

Quality Assessment for Price Indexes: Statistics Canada's Performance Measure Grading Scheme

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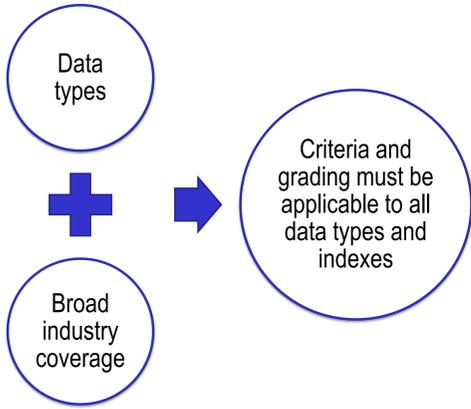
PURPOSE

The proposed Performance Measure Grading Scheme will be used to evaluate producer price indexes on key performance indicators to promote sound methodological practices, to plan program continuity and investments, and to express the overall quality and reliability of published index numbers.

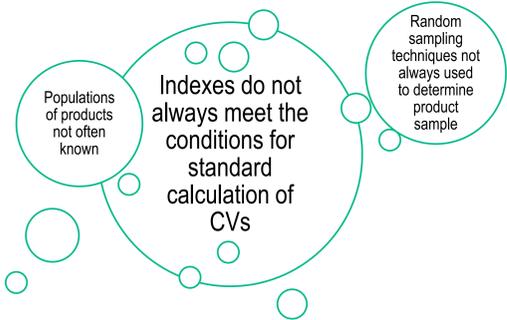
STANDARD MEASURES NOT SUFFICIENT

Assessing the quality of an index is multi-faceted because of the complex nature and the different components of index compilation. Standard quality measures are not sufficient to capture the overall quality of a price index.

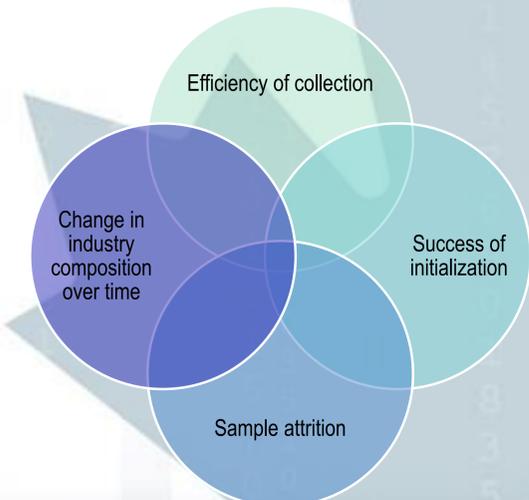
CHALLENGES



Coefficient of variation:
Measure of confidence in estimate and often used to determine sample size.



Response rate:
One response rate does not sufficiently measure quality. A range of indicators could be used to evaluate both cross-sectional and longitudinal measures of response.



STRUCTURE OF THE PERFORMANCE MEASURE GRADING SCHEME



Drawn from the OECD Generic Statistical Business Process Model and Statistics Canada's six dimensions of quality.



Weights are based on the number of performance measures and the importance of each in terms of the risk that the index does not represent reality.



Each dimension is assigned a grade based on the average of points of each performance measure.



An overall grade for the index is calculated using the weighted average of the grades for each dimension.



PERFORMANCE MEASURES

Relevance	Accuracy	Timeliness	Accessibility	Interpretability	Coherence
SNA use as a deflator	Sample coverage of target industry	Time lag of release	Suppressions	Notifications to users	Use of standard classifications
User relevance	Collection response rate	Timeliness of basket updates			Version of classification
Use of recommended price definition	Estimation response rate	Frequency of sample and weight updates			Coherence across baskets
Proportion of price definition used	Variance				
Weight type	Frequency of production substitution				
Additional weights in aggregation structure	Quality adjustment for product substitution				
	Quality adjustment for product specification changes				
	Revision magnitude				
	Source of revision				

RESULTS

Grading schema fills quality measure gaps for price indexes

Measures longitudinal and cross-sectional aspect of price indexes

Provides measures for all six dimensions of quality

Results in an all-encompassing measure of quality for an index