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Synthesizing Signals from the Canadian Survey of Consumer Expectations

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Abstract

We introduce a summary indicator based on the Canadian Survey of Consumer Expectations (CSCE). This indicator provides a summary measure of consumer opinions that we can track over time. We construct three underlying indexes—financial health, labour market and consumer spending—that capture different factors influencing consumers' daily lives. We also leverage the rich demographic information available in the CSCE to construct summary indicators for different groups defined by characteristics such as age, home-ownership status and income. We show that there is significant heterogeneity across different demographic groups. This heterogeneity helps us understand how economic shocks disproportionately impact some households. Finally, we investigate which macroeconomic variables drive changes in the CSCE indicator and show that the fundamental drivers vary over time.

Topics: Central bank research, Business fluctuations and cycles
JEL codes: D12, D84, E21, E32, E71

Résumé

Nous proposons un nouvel indicateur synthétique fondé sur l'enquête sur les attentes des consommateurs au Canada – soit une mesure de l'opinion des consommateurs que nous pouvons suivre au fil du temps. Nous élaborons trois indices sous-jacents – de santé financière, du marché du travail et des dépenses de consommation – qui tiennent compte de divers facteurs influant sur la vie quotidienne des consommateurs. Nous utilisons également de riches informations démographiques tirées de l'enquête sur les attentes des consommateurs au Canada afin de construire des indicateurs synthétiques pour différents groupes définis en fonction de certaines caractéristiques comme l'âge, le statut de locataire ou propriétaire, et le revenu. Nous montrons qu'il y a une forte hétérogénéité parmi les groupes démographiques. Cette hétérogénéité nous aide à comprendre l'incidence disproportionnée des chocs économiques sur certains ménages. Enfin, nous nous penchons sur les variables macroéconomiques qui déterminent l'évolution de l'indicateur de l'enquête et montrons que les facteurs fondamentaux varient au fil du temps.

Sujets : Sujet: Recherches menées par les banques centrales; Cycles et fluctuations économiques
Codes JEL : Code D12, D84, E21, E32, E71

Synthesizing signals from the Canadian Survey of Consumer Expectations

Since its inception in 2014, the Canadian Survey of Consumer Expectations (CSCE) has helped the Bank of Canada understand consumer expectations and behaviour in various contexts.[1] Results of the CSCE have been summarized and published quarterly since the fourth quarter of 2019 and are frequently used in the *Monetary Policy Report*. However, since the CSCE questionnaire includes many questions and modules, extracting a clear summary signal can be difficult. Therefore, there is merit in synthesizing the results in a more systematic way by calculating an aggregate index and tracking its evolution over time.

In this paper, we introduce the CSCE indicator, a measure that combines the results from core CSCE questions to provide a summary measure of consumer opinions. We explore the CSCE indicator and its three underlying indexes—financial health, labour market and consumer spending—which capture different factors that influence consumer sentiment.

Because the CSCE contains rich demographic information, we also construct summary indicators for different groups defined by, for example, age, home-ownership status and income. We explore the heterogeneous evolution of consumer opinions—that is, how the feelings of different groups of people change over time—and the underlying indexes across these groups. Finally, we look at which macroeconomic variables influence the evolution of the CSCE indicator, both in aggregate and for different demographic groups.

The CSCE indicator can be a useful tool for policy-makers and forecasters, not only because it provides a summary measure of consumer opinions but also because it explains the reasons for variation in consumer opinions, including across different demographic groups. These insights can help the Bank better understand future spending and saving decisions of Canadian households.

[1] The CSCE is a nationally representative, internet-based quarterly survey of approximately 2,000 heads of households. The survey's target population is adult residents of Canada aged 18 or older. The survey is conducted in February, May, August and November and is offered in both English and French.

Constructing the Canadian Survey of Consumer Expectations indicator

The CSCE indicator combines the results from 11 core questions that relate to the labour market, financial health and consumer spending to create a single summary indicator. These questions were selected based on their relevance to the everyday lives of consumers; they are the questions most likely to elicit consumers' feelings about the economy.

To construct the indicator, we first take the raw survey responses for each of the 11 CSCE questions and aggregate them into a quarterly time series.[2] We aggregate the answers to categorical-response questions by using the share of responses in each category. For example, responses to the question on expected change in financial position over the next 12 months are aggregated based on the share of respondents who expect their financial position to worsen.

We aggregate the answers to continuous-response questions by using interpolated medians. For example, responses to the question on the probability of losing a job are aggregated based on the interpolated median of respondents' point estimates. We then standardize each of the 11 CSCE indicator components using their respective mean and standard deviation from the fourth quarter of 2014 to the fourth quarter of 2024.[3] Standardizing each individual component is critical so that the levels of all components use a consistent scale before we aggregate them.

The standardized time series are then grouped into three indexes that are known to influence consumer sentiment: financial health, labour market and consumer spending.[4, 5]

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[2] See **Table A-1** in **Appendix A** for a detailed breakdown of the CSCE indicator components and the data transformations we apply.

[3] The CSCE hit its 10-year anniversary in the fourth quarter of 2024, providing a long enough sample period for constructing the summary indicator. Going forward, each component will be standardized using its respective mean and standard deviation for the period between the fourth quarter of 2014 and the fourth quarter of 2024. We will reassess the standardization window at a set frequency in the future, which is the common practice for many of the Bank's models.

[4] To construct the indicator, we consider only questions that have been included since the survey's inception in the fourth quarter of 2014. **Appendix B** discusses the robustness of our indicator to additional questions that have been added to the CSCE questionnaire more recently.

[5] See Lahiri and Zhao (2016) and El Alaoui, Bouri and Azoury (2020) for discussions on the role that labour market conditions, financial health and consumer spending play in determining consumer sentiment.

- The financial health index measures how consumers perceive their current financial situation and how they expect their financial situation to evolve in the future.
- The labour market index measures how consumers perceive their own job security and potential labour market prospects.
- The consumer spending index measures consumers' spending intentions.

Each index is constructed by equally weighting its standardized components. For example, we construct the labour market index by averaging its three standardized components: the probabilities of losing one's job, leaving one's job and finding a job. We can therefore interpret the level of each index as the average standardized value of the index components. Based on the construction, a value of +1.0 means that, on average, the components of the index are one standard deviation above their average between the fourth quarter of 2014 and the fourth quarter of 2024.[6]

Finally, to compute the CSCE indicator, we take the average of the three indexes. This ensures that each index receives equal weight in the overall indicator.[7] Positive (negative) values of the CSCE indicator indicate higher (lower) consumer sentiment relative to the historical average.

What the Canadian Survey of Consumer Expectations indicator and underlying indexes reveal

The CSCE indicator was above its historical average in the years before the COVID-19 pandemic, but it fell sharply in early 2020, driven by declines in the labour market and financial health indexes. After a partial rebound through 2021, the CSCE indicator started to fall again in late 2021 and reached record-low levels in late 2022 (**Chart 1**). Weakness in the financial health and consumer spending indexes were the main reasons

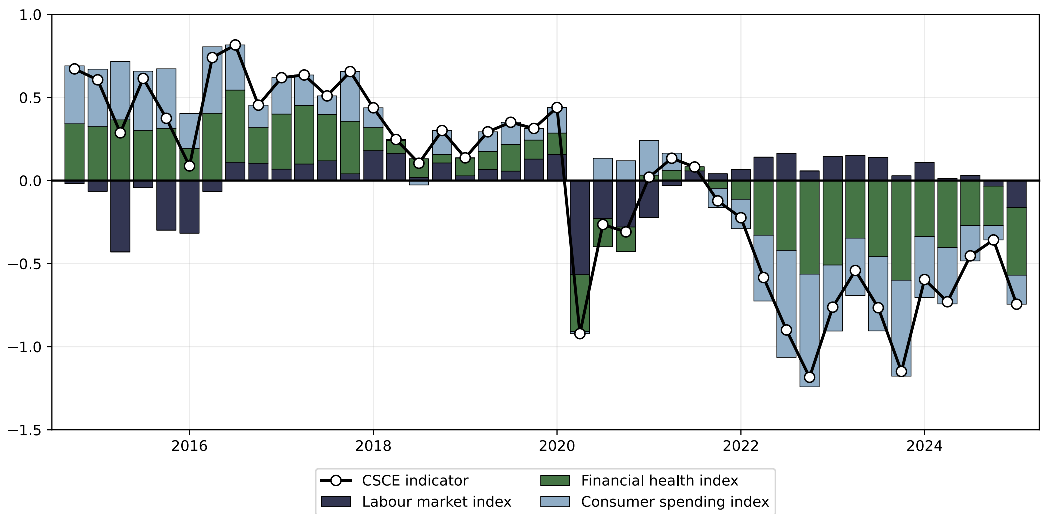
[6] Because each index is constructed by equally weighting the standardized components, the mean of each index is zero. However, because the underlying components of each index may not exhibit perfect correlations, the standard deviation of the index will not equal the average standard deviation of the underlying components.

[7] We consider an alternative weighting approach by estimating a dynamic factor model (DFM) with a single factor using the same core series to calculate the CSCE indicator. The DFM estimation allows the factor loadings to vary across components, which introduces the potential for variable weights on each component. We find that reweighting the components based on a DFM produces very similar results to the equally weighted CSCE indicator. We also consider an alternative version of the CSCE indicator where the indexes are standardized before they are aggregated. The impact of standardizing the indexes is minimal and further complicates the mapping interpretation of the individual components to each index. The robustness results are discussed further in **Appendix B**.

for this deterioration, while the labour market index remained relatively unchanged, above its historical average, providing a partial offset. The deterioration in consumer sentiment coincided with inflation rising to levels not seen since the 1980s and the Bank of Canada increasing interest rates to bring inflation down. Over 2024, sentiment steadily improved but remained subdued relative to pre-pandemic levels. In the first quarter of 2025, the positive momentum halted abruptly, and all three CSCE indicator indexes deteriorated because the trade war initiated by the United States intensified.[8]

Chart 1: Consumer sentiment fell sharply in the first quarter of 2025 as the trade war intensified

Contributions to the CSCE indicator, average of indexes



Note: CSCE is the Canadian Survey of Consumer Expectations.
Source: Bank of Canada calculations

Last observation: 2025Q1

Results from the CSCE indicator are quite consistent with those of two other widely used indicators of consumer sentiment in Canada—the Conference Board of Canada's Index of Consumer Confidence and the Bloomberg Nanos Canadian Confidence Index.[9] Despite some methodological differences, all three indicators remain well below pre-pandemic levels and have declined sharply in recent months. This supports the notion that the trade war is weighing on consumer sentiment.

One key benefit of the CSCE indicator is the ability to leverage the CSCE's rich demographic information to assess the heterogeneity of consumer opinions. We can construct different summary indicators to help address emerging policy questions. For example, to monitor the impact of the trade war on consumer sentiment, we can create summary indicators broken down by regional exposure to international trade with the United States.

[8] The CSCE for the first quarter of 2025 was conducted from January 29 to February 19. This period contained significant tariff and annexation threats from the United States.

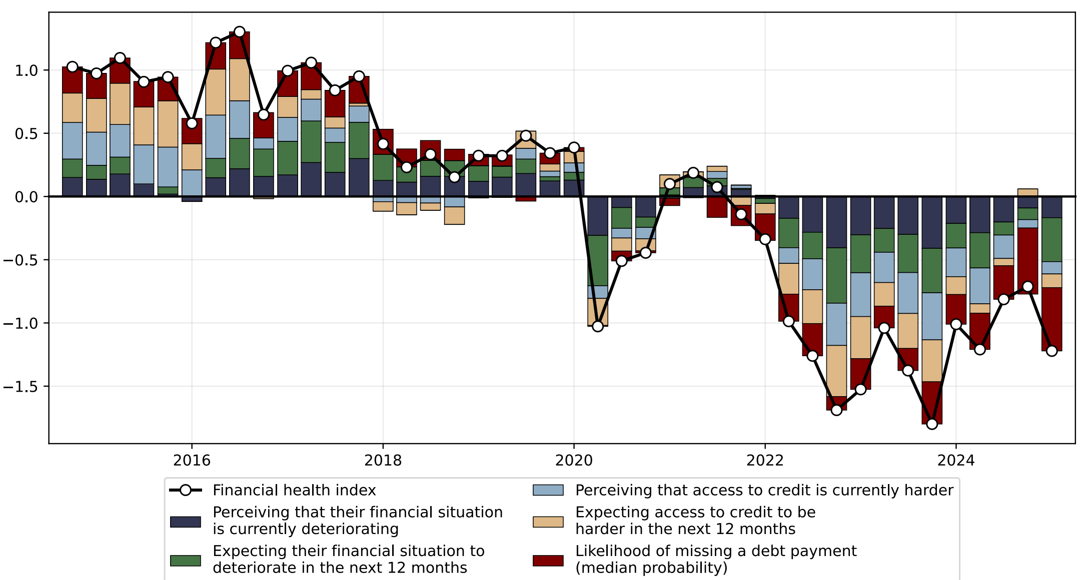
[9] See **Appendix B** for more on the comparison between the CSCE indicator and these other indicators, including methodological considerations.

The improvement in the CSCE indicator over 2024 was broadly observed across each index, albeit with only marginal improvements in the labour market index. The financial health index steadily improved over 2024 (**Chart 2**), likely reflecting the positive effects of monetary policy easing and inflation returning to target. However, in the first quarter of 2025, the financial health index fell sharply. This weakness was driven by a sharp rise in the share of respondents who indicated that they expect to be worse off financially over the next 12 months. Expecting to be financially worse off over the next 12 months was a particularly common answer for respondents in regions that have a high degree of exposure to trade with the United States.

The forward-looking components of the financial health index—such as expected financial situation and expected ease of access to credit—experienced sharp declines in the first quarter of 2025. In contrast, the components based on questions about current perceptions—such as perceived current financial situation and current access to credit—were broadly unchanged, suggesting that consumers expect the trade war to have a negative impact on their financial situation.

Chart 2: The financial health index fell sharply in the first quarter of 2025

Contributions to the CSCE financial health index, average of standardized components

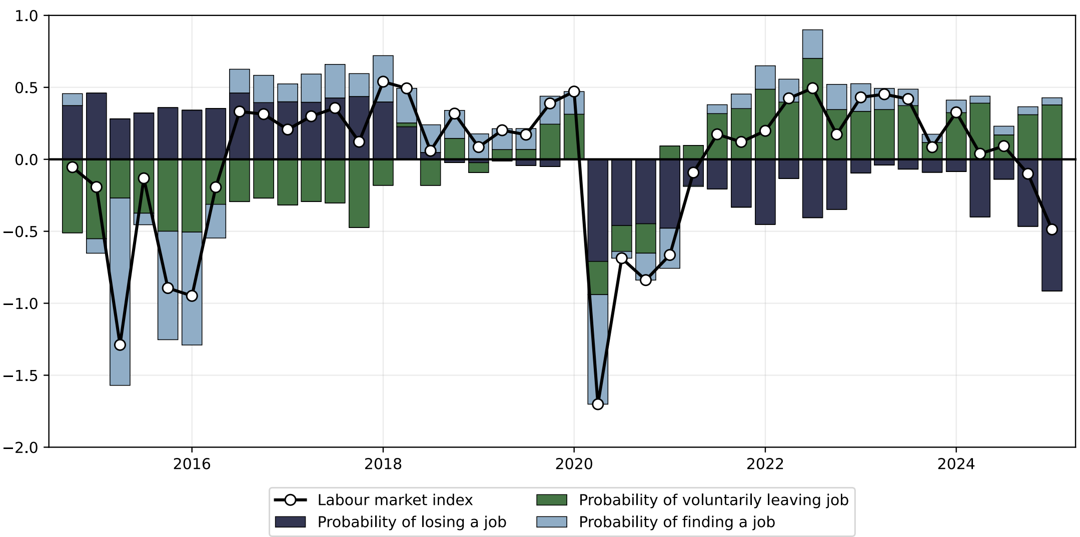


Note: CSCE is the Canadian Survey of Consumer Expectations.
Source: Bank of Canada calculations
Last observation: 2025Q1

The labour market index remained above its historical average throughout most of 2024, although it decreased slightly when its components diverged (**Chart 3**). On the one hand, the probabilities of voluntarily leaving a job and of finding a job remained above their historical averages, contributing positively to the index. On the other hand, the probability of losing a job increased further above its historical average, contributing negatively to the index. The easing in the labour market index over 2024 is consistent with an uptick in the unemployment rate and a steady decline in the number of job vacancies. In the first quarter of 2025, the labour market index declined sharply, driven by a large increase in the probability of losing a job. Consumers who reported elevated levels of concern about job security due to the trade war also reported strong increases in the probability of losing their job.[10]

Chart 3: Consumers' labour market concerns surged in the first quarter of 2025

Contributions to the CSCE labour market index, average of standardized components



Note: CSCE is the Canadian Survey of Consumer Expectations.
Source: Bank of Canada calculations

Last observation: 2025Q1

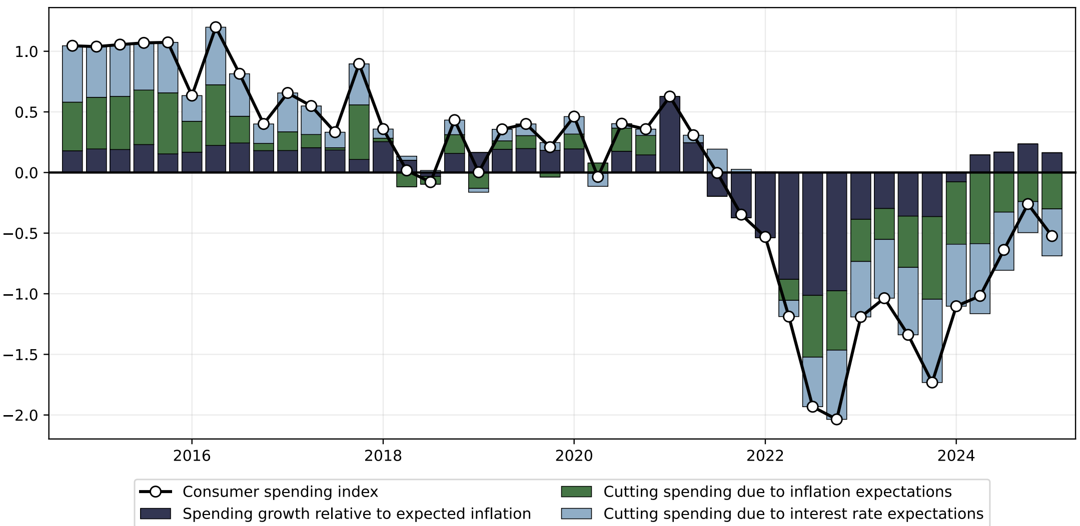
Finally, the consumer spending index also improved steadily throughout 2024 (**Chart 4**) because fewer consumers reported that they planned to reduce their spending due to their expectations for interest rates and inflation. This coincided with monetary policy easing and inflation returning to target. Real spending intentions—measured by expected spending growth less expected inflation—turned positive for the first time since 2021. This is consistent with an improvement in real consumption per person. However, progress in the consumer spending index stalled in the first quarter of 2025, likely because weaker labour market sentiment and financial health concerns constrained consumers' spending intentions.[11]

[10] See Chart 2 in *Canadian Survey of Consumer Expectations—First Quarter of 2025*.

[11] Most consumers said they expected that the trade war would lead to higher prices. Other factors, such as elevated price levels of goods and services, economic uncertainty and high housing costs, continued to weigh on spending decisions as well, as highlighted by special CSCE questions not used in our CSCE indicator. See Chart 5 in *Canadian Survey of Consumer Expectations—First Quarter of 2025*.

Chart 4: Momentum in the consumer spending index stalled in the first quarter of 2025

Contributions to the CSCE consumer spending index, average of standardized components



Note: CSCE is the Canadian Survey of Consumer Expectations.
Source: Bank of Canada calculations

Last observation: 2025Q1

Exploring the heterogeneity of the Canadian Survey of Consumer Expectations indicator

A key advantage of the rich demographic information in the CSCE is that we can construct summary indicators for different demographic groups defined by, for example, age, household income, home-ownership status or region.[12] With 2,000 survey respondents each quarter, we can produce statistically reliable demographic breakdowns. Being able to consider such demographic breakdowns is important because they provide insights into the heterogeneity across households, something that aggregate indicators—including consumer sentiment indexes and standard macroeconomic data—cannot provide. As Kozicki (2022) notes, heterogeneity across households matters significantly for understanding how economic shocks disproportionately impact some households. Summary indicators for different demographic groups can inform our understanding of macroeconomic conditions and expectations across households and can complement analyses that leverage microdata to explore heterogeneity across households.

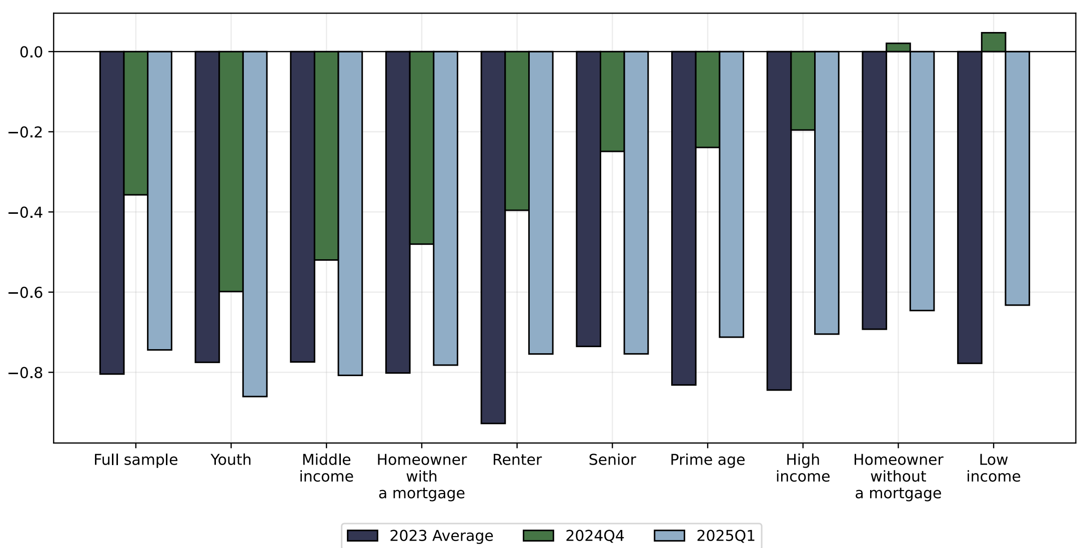
[12]Because each demographic group is produced independently, a significant overlap might exist between groups. For example, within the renter group, 42% of respondents are in the low-income group and 41% of respondents are in the youth age group. Consequently, results presented by demographic groups may not represent mutually exclusive combinations.

To construct our indicators for different groups, we standardize the 11 components for each demographic group independently. This means the values for each demographic-specific CSCE indicator and index are relative to their own historical averages. As a result, we can evaluate how each group is performing only relative to its own average level of sentiment—we cannot directly compare sentiment levels across groups.[13]

We find that consumers across all demographic groups were generally pessimistic in 2023. The CSCE indicator was well below the historical average for each group (**Chart 5**). As discussed earlier, aggregate consumer sentiment improved in 2024, but this aggregation masks significant differences in the magnitude of improvement for different groups. Youth, those in the middle-income group and homeowners with a mortgage experienced the smallest improvements relative to their respective 2023 average levels. At the same time, sentiment for low- and high-income consumers and homeowners without mortgages increased significantly by the end of 2024 compared with their respective 2023 average levels. In contrast, the declines in sentiment in the first quarter of 2025 were significant across all demographic groups and erased virtually all improvements observed throughout 2024, highlighting the pervasive impact of trade war on consumer sentiment.

Chart 5: After improving in 2024, consumer sentiment fell sharply in the first quarter of 2025

CSCE indicator, average of indexes, by demographic group



Note: CSCE is the Canadian Survey of Consumer Expectations.

Source: Bank of Canada calculations

Last observation: 2025Q1

Like the aggregate CSCE indicator, the demographic-specific CSCE indicators highlight the sources of strength and weakness coming from the three indexes. The financial health index was very weak across all demographic groups in 2023 likely in part because elevated inflation and interest rates weighed heavily on households' financial situations

[13] See **Table A-2** in **Appendix A** for the definitions of each demographic group discussed.

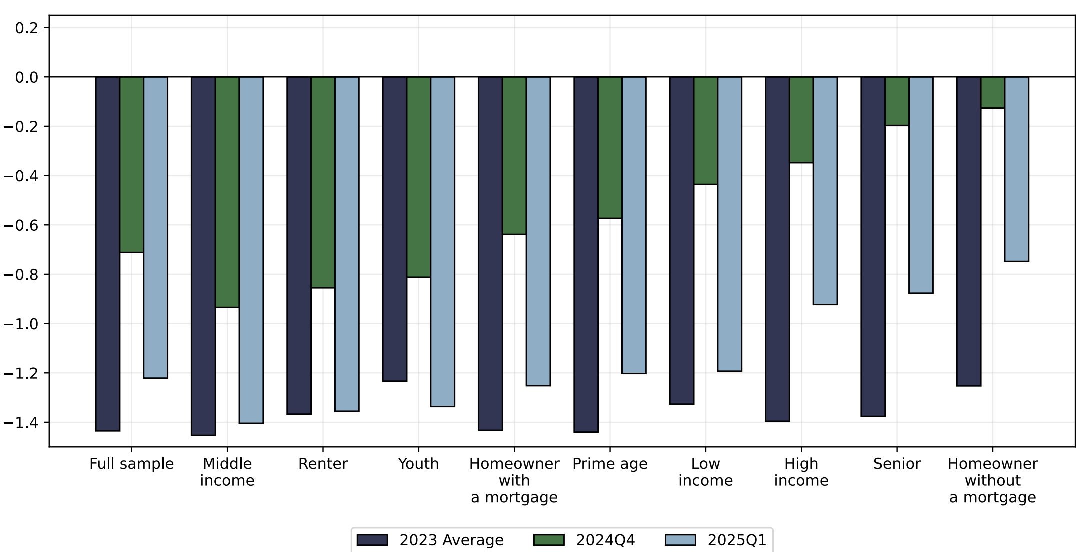
(**Chart 6**). As inflation and interest rates fell throughout 2024, the financial health index improved for all groups, but the magnitude of these improvements varied.

The financial health indexes for middle-income consumers, renters and youth were weak in 2023 and improved only slightly by the fourth quarter of 2024. This could reflect the larger impact of high shelter price inflation on these groups. Rising rent inflation tends to impact younger households disproportionately because they are more likely than middle-aged and older consumers to rent their home. Deteriorating housing affordability also negatively affects younger households and renters aspiring to buy a house. The financial health indexes for homeowners with mortgages was also weak in 2023 and improved only slightly by the fourth quarter of 2024. This likely reflects increased debt-servicing costs because some respondent's mortgages renewed at higher rates.

Conversely, the financial health indexes for high-income consumers, seniors and homeowners without mortgages improved markedly in the fourth quarter of 2024 compared with their respective 2023 levels. This improvement is consistent with these consumers generally having more interest-bearing assets and facing lower debt levels. In the first quarter of 2025, however, the financial health indexes deteriorated significantly for all demographic groups, driven by softening expectations for future financial health. This suggests that all consumers expect the trade war to impact their financial situation.

Chart 6: Financial health sentiment also dropped abruptly in the first quarter of 2025

CSCE financial health index, average of standardized components, by demographic group



Note: CSCE is the Canadian Survey of Consumer Expectations.

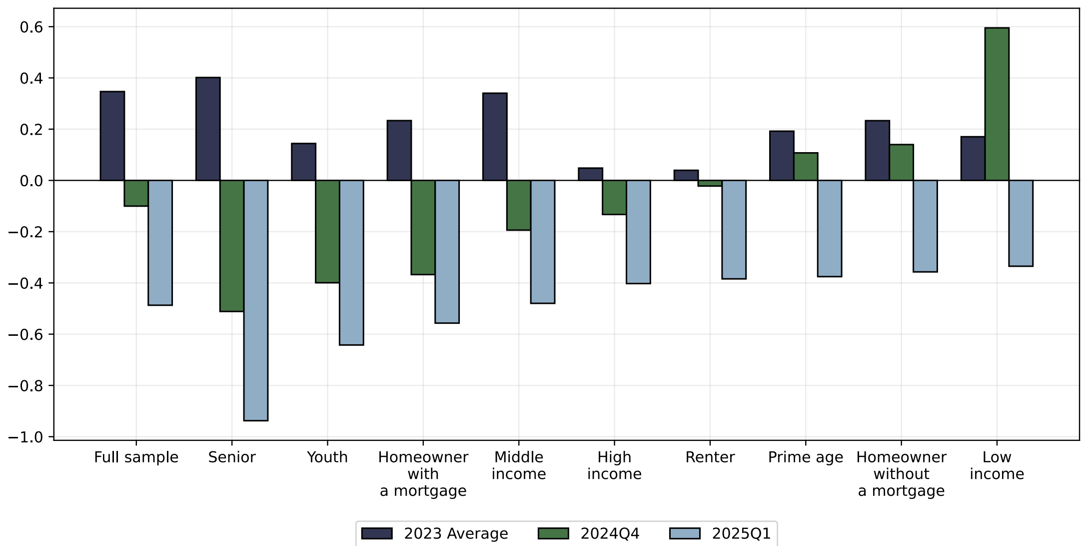
Source: Bank of Canada calculations

Last observation: 2025Q1

While the financial health indexes exhibit similar patterns across different groups, although to varying degrees, we find more heterogeneity among the labour market indexes across all groups (**Chart 7**). In 2023, the labour market index for all groups remained above its respective historical average, likely reflecting tight labour market conditions. However, as the labour market softened over 2024, the changes in the labour market indexes from 2023 levels varied dramatically across groups. Labour market sentiment for seniors, youth and homeowners with mortgages was quite strong in 2023 but exhibited large declines by the fourth quarter of 2024. Youth respondents—who typically experience the worst impacts during labour market downturns—show one of the largest labour market index declines between 2023 and the fourth quarter of 2024, which coincides with a sharp uptick in the youth unemployment rate. In the first quarter of 2025, all demographic groups reported significant declines in labour market sentiment, suggesting that consumers expect the trade war to negatively impact their job security.

Chart 7: The trade war weakened labour market sentiment in the first quarter of 2025

CSCE labour market index, average of standardized components, by demographic group



Note: CSCE is the Canadian Survey of Consumer Expectations.

Source: Bank of Canada calculations

Last observation: 2025Q1

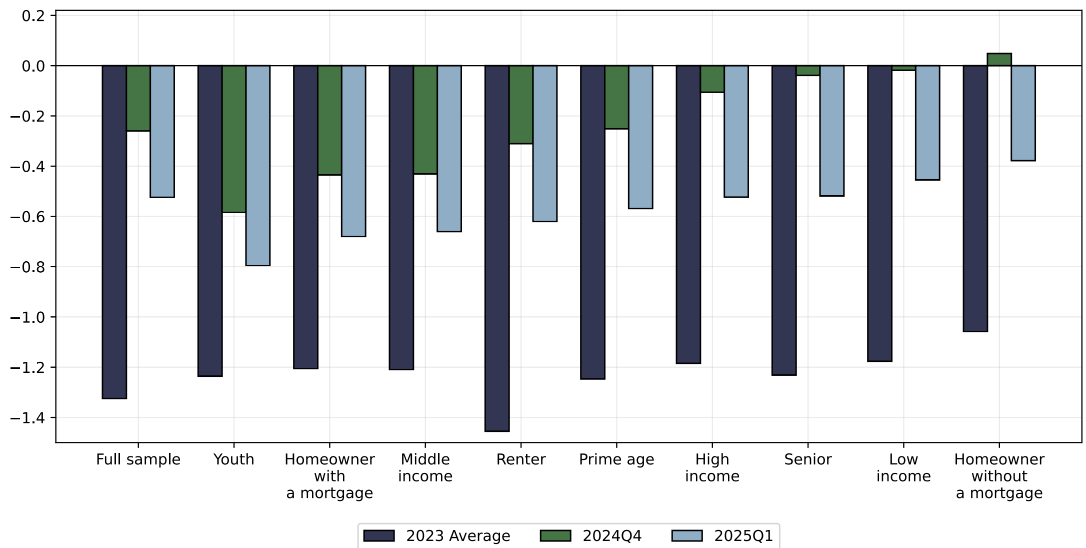
We find similar heterogeneity in the consumer spending indexes across demographic groups (**Chart 8**). In 2023, the consumer spending index remained subdued for all groups, likely because of elevated inflation and interest rates. By the end of 2024, with both inflation and interest rates having declined, consumers' spending intentions had improved but to different extents across groups.

Unsurprisingly, the consumer spending indexes for youth, homeowners with mortgages and middle-income consumers exhibited patterns similar to those for the financial health index. In other words, they had low spending intentions for 2023, with only a slight improvement in 2024. This was likely driven by similar factors—high rent inflation, the deterioration in housing affordability and elevated debt-servicing costs. The consumer spending indexes for demographic groups that tend to be more insulated from these factors improved significantly from low levels in 2023 to roughly their historical averages by the fourth quarter of 2024. Those demographic groups include homeowners without mortgages, seniors and high-income consumers.

But in the first quarter of 2025, the consumer spending indexes for all groups fell, erasing a large portion of the improvements made throughout 2024. Heightened uncertainty due to the trade war could lead some consumers to delay making major purchases such as motor vehicles, furniture or vacations.

Chart 8: Despite improvements in 2024, consumers' spending intentions declined in the first quarter of 2025

CSCE consumer spending index, average of standardized components, by demographic group



Note: CSCE is the Canadian Survey of Consumer Expectations.
Source: Bank of Canada calculations
Last observation: 2025Q1

What drives the Canadian Survey of Consumer Expectations indicator?

In this section, we explore how a set of fundamental variables impact the CSCE indicator. The fundamental variables were selected to capture key factors that impact the lives of consumers, consistent with the literature.[14] We estimate equation (1) over the full sample (from the fourth quarter of 2014 to the first quarter of 2025) using the overall CSCE indicator:[15, 16]

$$\begin{aligned} \mathit{CSCE\ indicator}_t &= \beta_0 + \beta_1 \mathit{CPI\_Inflation}_t + \beta_2 \mathit{Housing\_Affordability}_t + \beta_3 \mathit{TSX}_t \\ &+ \beta_4 \mathit{Unemployment\_Gap}_t + \beta_5 \mathit{Labour\_Income\_PerCapita}_t + \varepsilon_t \end{aligned} \tag{1}$$

The estimated signs on the fundamental variables are consistent with our priors.[17] Increasing inflation, deteriorating housing affordability and a growing unemployment gap are all associated with declining consumer sentiment. In contrast, increases in stock prices and labour income growth per person are associated with increasing consumer sentiment.

To illustrate how fundamental variables affect consumer sentiment, we decompose the drivers of the CSCE indicator. At the onset of the pandemic, when lockdowns took effect and unemployment spiked, the unemployment gap explained most of the sharp fall in

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[14] See Herbstman and Brave (2023), Gascon and Martorana (2024), Cummings and Mahoney (2023) and Bolhuis et al. (2024). This stream of literature explores the puzzling *vibecession*—coined by Scanlon (2022)—where pessimistic consumer sentiment readings do not match strong economic data, such as low unemployment and growth of real gross domestic product.

[15] CPI_Inflation is the year-over-year growth rate of all items in the consumer price index (CPI) basket, Housing_Affordability is the Bank of Canada's housing affordability index, TSX is the year-over-year growth rate in the S&P/TSX composite index, Unemployment_Gap is level of the unemployment gap, and Labour_Income_PerCapita is the year-over-year growth rate of real labour income per person (aged 15 and over). Data for population aged 15 and older are from Statistics Canada's quarterly population estimates. For the unemployment gap measure, we use an internal measure based on the deviation of the unemployment rate from the non-accelerating inflation rate of unemployment (NAIRU). An approximation of the measure used in our analysis can be computed as the difference between the unemployment rate and the NAIRU, where the NAIRU is estimated using a Hodrick–Prescott filter with a smoothing parameter $\lambda = 1{,}600$ on the quarterly unemployment rate series.

[16] Given the short sample period, we estimate equation (1) using the full sample, including the volatile pandemic period, which could impact the coefficient estimates. To assess by proxy whether this is indeed the case, we estimate the same model using the Conference Board of Canada's Index of Consumer Confidence—which exhibits similar dynamics as the CSCE indicator and is available over a longer horizon—over the pre-pandemic period (from the first quarter of 1981 to the fourth quarter of 2019) before predicting out-of-sample in the post-pandemic period. We find that the key results are robust to whether we estimate over the entire sample or exclude the post-pandemic period. This leads us to conclude that our estimates using the full CSCE indicator sample are robust.

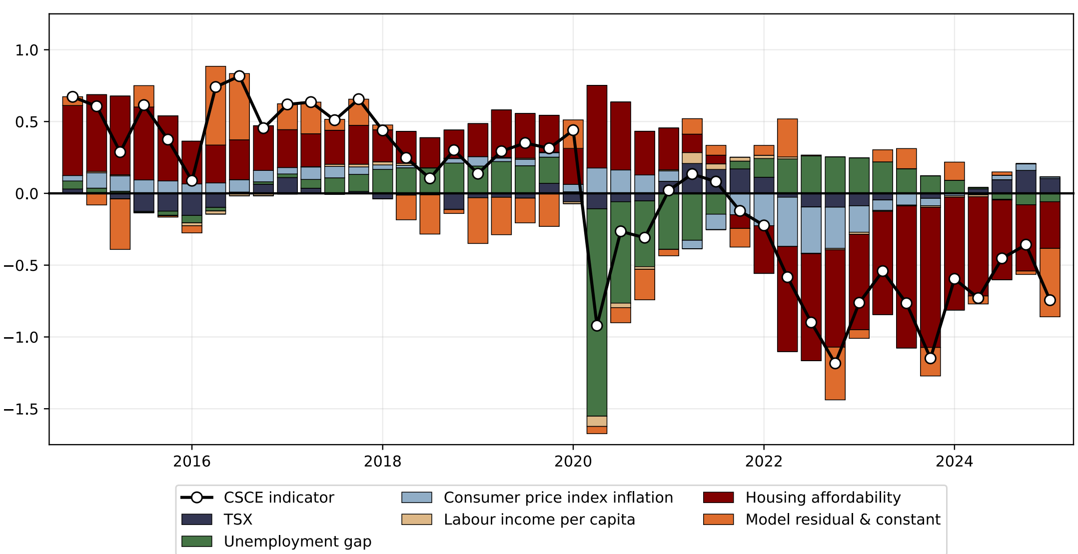
[17] See **Table A-3** in **Appendix A** for the full regression results.

the CSCE indicator (**Chart 9**). When the economy began to reopen and inflation increased sharply in 2021, inflation explained most of the decline in the indicator through 2022. Housing affordability—which in 2023 deteriorated to levels not seen since the 1980s and 1990s—has weighed heavily on consumer sentiment and has remained the largest drag on sentiment since 2022, despite improving over recent quarters as interest rates have fallen.

In the first quarter of 2025, the CSCE indicator was below the value implied by fundamentals (i.e., in **Chart 9**, the sum of the bars corresponding to the five fundamental drivers), resulting in a significant residual term in our decomposition. The decline in the CSCE indicator in the first quarter of 2025 was led by the softening of future expectations, whereas the fundamental indicators in our model capture contemporaneous movements. The residual is consistent with the decline in the CSCE indicator in the first quarter of 2025 being driven by the trade war instead of by a deterioration in fundamentals. This suggests that consumers expect the trade war to have negative economic impacts. Declines in sentiment driven primarily by expectations for the future may not necessarily translate into weaker consumption if the declines in the fundamental indicators do not materialize. While large negative residuals in our regression do not necessarily mean that consumption will be weaker in the current or subsequent quarter, consumer sentiment shocks could lead to shifts in the balance of risks for consumption as households adjust their behaviour.

Chart 9: Fundamental drivers of the CSCE indicator vary over time

Contributions to CSCE indicator, average of indexes



Note: CSCE is the Canadian Survey of Consumer Expectations. Model residual corresponds to the deviations from the model’s predicted level, and the constant reflects the baseline level of the CSCE indicator, obtained from equation 1.

Sources: Statistics Canada and Bank of Canada calculations

Last observation: 2025Q1

In addition to understanding how fundamental variables impact the overall CSCE indicator, we also want to determine whether the indicator is affected the same way across different demographic groups. To do so, we estimate equation (1) again using the

CSCE indicator for each demographic group. We find that the fundamental drivers are largely similar across groups but with some differences (**Chart 10**).[18]

For example, the coefficient on housing affordability is more negative for renters, youth and homeowners with a mortgage than for homeowners without a mortgage. Because housing affordability has deteriorated sharply over recent years, the barrier to entry has increased for first-time homebuyers. We also find differences across estimates of the unemployment gap, with a much lower coefficient for seniors than for prime-age workers. Since many seniors are either retired or approaching retirement, changes in labour market conditions have a relatively minor impact on their overall sentiment level.

While we find relatively little heterogeneity across demographic groups for the coefficient on inflation, the near-average coefficient for the low-income group is puzzling because high inflation tends to impact low-income households disproportionally.[19] The near-average coefficient for the low-income group could be due to the fact that we use total consumer price index (CPI) inflation for all groups rather than inflation measures that would align with the inflation experience of each specific demographic group.[20]

Finally, while the positive impact of stock price gains on sentiment is relatively limited for all groups, it is greater for homeowners without a mortgage, which is consistent with the fact that they tend to be older and own more financial assets for retirement.[21]

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[18] We use aggregate fundamental indicators rather than fundamental indicators pertaining to each demographic group. Using demographic-specific fundamental indicators may yield more heterogeneity across groups in terms of the regression results.

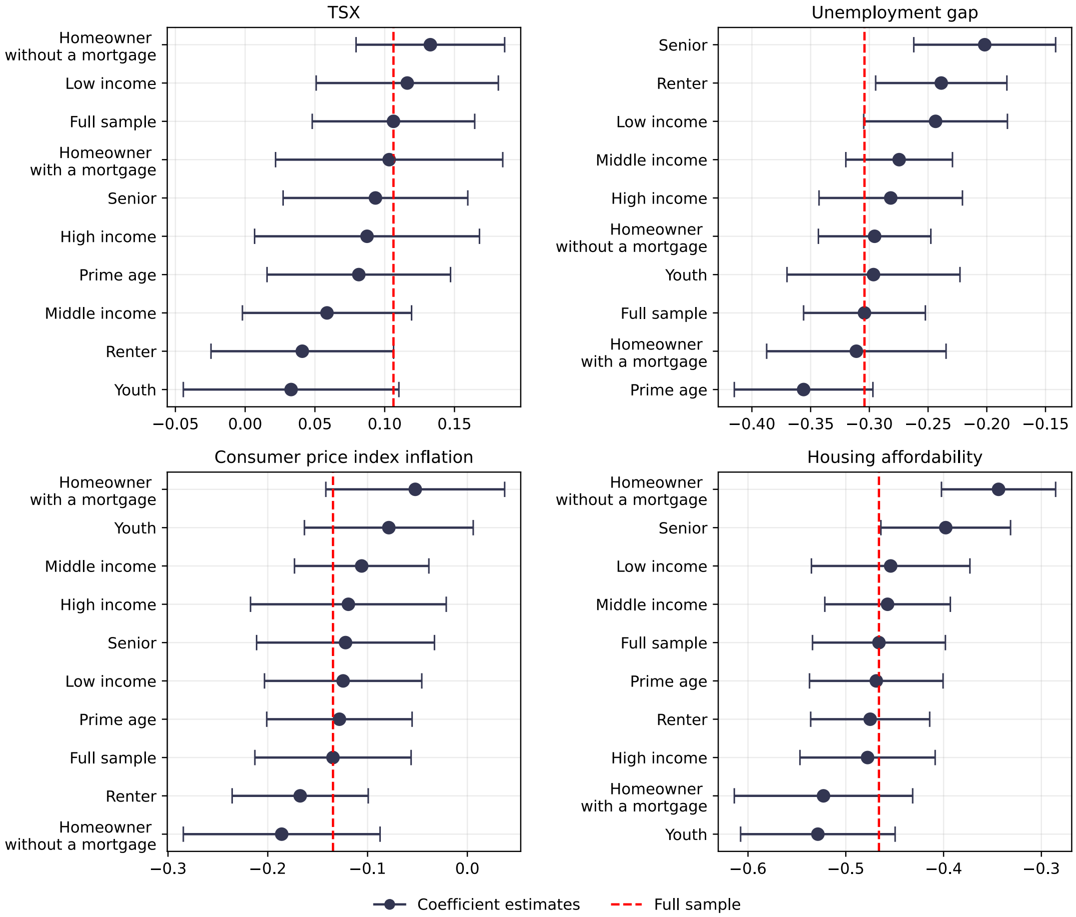
[19] See for example, Argente and Lee (2021), Orchard (2025) and Kostyshyna and Ouellet (2024).

[20] As Kostyshyna and Ouellet (2024) show, low-income households faced higher levels of inflation than high-income households during the pandemic. Further, since low-income households spend a greater share of their income on food and other essentials, the negative impact of elevated inflation is more pronounced for these households.

[21] One puzzling result we find is that the low-income group has one of the highest coefficients for stock price gains. Low-income households traditionally hold very few assets, but this cohort could also be capturing households that have significant assets but limited incomes, such as retirees who are living off their stockpile of savings. Therefore, stronger stock price growth would impact these households more than the traditional low-income group. Additionally, the use of aggregate fundamental indicators rather than demographic-specific data may impact the coefficient estimates.

Chart 10: The CSCE indicator responds differently to different macroeconomic variables

Coefficient estimates



Note: CSCE is the Canadian Survey of Consumer Expectations. Results show estimates with 90% confidence intervals.

Sources: Statistics Canada and Bank of Canada calculations

Last observation: 2025Q1

Conclusion and discussion

Consumer sentiment indexes can be a useful tool for policy-makers and forecasters to understand how consumers' current perceptions and expectations of the economy can impact their future spending and saving decisions. In this paper, we introduce the CSCE indicator, a summary indicator of consumer opinions based on the Canadian Survey of Consumer Expectations. The CSCE indicator comprises three indexes—financial health, labour market and consumer spending—that allow us to explain why consumer opinions change. Moreover, we can leverage the rich demographic data in the CSCE to construct summary indicators for different groups based on demographic characteristics such as household income, home-ownership status and age. The flexibility to construct summary indicators for different groups allows us to better understand the heterogeneous impacts of economic shocks and how they could contribute to the uneven economic experience across households.

The CSCE indicator shows that sentiment among Canadian consumers remained weak even after the pandemic ended, hitting a record low level in late 2022, likely driven by the impact of elevated inflation and interest rates. Consumer sentiment gradually improved through 2024, although it remained subdued relative to pre-pandemic levels. Our analysis of the fundamental drivers shows that the deterioration in housing affordability and the surge in inflation can explain a significant part of the consumer dissatisfaction. In the first quarter of 2025, consumer sentiment declined sharply, erasing most of the positive momentum gained in 2024. This suggests that consumers see the trade war initiated by the United States as potentially increasing their cost of living and job security concerns.

In future work, we will focus on assessing the nowcasting and forecasting performance of the CSCE indicator and its indexes with respect to various consumer-related macroeconomic data. We will also explore how consumer sentiment heterogeneity across different demographic groups impacts aggregate consumer spending and saving decisions.

Appendix A: Tables

Table A-1: Breakdown of the Canadian Survey of Consumer Expectations indicator

CSCE indicator index	Components	Transformation methodology
Financial health index	Change in financial position, past 12 months	Share of respondents whose financial position worsened over the past 12 months (inverted)
	Expected change in financial position, next 12 months	Share of respondents expecting their financial position to worsen in the next 12 months (inverted)
	Perceived access to credit, past 12 months	Share of respondents reporting difficulty accessing credit over the past 12 months (inverted)
	Expected access to credit, next 12 months	Share of respondents expecting difficulty accessing credit in the next 12 months (inverted)
	Probability of missing a debt payment	Interpolated median (inverted)
Labour market index	Probability of losing a job	Interpolated median (inverted)
	Probability of finding a job	Interpolated median
	Probability of voluntarily leaving a job	Interpolated median
Consumer spending index	Cutting spending due to inflation expectations	Share of respondents cutting spending due to inflation expectations (inverted)
	Cutting spending due to interest rate expectations	Share of respondents cutting spending due to interest rate expectations (inverted)
	Real spending growth expectations	1-year spending growth expectations minus 1-year inflation expectations, interpolated median

Table A-2: Descriptions of demographic groups in the Canadian Survey of Consumer Expectations

Aggregate	Demographic group	Details
Age	Youth	18 to 34
	Prime age	35 to 54
	Senior	55 and over
Household income	Low income	Less than $40,000
	Middle income	Between $40,000 and $100,000
	High income	Greater than $100,000
Home-ownership status	Renter	Rent their primary residence
	Homeowner with a mortgage	Own their primary residence and have a mortgage
	Homeowner without a mortgage	Own their primary residence and do not have a mortgage

Table A-3: Canadian Survey of Consumer Expectations indicator regression results

	Full sample	High income	Homeowner with a mortgage	Homeowner without a mortgage	Low income	Middle income	Prime age	Renter	Senior	Youth
Consumer price index inflation	-0.13*** (0.05)	-0.12** (0.06)	-0.05 (0.05)	-0.19*** (0.06)	-0.13*** (0.05)	-0.10*** (0.04)	-0.13*** (0.04)	-0.16*** (0.04)	-0.12** (0.05)	-0.08 (0.05)
Housing affordability index	-0.46*** (0.04)	-0.47*** (0.04)	-0.52*** (0.06)	-0.34*** (0.04)	-0.45*** (0.05)	-0.45*** (0.04)	-0.46*** (0.04)	-0.47*** (0.04)	-0.39*** (0.04)	-0.53*** (0.05)
Labour income per capita	0.01 (0.04)	0.02 (0.05)	-0.03 (0.06)	0.01 (0.03)	0.04 (0.05)	0.03 (0.04)	0.02 (0.04)	0.10** (0.05)	0.07 (0.05)	-0.02 (0.06)
TSX	0.11*** (0.03)	0.09* (0.05)	0.1** (0.05)	0.13*** (0.03)	0.12*** (0.04)	0.06* (0.04)	0.08** (0.04)	0.04 (0.04)	0.09** (0.04)	0.03 (0.05)
Unemployment gap	-0.30*** (0.03)	-0.28*** (0.04)	-0.31*** (0.05)	-0.29*** (0.03)	-0.24*** (0.04)	-0.26*** (0.03)	-0.35*** (0.04)	-0.23*** (0.03)	-0.20*** (0.04)	-0.29*** (0.04)
Constant	0.01 (0.03)	0.01 (0.04)	0.01 (0.04)	0.01 (0.03)	0.02 (0.03)	0.01 (0.03)	0.01 (0.03)	0.02 (0.03)	0.02 (0.03)	0.01 (0.04)
R^2	0.88	0.83	0.80	0.84	0.85	0.88	0.86	0.89	0.84	0.83

Note: ***p<0.01, **p<0.05, *p<0.1. Standard errors are in parentheses.

Appendix B: Assessing the robustness of the Canadian Survey of Consumer Expectation indicator

To assess whether the CSCE indicator is robust to our equal weighting methodology, we considered an alternative weighting approach by estimating a dynamic factor model (DFM) with a single factor using the same 11 core questions.[22] The estimation procedure for the DFM allows the factor loadings to vary across series, which introduces the potential for variable weights on each question. We find that weighting series based on a DFM produces results very similar to those of the equal weights methodology (**Chart B-1**). These results suggest that the benefits of departing from the simple equal-weight approach are limited.

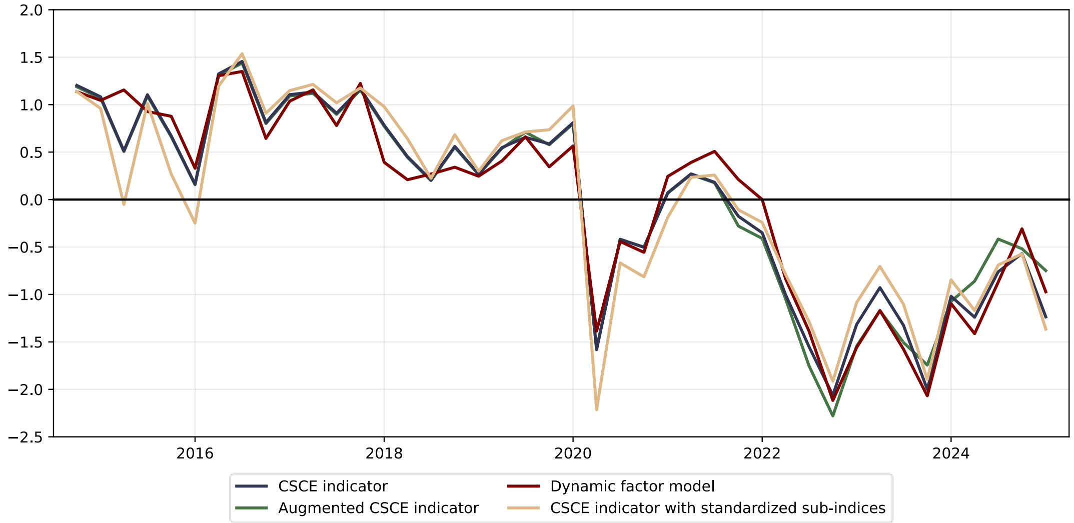
We also consider the impact of standardizing the indexes before computing the CSCE indicator. Computing the CSCE indicator using the standardized indexes leads to negligible differences with our approach using the non-standardized indexes (**Chart B-1**). Also, standardizing the indexes makes it difficult to interpret the mapping of the individual components in each index.

We recently introduced new questions related to the labour market and spending intentions. In the third quarter of 2021, we added a question asking unemployed respondents how many weeks they spent looking for a job. In the first quarter of 2023, we added a question on intentions to make a major purchase (such as motor vehicles, vacations or home appliances). To assess whether including these new questions affects the CSCE indicator, we consider an augmented version of the CSCE indicator that includes these two new questions. We find that the results using these additional questions are very similar to the original CSCE indicator, which indicates the CSCE indicator is not overly sensitive to new additional questions (**Chart B-1**).

[22] Since some series in the CSCE indicator are non-stationary, the DFM uses these series in first differences. The DFM index is constructed by cumulatively summing the estimated factor for each period. For more information on DFM estimation, see Stock and Watson (2016).

Chart B-1: The CSCE indicator is robust to alternative methodologies and additional questions

CSCE indicator, average of indexes

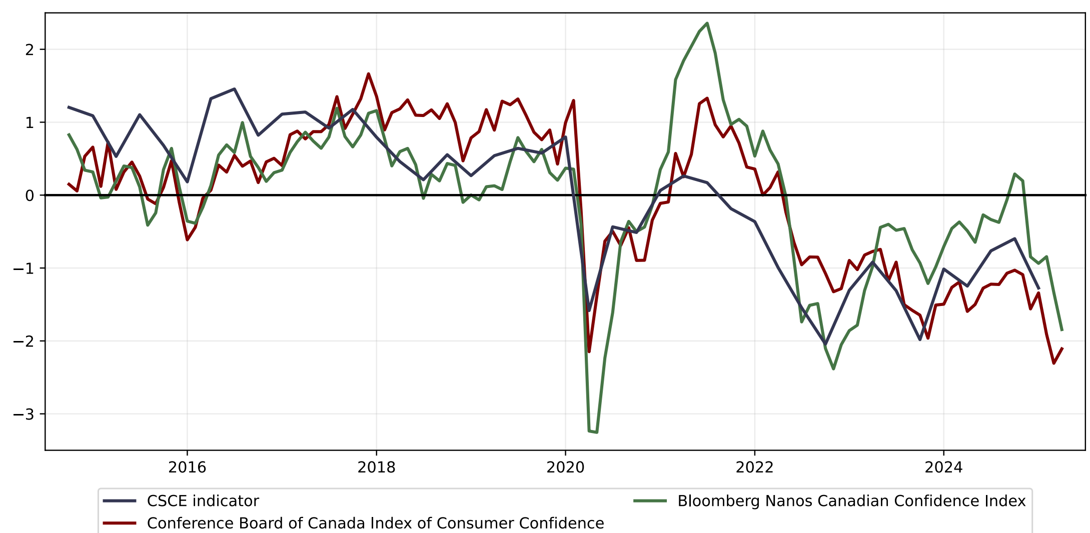


Note: CSCE is the Canadian Survey of Consumer Expectations. The augmented CSCE indicator includes additional CSCE questions.
Source: Bank of Canada calculations — Last observation: 2025Q1

In addition to assessing the CSCE indicator's robustness to methodological considerations, we also compare it with the two other indexes that also capture consumer opinions in Canada, the Conference Board of Canada's Index of Consumer Confidence and the Bloomberg Nanos Canadian Confidence Index. Overall, the three indexes present similar dynamics despite some differences (**Chart B-2**).

Chart B-2: Consumer sentiment remains soft across different indicators

Standardized index



Note: CSCE is the Canadian Survey of Consumer Expectations. Bloomberg Nanos Canadian Confidence Index is average of weekly data, Conference Board of Canada Index of Consumer Confidence data is monthly, and CSCE indicator data is quarterly.
Sources: Bloomberg Nanos, Conference Board of Canada and Bank of Canada calculations — Last observation: April 2025

The CSCE indicator reflects the individual perspectives of respondents for the three aspects of sentiment considered (labour market outcomes, financial health and spending intentions) while the other two indexes combine individual perspectives and aggregate views regarding these three aspects. The monthly Conference Board of Canada and weekly Bloomberg Nanos surveys are much timelier than the CSCE, which is published quarterly. However, the rich demographic information available in the CSCE allows us to create custom aggregates to better explore the underlying drivers of consumer sentiment.

The Conference Board of Canada's confidence index consists of four equally weighted questions:[23]

- Considering everything, would you say that your family is better off financially or worse off than six months ago?
- Again, considering everything, do you think that your family will be better off financially, the same, or worse off financially six months from now?
- How do you feel the job situation and overall employment will be in this community six months from now?
- Do you think that right now is a good time or bad time for the average person to make a major outlay for things such as a home or a car or some other major item?

The Bloomberg Nanos confidence index also consists of four equally weighted questions:[24]

- Thinking of your personal finances, are you better off, worse off, or has there been no change over the past year?
- Would you describe your job, at this time, as secure, somewhat secure, somewhat not secure, or not at all secure?
- In the next six months, do you think the Canadian economy will become stronger, weaker, or will there be no change?
- In the next six months, do you believe that the value of real estate in your neighbourhood will increase, stay the same or decrease?

[23] For more information, see "Index of Consumer Confidence" on The Conference Board of Canada website.

[24] For more information, see "Nanos-Bloomberg Tracking Methodology" on the Nanos website.

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