



Experimental Indexes of Economic Activity for Yukon December 2020

Highlights:

- On a **year-over-year** basis, the December 2020 PCA-based experimental index of economic activity increased only in Yukon (16.2%), Manitoba (5.7%) and the Northwest Territories (2.7%); the LASSO-based experimental index increased in all provinces and territories, with the exceptions of Alberta, Newfoundland and Labrador, and Ontario.
- On a **month-over-month** basis, both PCA-based and LASSO-based experimental indexes of economic activity in December 2020 had mixed results for provinces and territories.

Timely measures of economic activity are critical for understanding how economies perform, and for informing policy responses to macroeconomic fluctuations. The onset of the COVID-19 pandemic emphasized the need to produce new monthly measures of aggregate economic activity for the provinces and territories, in advance of the annual estimates of gross domestic product. Monthly experimental economic activity indexes were created by Statistics Canada at the sub-national level using three different statistical methods to combine a range of economic indicators from a number of areas (i.e., labour market, merchandise trade, manufacturing production, consumer prices, electric power data, housing, wholesale and retail trade, food services and drinking places, vehicle movement between Canada and US, building permits) into composites:

- Simple economic activity index:** assumes that total employment, total exports and total retail sales contain the appropriate information for understanding aggregate economic fluctuations; not available for Yukon.
- Principal component analysis (PCA) index:** uses a variable reduction technique to capture the variation in the input data set using a smaller number of principal components.
- Least absolute shrinkage and selection operator (LASSO):** uses a shrinkage and selection method to select series from the input data set to be included in a regression to explain annual growth.

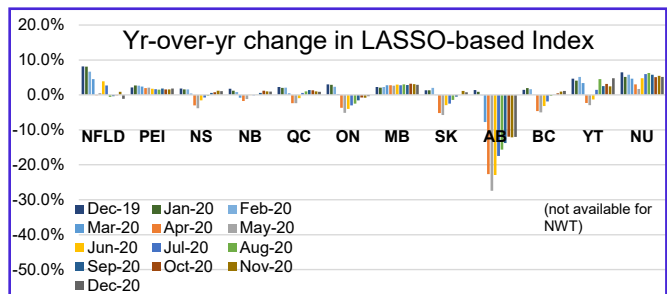
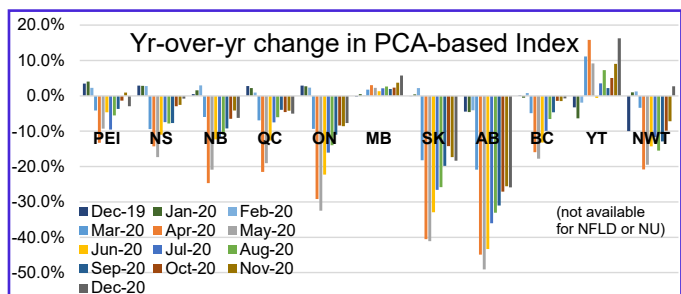
The indexes are experimental and not based on economic theories, and therefore, should be **interpreted with caution**. Models employed typically have a different set of inputs for each province or territory. As a result, may affect inter-jurisdictional comparisons.

Source: Statistics Canada. Data table 36-10-0633-01. For further information, see: [Experimental Economic Activity Indexes for Canadian Provinces and Territories: Experimental Measures Based on Combinations of Monthly Time Series](#)

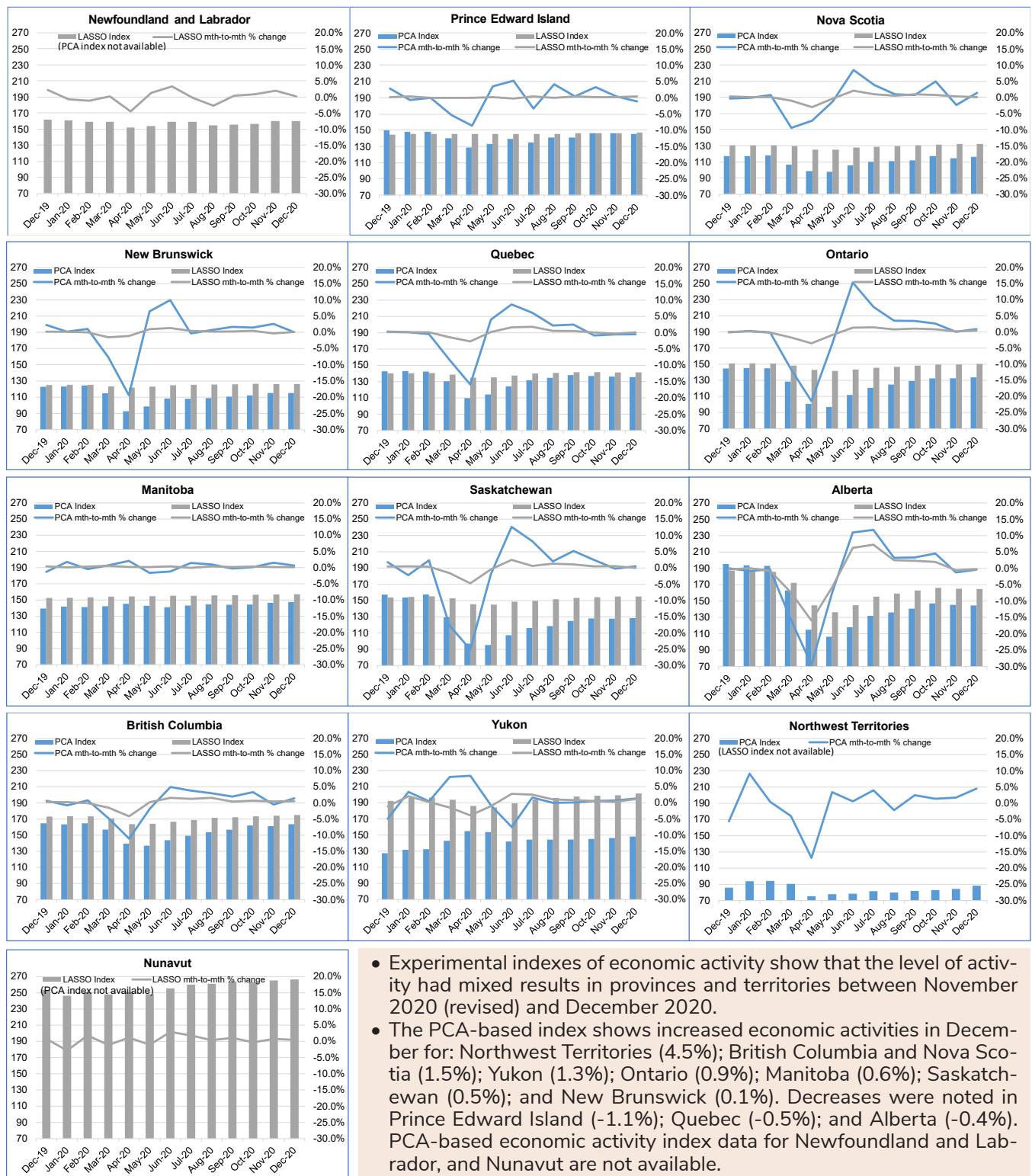
Year-over-year Changes in Economic Activity Indexes, Provinces and Territories, Jan 2019 to Dec 2019 Compared to Respective Month Jan 2020 to Dec 2020

Note: The PCA-based indexes generally show larger changes than the LASSO-based indexes because they include a larger set of input series in their construction and therefore, capture more variability. For small economies like Yukon, where fewer inputs series are available, the results should be **interpreted even with more caution**.

- The PCA-based experimental index shows that most provinces and territories have experienced decreased economic activity in months from March to December of 2020 (revised) compared to the respective month in 2019 (revised), except for Yukon and Manitoba. Comparing December 2020 to that of December 2019 (revised), Yukon, Manitoba and Northwest Territories saw an increase in economic activity at 16.2%, 5.7%, and 2.7%, respectively. Alberta had the largest decrease (-25.9%) year-over-year in December 2020.
- The LASSO-based experimental index, however, shows year-over-year increases in economic activity in each revised month from March through December 2020 for Prince Edward Island, Manitoba and Nunavut; decreases in Alberta; and mixed results for other jurisdictions including Yukon.



Economic Activity Indexes (January 2002 = 100) and *Month-over-month* Changes, Provinces and Territories, December 2019 to December 2020



- Experimental indexes of economic activity show that the level of activity had mixed results in provinces and territories between November 2020 (revised) and December 2020.
- The PCA-based index shows increased economic activities in December for: Northwest Territories (4.5%); British Columbia and Nova Scotia (1.5%); Yukon (1.3%); Ontario (0.9%); Manitoba (0.6%); Saskatchewan (0.5%); and New Brunswick (0.1%). Decreases were noted in Prince Edward Island (-1.1%); Quebec (-0.5%); and Alberta (-0.4%). PCA-based economic activity index data for Newfoundland and Labrador, and Nunavut are not available.

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