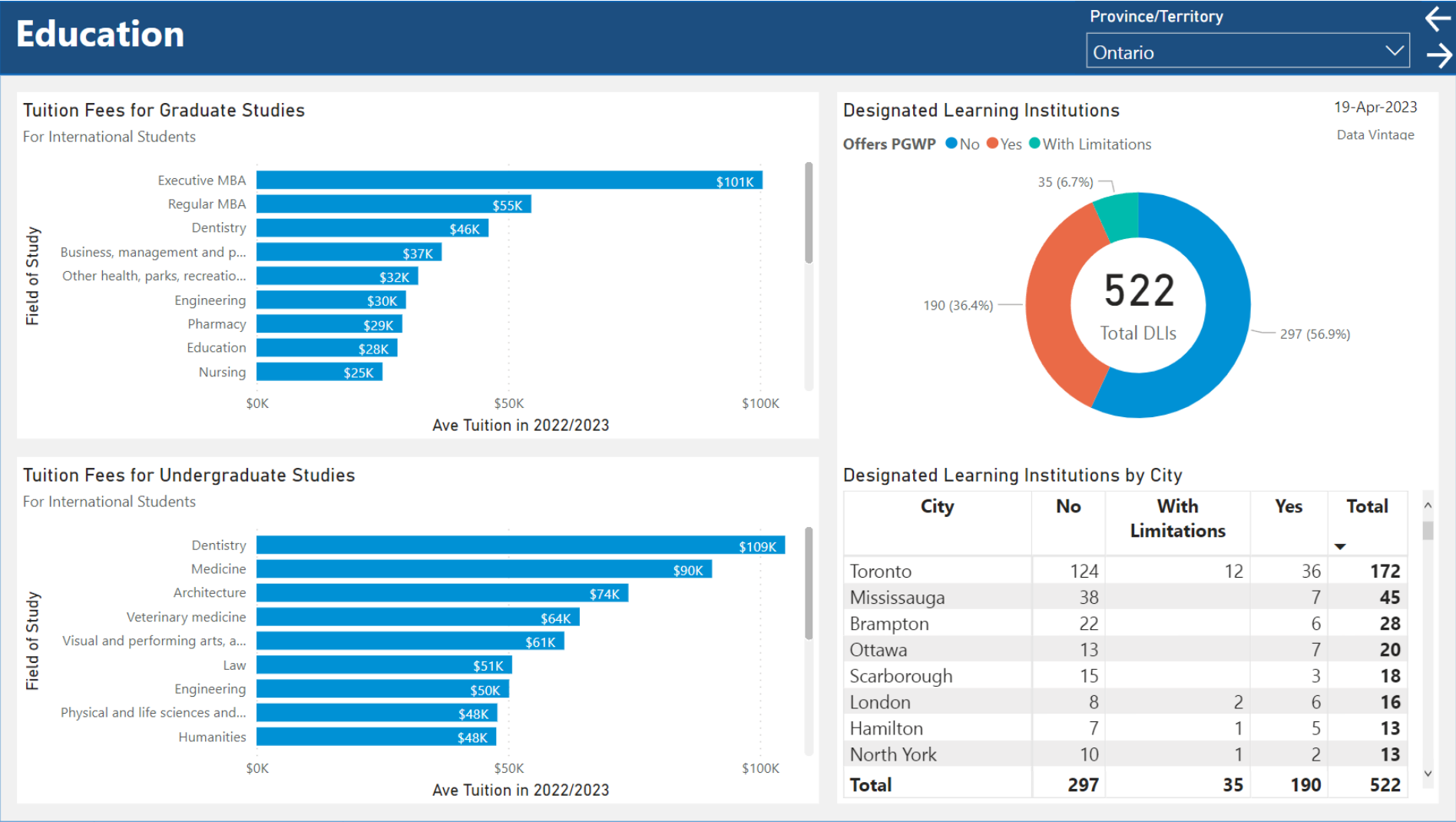
Scenario



Ontario vs Alberta

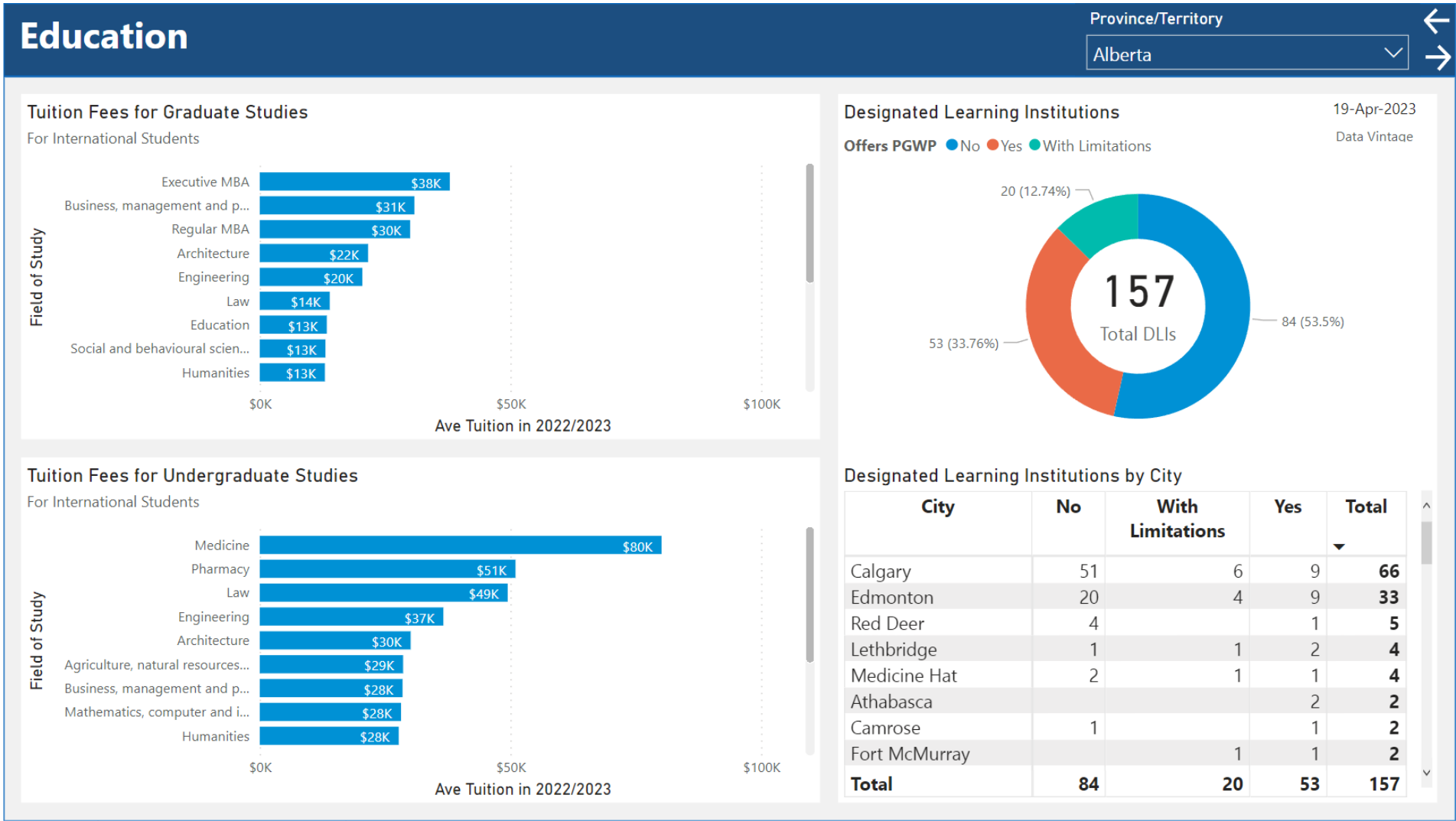
Education: Ontario

- ▶ For AY 2022/2023, Executive MBA has the highest average tuition fee for graduate studies at CAD 101K.
- ▶ For undergraduate studies, Dentistry (CAD 109K) tops the list.
- ▶ Ontario has a high number of DLIs at 522, with 56.9% fully offering PGWP. Majority of DLIs are in Toronto.



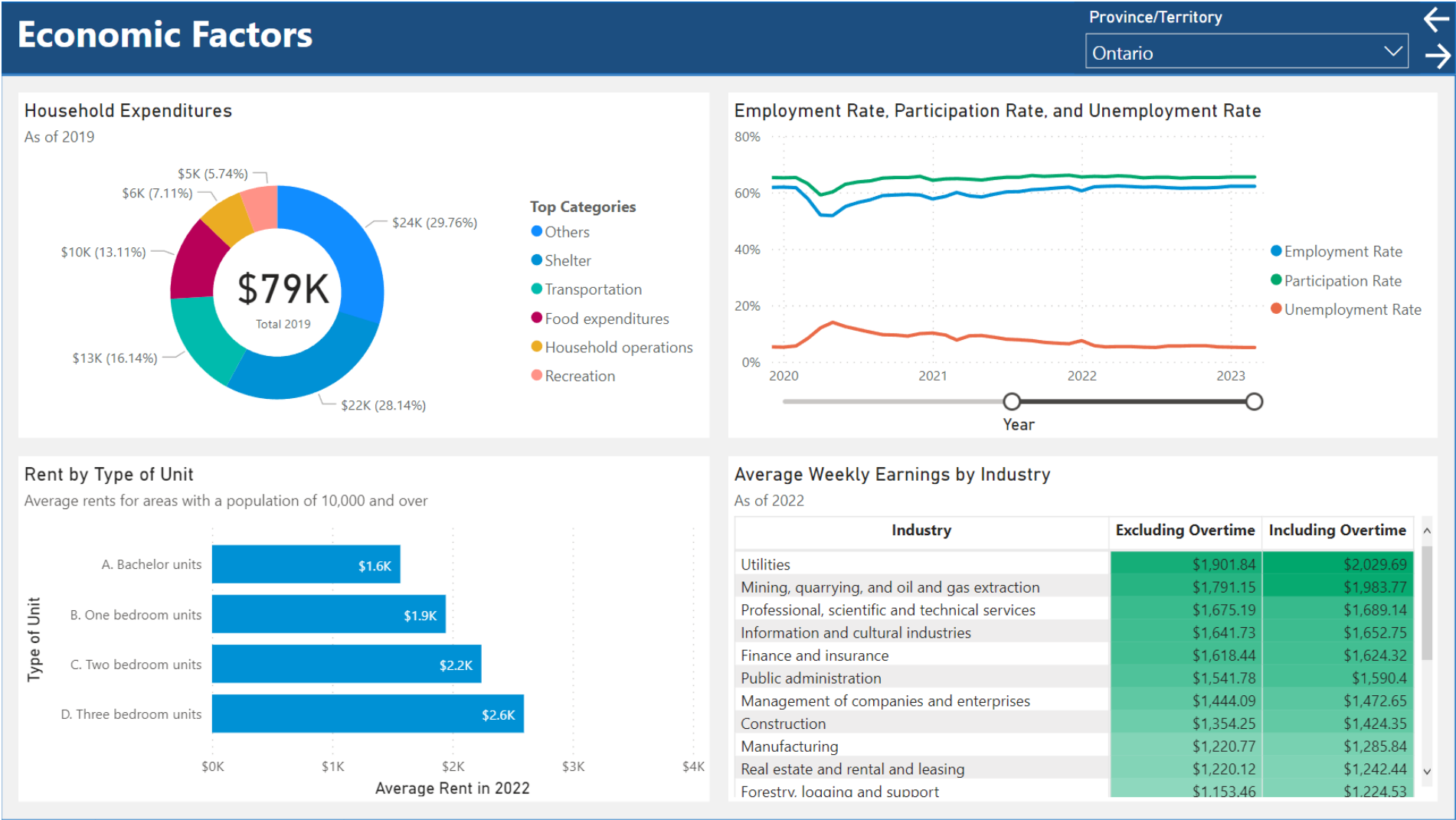
Education: Alberta

- ▶ Executive MBA is also the most expensive graduate studies program but at a significantly lower tuition fee of CAD 38K.
- ▶ Undergraduate programs are more expensive compared to graduate programs. Medicine tops the list.
- ▶ Alberta has fewer DLIs (157) compared to Ontario (522).



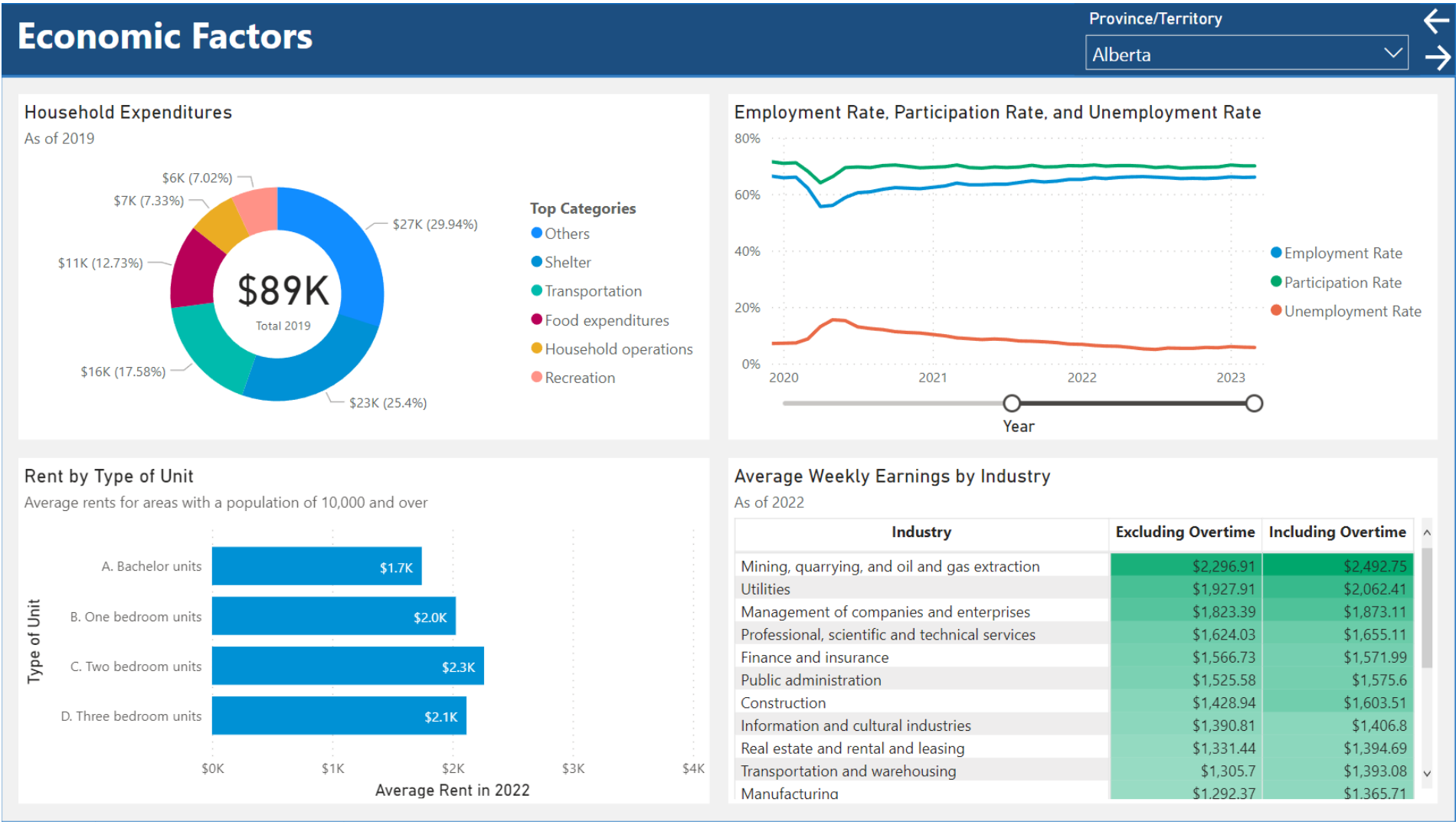
Economic Factors: Ontario

- ▶ Shelter (28.1%) is one of the major household expenses.
- ▶ Average rent ranges from CAD 1.6K for bachelor units, up to CAD 2.6K for three-bedroom units.
- ▶ Unemployment rate has slowly recovered from pandemic effects and is now at 5.1% as of March 2023.
- ▶ The highest paid industry, with or without overtime, is Utilities.



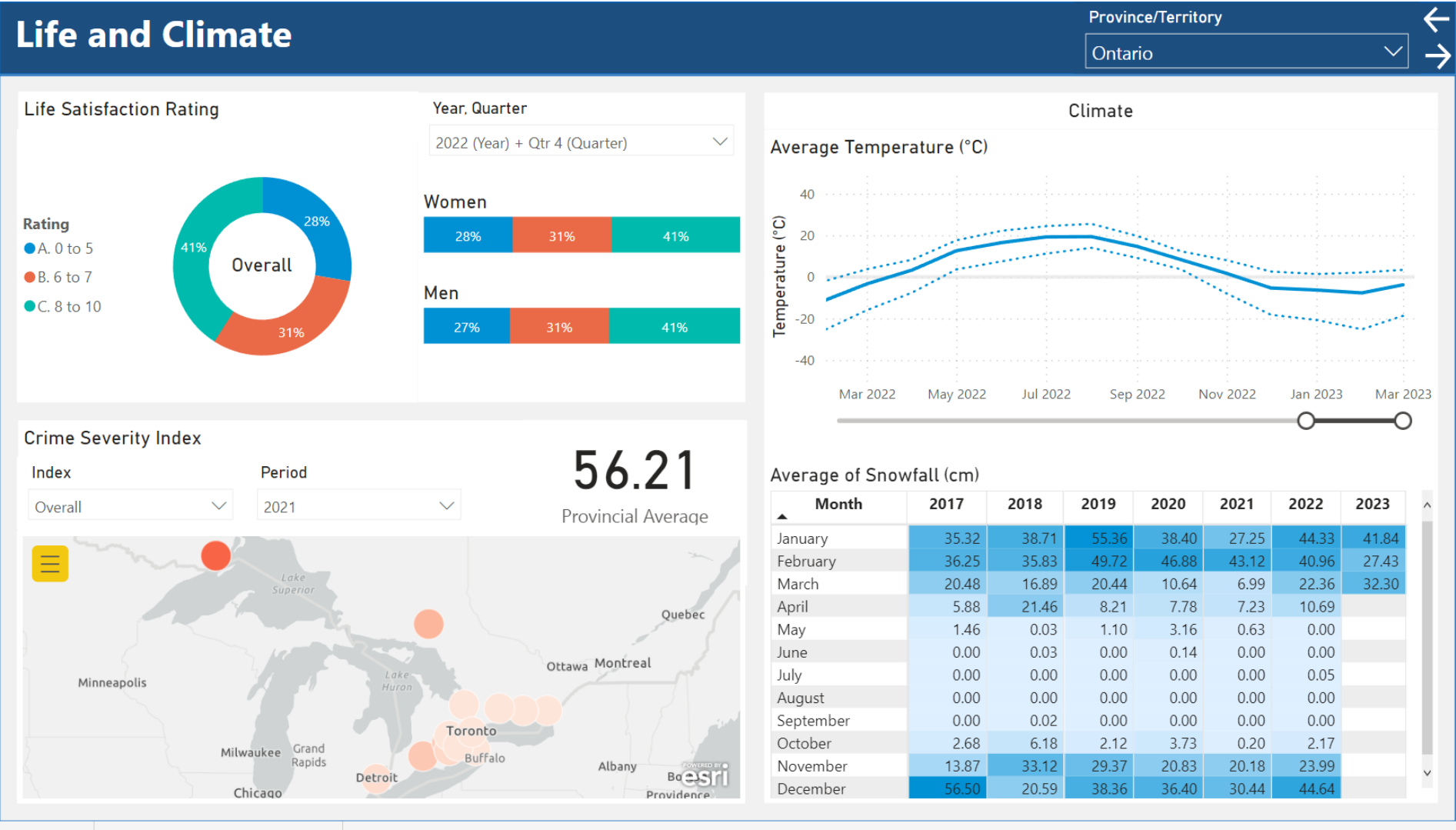
Economic Factors: Alberta

- ▶ In Alberta, Shelter (25.4%) accounts for a slightly smaller chunk of expenses compared to Ontario.
- ▶ Rent is generally cheaper compared to Ontario. It ranges from CAD 1.7K to CAD 2.3K.
- ▶ March 2023 unemployment rate is slightly higher at 5.7%.
- ▶ Mining, Quarrying, and Oil and Gas Extraction industry has the highest average weekly earnings.



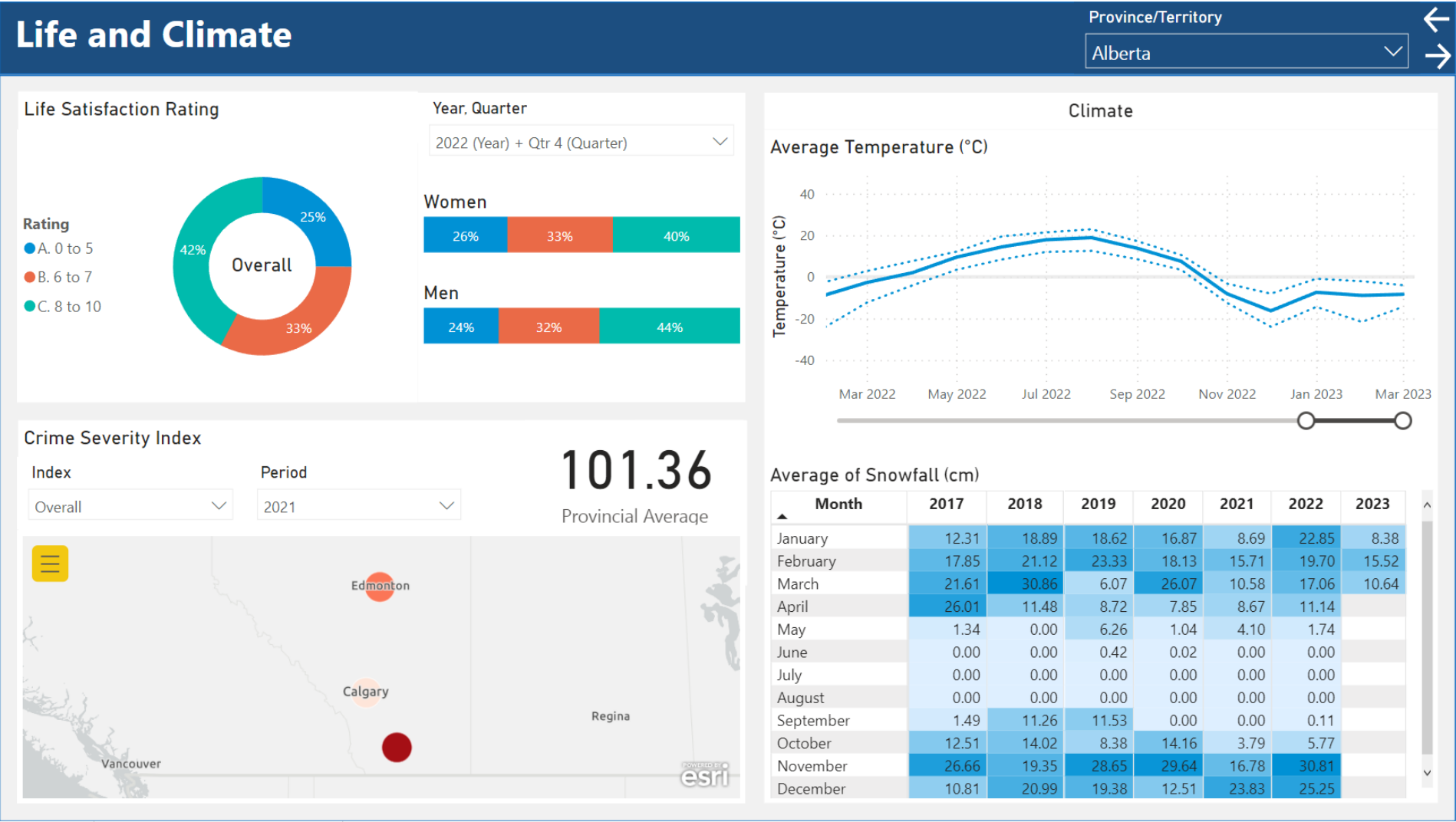
Life and Climate: Ontario

- ▶ 41% of Ontarians have a high Life Satisfaction Rating of 8-10.
- ▶ Overall Crime Severity Index is low at 56.21.
- ▶ In the past 12 months, the lowest average temperature recorded is -25.2°C (Feb 2023), while the highest is 25.5°C (Aug 2022)
- ▶ Records of snowfall are higher in December to January.



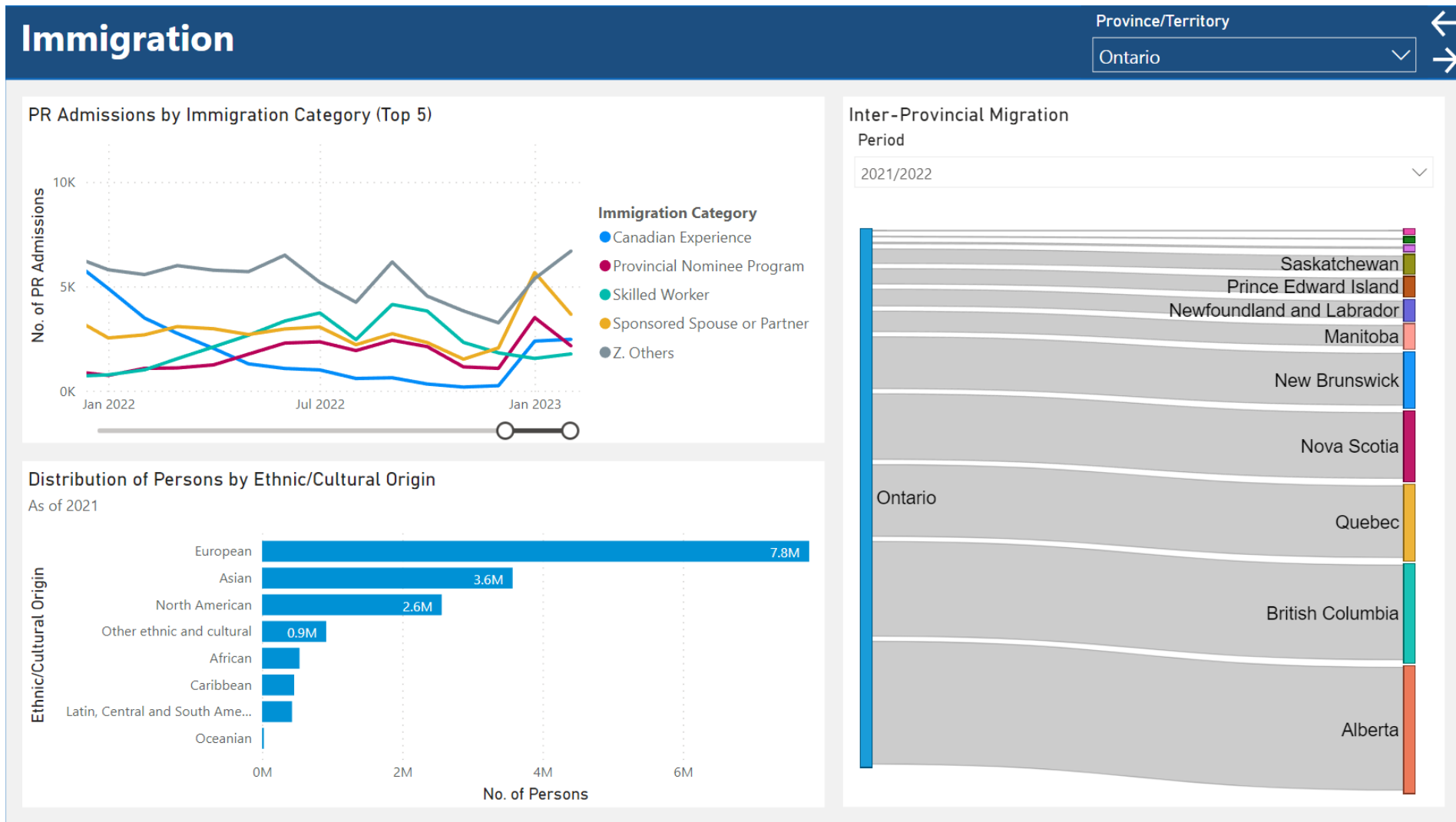
Life and Climate: Alberta

- ▶ 42% of Albertans have a high Life Satisfaction Rating of 8-10.
- ▶ Overall Crime Severity Index is high at 101.36.
- ▶ In the past 12 months, the lowest average temperature recorded is -24°C (Dec 2022), while the highest is 12.5°C (Aug 2022)
- ▶ Alberta has more months with snowfall.



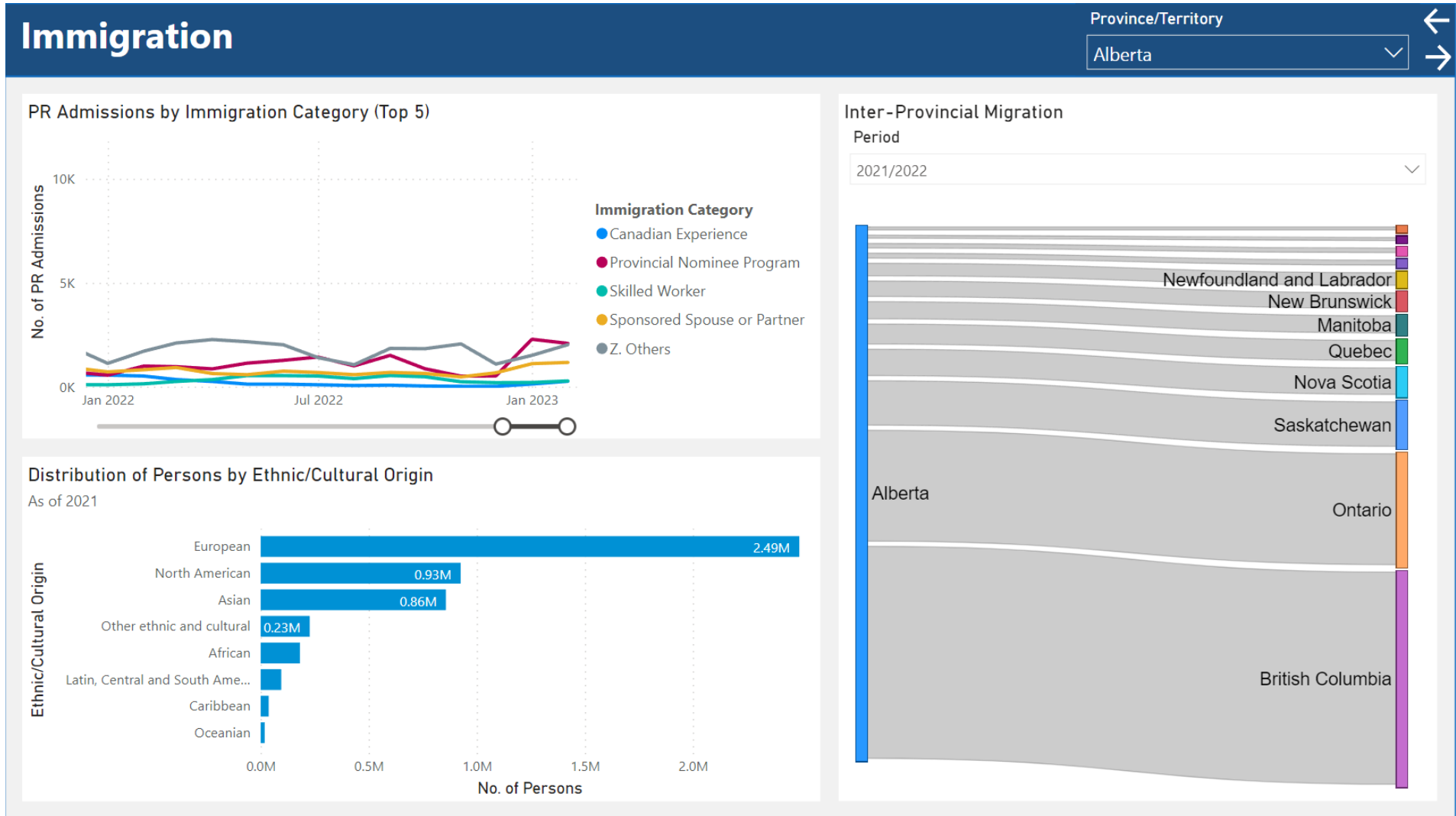
Immigration: Ontario

- ▶ PR admissions in Ontario are coming from more diverse streams.
- ▶ Majority of people have European and Asian origin.
- ▶ In 2021/2022, most of the people who left Ontario transferred to Alberta (29K) and British Columbia (23K).



Immigration: Alberta

- ▶ In the recent months, PR admissions in Alberta were from the Provincial Nominee Program stream.
- ▶ Majority of people have European and North American origin.
- ▶ In 2021/2022, a significant number of people who left Alberta moved to British Columbia (30K). Ontario (15K) ranks second but with almost half the number.



Summary

► Education

- Tuition fees of international students, both in graduate and undergraduate studies, are generally more expensive in Ontario compared to Alberta. But it has more options for Designated Learning Institutions that offer PGWP.

► Economic Factors

- Ontario has higher average rent. In Alberta, highest paying jobs are in the Mining, Quarrying, and Oil and Gas Extraction industry.

► Life and Climate

- People with high Life Satisfaction Rating (8-10) are almost the same for both provinces. However, the Crime Severity Index in Alberta is significantly higher than in Ontario.
- For the climate, Alberta is colder and has longer months with snowfall compared to Ontario

► Immigration

- For PR pathways, Alberta is more focused on the Provincial Nominee Program, whereas Ontario has more options for PR streams. In terms of diversity, majority of the people in both provinces have European origin, but Ontario has a larger Asian community.
- Most people from Ontario moved to Alberta in 2021/2022. For people from Alberta, the common choice for domestic migration is British Columbia.

Thank you.