

Experimental indexes of economic activity in the provinces and territories, November 2020

Released at 8:30 a.m. Eastern time in *The Daily*, Monday, March 15, 2021

In November, economic activity decreased or decelerated in most provinces and territories. This finding is reflected in both the principal component analysis (PCA)-based and the least absolute shrinkage and selection operator (LASSO)-based economic activity indexes.

The PCA- and LASSO-based experimental indexes were developed to address the need for a comprehensive measure of economic activity at the sub-national level in advance of the annual estimates of gross domestic product for the provinces and territories. PCA and LASSO are statistical methods that can be used to combine a range of economic indicators from a number of areas (e.g., the labour market, merchandise trade, manufacturing production, and wholesale and retail trade) into composite indicators.

On a month-to-month basis, the PCA indexes show decreases in economic activity for 6 of the 11 provinces and territories reported. Among the remaining 5 provinces and territories, 2 recorded a slowdown in growth. The LASSO-based indexes show declines in economic activity in 3 of the 12 provinces and territories surveyed and a slowdown in growth in 8 of the 12 provinces and territories.

Table 1
Month-to-month changes in activity, by index

	PCA-based indexes			LASSO-based indexes		
	October 2020	November 2020	October to November 2020	October 2020	November 2020	October to November 2020
	% change		change in percentage points	% change		change in percentage points
Newfoundland and Labrador	..	..	..	0.89	1.52	0.63
Prince Edward Island	3.28	0.79	-2.49	0.13	0.3	0.17
Nova Scotia	5.06	-2.48	-7.54	0.67	0.23	-0.44
New Brunswick	1.31	2.65	1.34	0.39	-0.26	-0.65
Quebec	-0.85	-0.59	0.26	0.09	-0.27	-0.36
Ontario	2.53	-0.04	-2.57	0.86	0.07	-0.79
Manitoba	0.17	1.44	1.27	0.36	0.19	-0.17
Saskatchewan	2.34	-0.68	-3.02	0.49	0.58	0.09
Alberta	4.46	-1.55	-6.01	1.95	-0.87	-2.82
British Columbia	3.30	-0.56	-3.86	0.83	0.39	-0.44
Yukon	0.58	1.10	0.52	0.52	0.41	-0.11
Northwest Territories	1.60	1.50	-0.10	..	..	..
Nunavut	..	..	..	-0.11	0.93	1.04

.. not available for a specific reference period

Note(s): PCA: Principal component analysis; LASSO: least absolute shrinkage and selection operator.

Source(s): Author's calculations based on data from table [36-10-0633-01](#).

Growth trend slows

The three-month moving averages of growth for the PCA- and LASSO-based indexes show a slowing of economic activity over the late fall as COVID-19 cases increased across the country. The three-month moving average of the activity index growth rates declined as the majority of monthly growth rates from the PCA-based indexes and LASSO-based indexes either became negative or had slower growth rates than in October.



The PCA-based indexes show a decline in the three-month moving average of monthly growth rates from October to November in 7 of the 11 indexes reported. The largest declines were seen in Alberta, British Columbia, and Ontario. The LASSO-based indexes show declines in 9 of the 12 indexes reported, with the largest declines in Alberta, British Columbia and Quebec.

Table 2
Three-month moving average for PCA-based indexes

	September 2020	October 2020	November 2020	September to October 2020	October to November 2020
	% change			change in percentage points	
Newfoundland and Labrador	..	..	..	..	..
Prince Edward Island	0.39	2.58	1.47	2.20	-1.11
Nova Scotia	1.73	2.19	1.08	0.45	-1.11
New Brunswick	0.67	1.24	1.98	0.57	0.74
Quebec	3.61	1.28	0.36	-2.32	-0.92
Ontario	4.90	3.14	1.97	-1.76	-1.17
Manitoba	0.73	0.30	0.45	-0.43	0.15
Saskatchewan	5.17	3.20	2.30	-1.97	-0.91
Alberta	6.10	3.68	2.10	-2.42	-1.58
British Columbia	2.91	2.75	1.57	-0.16	-1.18
Yukon	0.75	0.39	0.66	-0.37	0.27
Northwest Territories	1.45	0.62	1.86	-0.82	1.24
Nunavut	..	..	..	..	..

.. not available for a specific reference period

Note(s): PCA: Principal component analysis

Source(s): Author's calculations based on data from table [36-10-0633-01](#).

Table 3
Three-month moving average for LASSO-based indexes

	September 2020	October 2020	November 2020	September to October	October to November
	% change			change in percentage points	
Newfoundland and Labrador	-0.82	-0.48	0.96	0.34	1.44
Prince Edward Island	0.23	0.17	0.28	-0.06	0.11
Nova Scotia	0.87	0.75	0.63	-0.13	-0.12
New Brunswick	0.31	0.29	0.16	-0.02	-0.13
Quebec	0.99	0.41	0.12	-0.58	-0.29
Ontario	1.08	0.89	0.65	-0.19	-0.24
Manitoba	0.17	0.32	0.25	0.15	-0.07
Saskatchewan	1.04	0.98	0.73	-0.06	-0.25
Alberta	4.01	2.25	1.14	-1.75	-1.12
British Columbia	1.08	0.95	0.56	-0.13	-0.39
Yukon	1.41	0.70	0.58	-0.70	-0.12
Northwest Territories	..	..	..	..	..
Nunavut	1.13	0.48	0.85	-0.66	0.37

.. not available for a specific reference period

Note(s): LASSO: least absolute shrinkage and selection operator.

Source(s): Author's calculations based on data from table [36-10-0633-01](#).

Note to readers

Additional information is available in the paper titled "[Experimental Economic Activity Indexes for Canadian Provinces and Territories: Experimental Measures Based on Combinations of Monthly Time Series](#)," which is part of the series *Analytical Studies: Methods and References (11-633-X)*.

Available tables: table [36-10-0633-01](#).

Definitions, data sources and methods: survey numbers [2101](#), [2151](#), [2201](#), [2301](#), [2310](#), [2325](#), [2401](#), [2406](#), [2419](#), [2612](#), [2802](#), [3701](#), [5005](#) and [7505](#).

For more information, contact us (toll-free 1-800-263-1136; 514-283-8300; STATCAN.infostats-infostats.STATCAN@canada.ca).

To enquire about the concepts, methods or data quality of this release, please contact Ryan Macdonald (343-998-1890; ryan.macdonald@canada.ca), Economic Analysis Division.