

Output compilation during economic shocks

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Delivering insight through data for a better Canada



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Outline

- Motivation
- Source of alternative administrative data
- Advanced estimates
- Accuracy of administrative data
- Takeaways

Motivation

Relying on alternative data sources

- Can help improve the understanding of economic trends ahead of estimates based on annual industry survey data.
- Annual business survey estimates at Statistics Canada are available with lags of 10 to 15 months after the reference year for most service industries.
- Alternative data can provide more timely estimates (generally with lags of just a few months).

Timeliness during economic shocks

- This is important as many service industries in Canada experienced unusual volatility during the pandemic and post-pandemic periods.

Sources of data

Tax data

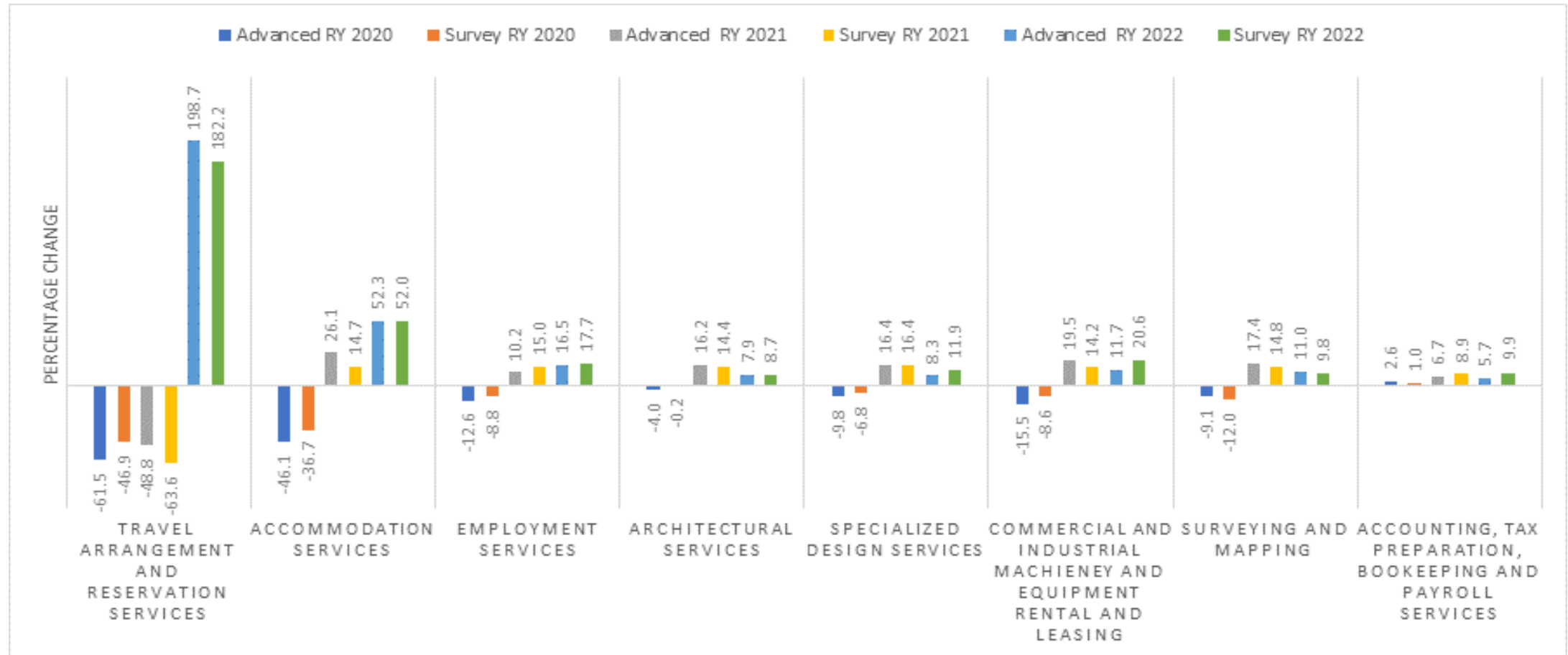
- Statistics Canada business annual statistics program making use of administrative data from Canada Revenue Agency —goods and services tax (GST) remittances
- GST is a value-added tax levied by the federal Canadian government and is essentially borne by the final consumer.
- The GST remittance revenues are not formally used as replacement for annual survey data in Statistics Canada Service Industries Program.
- Used in monthly survey programs.

Comparability

- The GST files were also reviewed to ensure consistency and comparability with the Services Industries Program's annual business survey estimates.

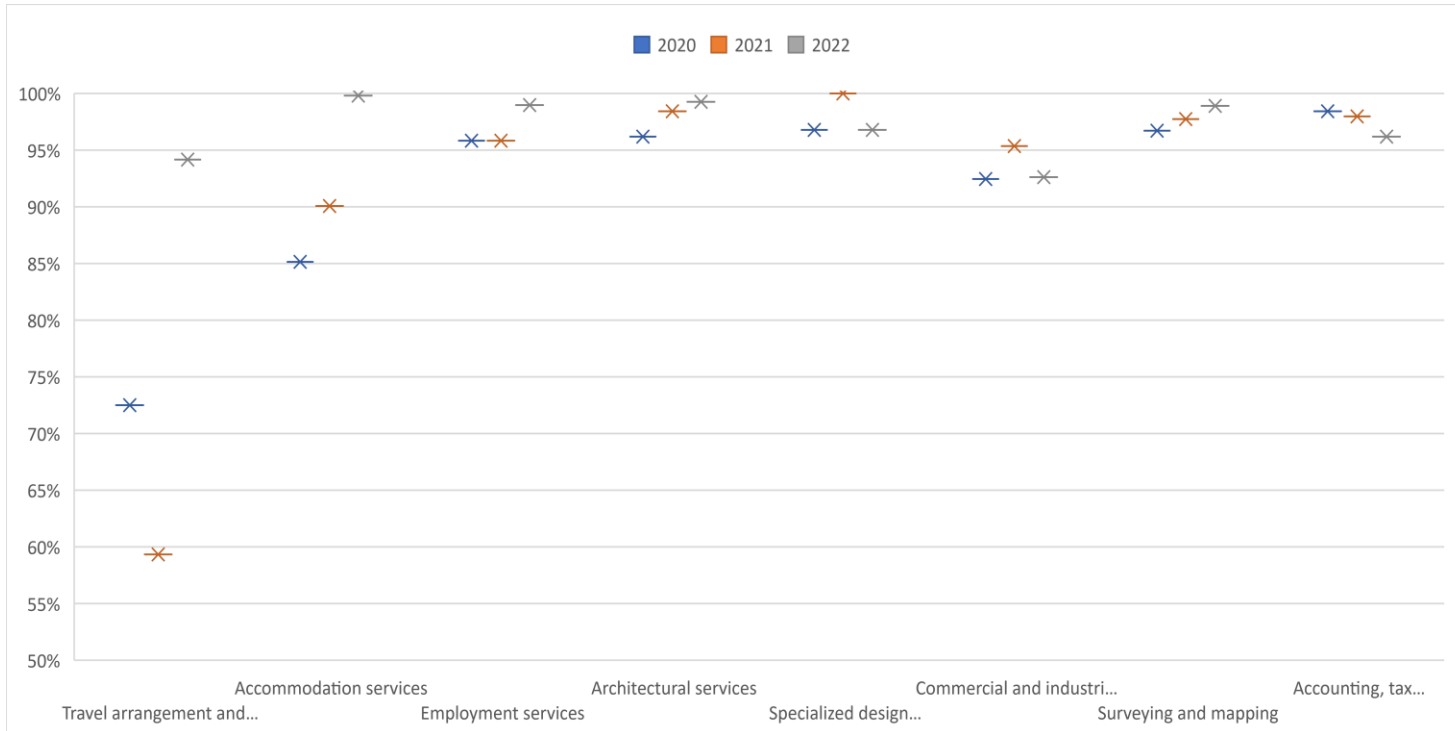
Advanced estimates of operating revenues compared to survey data, for select service industries, Canada, 2020-2022

(Operating revenue is a key input in the measurement of national economic production statistics such as gross domestic product (GDP))



- The growth rates of the advanced estimates were in the same direction and within the same magnitude as the growth rates of survey estimates for all reference years.

Accuracy of advanced estimates for select service industries , per cent, reference years 2020 to 2022



- The advanced estimates based on administrative data were at least 90% accurate compared with survey estimates.
- Travel arrangement and reservation services and accommodation services had the lowest growth rate accuracy using administrative data. In the case of using the GST data, there are concessions on accuracy in some instances but there are gains in timeliness.

Take aways from use of administrative data during economic shocks

Good proxy

- Timeliness at a time of economic uncertainty.
- Provides a more cost efficient and quicker understanding of economic trends.
- Other use for the GST data files for monthly economic services industry trends.
 - Monthly econometric nowcast models of the GST have been developed for most service industries where there are no monthly surveys. The nowcast estimates of the GST are inputs into Statistics Canada's monthly industry real GDP advanced estimate.

Limitations of administrative data

- Not necessarily subjected to the same data quality and consistency checks as traditional survey data.
- Often do not correspond exactly with the variables targeted in the survey.
- Not a good proxy for all industries in the Service Industries Program.
- Operating revenue estimates based on GST data may be biased by industry misclassifications in the GST remittances.
- Estimates based on administrative data may not be at the same granular level as survey estimates.

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