

A Few Suggested Topics for Student Research Competition 2024, Open Data Centre for Alberta Urban Real Estate

The following are mere suggestions. As stated in the 2024 Call for Proposals, the Centre welcomes research in all areas on Alberta's urban neighbourhoods and communities, whether they are related to real estate or not. Local economy, equality, urban issues, urban design, public services, quality of life, and all other subject areas are valued.

Suggested Topic 1: The Impacts of Covid-19 Pandemic on Alberta Urban Neighbourhoods and Their Recoveries

Skills required: Familiarity with statistical software such as STATA is required. Experience using ArcGIS is an asset, though not a must.

Project description:

The Covid-19 pandemic likely have had different impacts on neighbourhoods in Alberta depending on their locations, density, resident, property and business profiles, as well as other characteristics. The post-pandemic recoveries are likely different, too. Other North American cities' experience suggests that some of the pandemic impacts are temporary. For example, the fears of an urban exodus appear to have been overblown (Richard Florida April 14, 2023, "The Pandemic Didn't Upend US Geography"). But others may be more enduring, such as those due to the rising popularity of remote work. This project invites researchers to study Calgary and Edmonton's pandemic experience and post-pandemic recovery. Its primary objective is fact finding, to record and summarize these two cities' experiences at the city and neighbourhood levels, and to uncover the dimensions along which notable differences exist. Data collection at the Open Data Centre for Alberta Urban Real Estate will help researcher examine changes in building activity, property values, land transfer volume, business licenses and other aspects of neighbourhood dynamics over the period. The data collection also includes neighbourhood Census profile, types of properties and businesses, amenities, and other information. But external data may still be needed, and there will be data limitation that imposes moderation on ambitions. Proficiency in working with large datasets with statistical software package is necessary. If the research team is familiar with the use of ArcGIS, Tableau or similar software, they can produce heatmaps to help visualize some of the findings.

Analysis:

1. Using the data collection at the Open Data Centre for Alberta Urban Real Estate, as well as any necessary external data, study the pandemic experience and post-pandemic recoveries at the city and neighbourhood levels.
2. Using regression analysis and other methods to uncover the dimensions along which there are notable differences in pandemic impacts and/or recoveries.
3. Commentary on the pandemic experience, the challenges facing different neighbourhoods, and public policy are welcome.

Deliverables: A written report with supporting maps, graphs and regression outputs. As a good research practice, we strongly recommend including computer codes that can replicate the analysis.

Additional resources/information:

- Open Data Centre for Alberta Urban Real Estate: <https://realestatedata.srv.ualberta.ca/>
- Richard Florida (April 14, 2023), "The Pandemic Didn't Upend US Geography" and the references within, <https://www.bloomberg.com/news/features/2023-04-14/three-years-into-the-pandemic-the-urban-exodus-was-overblown>

Suggested Topic 2: Capitalization of Local Amenities in House Prices

Skills required: Familiarity with statistical software such as STATA is required. Some knowledge of spatial analysis is needed.

Project description:

This project invites student researchers to study how local goods and amenities, such as school quality, transit, and crime affect house prices in Edmonton and Calgary. Although the idea is simple, there are non-trivial technical requirements. Research teams will need a good grasp of regression analysis, and skills in working with shape files and longitudes and latitude information, such as to calculate distances or to place individual properties into different geographical areas. Research team likely will need to use property-level data for the analysis. The Data Centre will provide links to download those datasets from municipal (Calgary and Edmonton) sources.

Deliverables: A written report with supporting maps, graphs and regression outputs. As a good research practice, we strongly recommend including computer codes that can replicate the analysis.

Additional resources/information:

- Open Data Centre for Alberta Urban Real Estate: <https://realestatedata.srv.ualberta.ca/>
- Hilber, Christian. (2015). The Economic Implications of House Price Capitalization: A Synthesis. Real Estate Economics. 45. n/a-n/a. 10.1111/1540-6229.12129.
- Bowes, David R. & Ihlanfeldt, Keith R., 2001. "Identifying the Impacts of Rail Transit Stations on Residential Property Values," Journal of Urban Economics, Elsevier, vol. 50(1), pages 1-25, July.
- Johnson, DR., Nicholas J (2019). Light Rail Transit and Property Values in Kitchener - Waterloo. Canadian Public Policy. Vol. 45(1). pp. 32-47.
- Geoffrey K. Turnbull & Minrong Zheng, 2021. "A Meta-Analysis of School Quality Capitalization in U.S. House Prices," Real Estate Economics, American Real Estate and Urban Economics Association, vol. 49(4), pages 1120-1171, December.
- Fraser Institute - School Ranking, <https://www.compareschoolrankings.org/>