October 8, 2024

A Distributional Analysis of the Purchasing Power of Canadian Households Since 2019

OFFICE OF THE PARLIAMENTARY BUDGET OFFICER
BUREAU DU DIRECTEUR PARLEMENTAIRE DU BUDGET

The Parliamentary Budget Officer (PBO) supports Parliament by providing economic and financial analysis for the purposes of raising the quality of parliamentary debate and promoting greater budget transparency and accountability.

To study the discrepancies in the evolution of the purchasing power of Canadian households, this report provides a distributional analysis of inflation and Canadian household incomes since the start of the COVID-19 pandemic. Our analysis also includes a snapshot of purchasing power at the provincial and territorial level.

Lead analysts:

Régine Cléophat, Analyst
Caroline Nicol, Advisor–Analyst

Prepared under the direction of:

Diarra Sourang, Director

Nathalie Desmarais, Marie-Eve Hamel Laberge, Martine Perreault and Rémy Vanherweghem assisted with the preparation of the report for publication.

For more information, please contact the Office of the Parliamentary Budget Officer.

Yves Giroux
Parliamentary Budget Officer

Table of contents

Highlights 1
Summary 2
Consumer spending and inflation 2
Changes in income 2
Purchasing power and inflation 3
Introduction 5
Inflation and consumption 8
Similar consumption profile across quintiles 9
Shelter, transportation and food: the main contributors to inflation 11
Changes in income 12
Wage increases have supported market income growth since 2022 12
Disposable income increased for all households, with some distinctions 13
Uneven market income growth since 2019 14
Changes in purchasing power 17
2020–2022: Impact of the pandemic 17
2022: Inflation and tighter monetary policy impact purchasing power 18
Provincial profile 20
Notes 24

Highlights

In the first quarters of the COVID-19 pandemic, prices rose well below the Bank of Canada's 2% inflation target, while household incomes were supported by government transfers, leading to improved purchasing power for all income quintiles.

The purchasing power of most households was higher in the first quarter of 2024 than in the last quarter of 2019. However, since 2022, rising inflation and tighter monetary policy have eroded purchasing power, particularly among lower-income households.

Due to the composition of their family wealth, the investment income of households in the highest quintile grew faster than their interest payments. Because this net increase in income outpaced inflation, the average purchasing power of these households improved in 2023.

For households in the other income quintiles, interest payment increases were higher on average than investment income payments in 2023. As a result, the average purchasing power of households in the third and fourth quintiles stagnated, while it deteriorated for the two lowest quintiles.

Purchasing power trends varied from province to province. Quebec, Ontario and British Columbia are among the provinces that saw an increase in purchasing power, while Newfoundland and Labrador, Nova Scotia and Alberta saw a decline. For these provinces, inflation offset the increase in disposable income. As for the territories, purchasing power for all households was among the highest in Canada since the last quarter of 2019.

Summary

To study the discrepancies in how the purchasing power of Canadian households has changed, this report provides a distributional analysis of inflation and Canadian household incomes since the start of the COVID-19 pandemic. Our analysis also includes a snapshot of purchasing power at the provincial and territorial level.

Consumer spending and inflation

The PBO used the 2019 consumption bundle as a reference point to calculate a measure of inflation specific to households in different income quintiles.

On average, households—regardless of disposable income—have experienced price increases of about 15% since the last quarter of 2019. All households have experienced similar levels of inflation because households allocate very similar proportions of their income to the various consumption expenditure categories.

Furthermore, spending on food, shelter and transportation has accounted for more than three-quarters of inflation since the last quarter of 2019, despite these categories making up less than half of the 2019 consumption bundle.

Changes in income

The PBO considered two income measures for this analysis. Market income is income before transfers and income tax, while disposable income is market income and government transfers after income tax is deducted.

Since the last quarter of 2019, average household disposable income has risen by 21%. However, the source of this increase differs by income groups. For households in the lowest income quintile, an increase in government transfers was the biggest contributor to their 22% increase in average disposable income. For households in the highest income quintile, market income growth was the main driver of their 25% increase in average disposable income.

Households in the two highest quintiles saw their market incomes grow three times faster on average than those in the two lowest quintiles—a discrepancy that can be explained in part by the fact that higher-income households experienced stronger

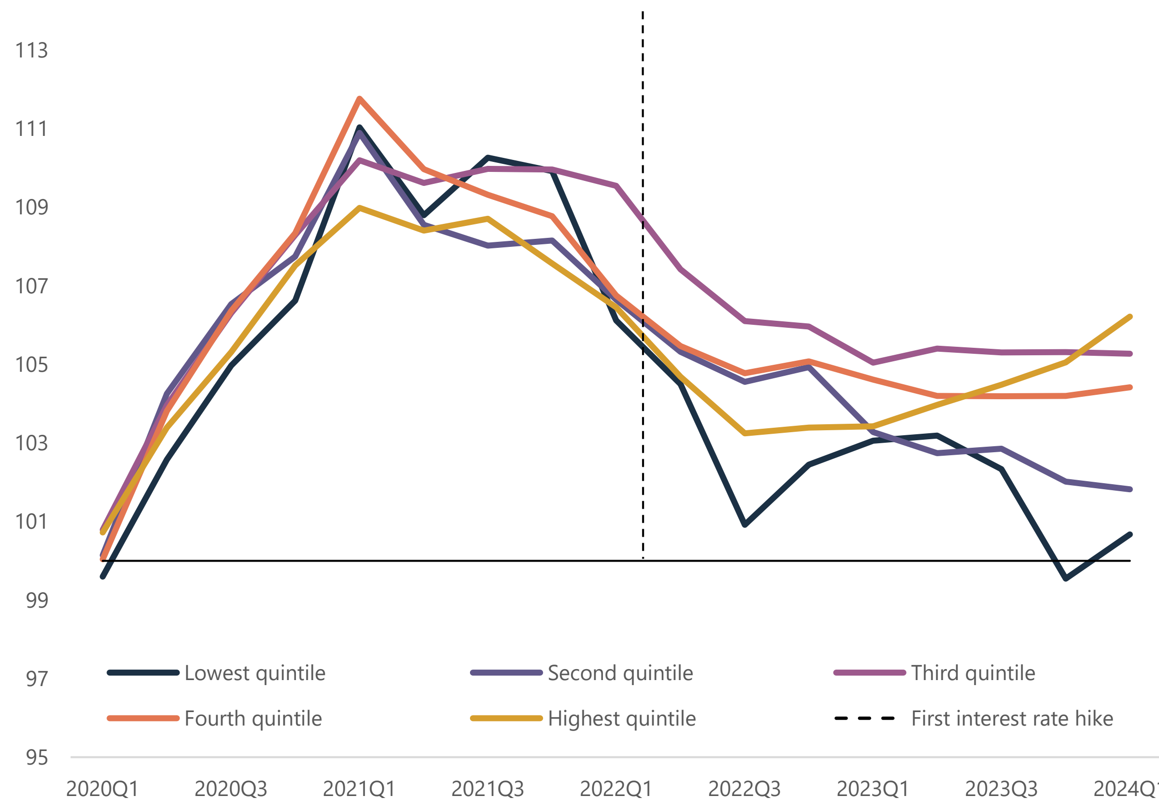
growth in their compensation. In addition, higher interest rates led to an increase in investment income that was greater than the increase in interest payments for households in the highest income group.

Purchasing power and inflation

In the first quarters of the COVID-19 pandemic, prices rose well below the Bank of Canada's 2% inflation target, while household incomes were supported by government transfers. As a result, all income quintiles saw their purchasing power increase (Figure R-1).

Figure R-1

Changes in the purchasing power index



Source:
Office of the Parliamentary Budget Officer.

Although prices increased again in 2021, household purchasing power was maintained, as incomes grew at a comparable rate. In 2022, inflation accelerated sharply, leading to an overall decrease in household purchasing power. In response, the Bank of Canada raised its policy interest rate seven times.

Higher interest rates mean not only higher investment incomes but also higher interest payments on consumer credit, mortgages and non-mortgage loans. On average, only households in the highest quintile saw their investment income exceed their interest payments. As a result, the average purchasing power of these households improved in 2023. The purchasing power of households in the third and fourth quintiles stayed the same, while that of the two lowest quintiles decreased.

In summary, the purchasing power of most households stayed the same or increased from the last quarter of 2019. However, since 2022, rising inflation and tighter monetary policy have led to a decrease in purchasing power, particularly for lower-income households.

Purchasing power trends varied from province to province. Quebec, Ontario and British Columbia are among the provinces that saw an increase in purchasing power, while Newfoundland and Labrador, Nova Scotia and Alberta saw a decline. For these provinces, inflation offset the increase in disposable income. As for the territories, purchasing power for all households was among the highest in Canada since the last quarter of 2019.

Introduction

Purchasing power corresponds to the quantity of goods and services that can be purchased with an income. Therefore, to measure the change in household purchasing power over time, it is necessary to compare income growth with price increases over the period studied.

COVID-19 disruptions had a major impact on the price of goods and services and—therefore—on household purchasing power.

In the first year of the COVID-19 pandemic, inflation as measured by the Consumer Price Index (CPI) remained well below the Bank of Canada's target range, but in 2021 the opposite held true. Raw material prices and supply chain disruptions drove up the price of consumer goods. In April 2021, CPI inflation rose to 3.2% year over year, exceeding the upper limit of the Bank of Canada's target range. In 2022, inflation soared and became widespread.

CPI inflation reached an all-time high of 8.1% in June 2022, reflecting sustained price increases in most categories of goods and services measured by the CPI. Since then, inflation has slowed, and in January 2024 it fell below the upper limit of the Bank of Canada's target range once again.

Cumulatively, the price of the typical basket of goods and services for the average Canadian household has risen by 15% since the last quarter of 2019.[1] Despite this, disposable income outpaced inflation (Figure 1). It rose by 21% over the same period, supported first by higher government transfers, then by wage gains and net investment income. This indicates that—on average—the purchasing power of Canadian households is higher now than before the pandemic.

Figure 1

Disposable income and price of the 2019 basket of goods and services for all Canadian households (2019Q4 = 100)

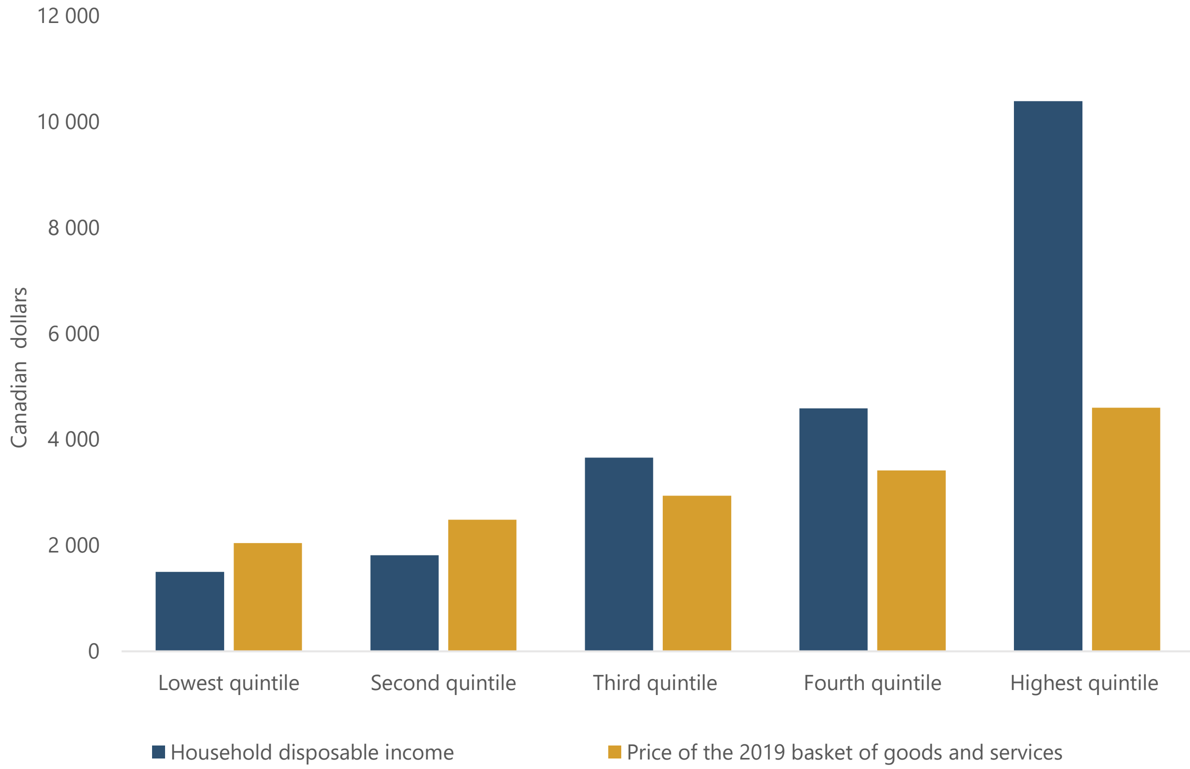
Office of the Parliamentary Budget Officer and Statistics Canada.

However, this conclusion does not provide a full picture of the recent changes to purchasing power in Canada. In fact, it is widely accepted that inflation and the accompanying tightening of monetary policy have affected household purchasing power disproportionately, depending on income level.[2]

Figure 2 shows that, for households in the two lowest quintiles, small increases in income were not enough to counteract the effect of inflation on their purchasing power.

Figure 2

Increase in disposable income and the price of the 2019 basket of goods and services from 2019Q4 to 2024Q1, by income quintile



Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

To study the discrepancies in how the purchasing power of Canadian households has changed, this report provides a distributional analysis of inflation and Canadian household incomes since the start of the COVID-19 pandemic.[3] Our analysis also includes a snapshot of purchasing power at the provincial and territorial level.

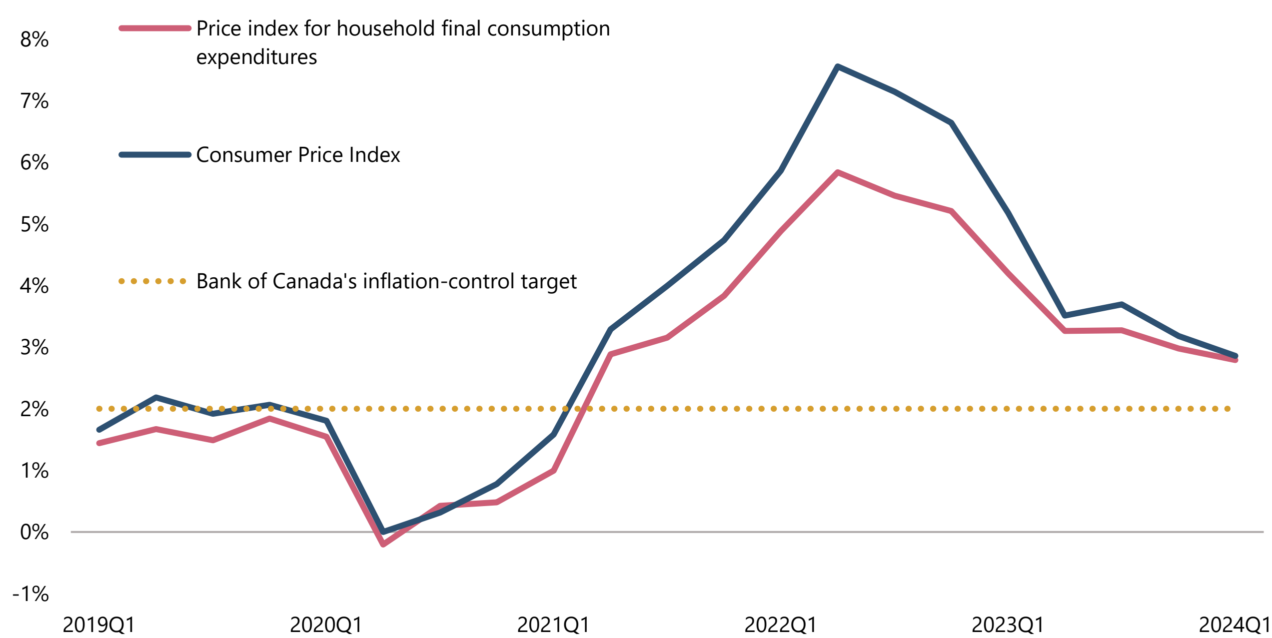
Inflation and consumption

The Consumer Price Index (CPI) is the Bank of Canada's indicator for measuring inflation, or the changes in prices consumers pay. However, the CPI does not reflect changes in consumer habits immediately, as the weights associated with the various categories of goods and services are updated annually. By contrast, the implicit price index for household final consumption expenditure measures inflation while considering real-time changes in household spending.

In the second quarter of 2022, the year-over-year percentage change in the CPI reached a record high of 7.6%, while the price index for household final consumption expenditure was 5.8% over the same period. The gap observed between the two inflation measures over this period (Figure 3) shows that households adjusted their consumption in response to prices deemed too high—also known as the substitution effect.

Figure 3

Inflation measures – Year-over-year percentage change



Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

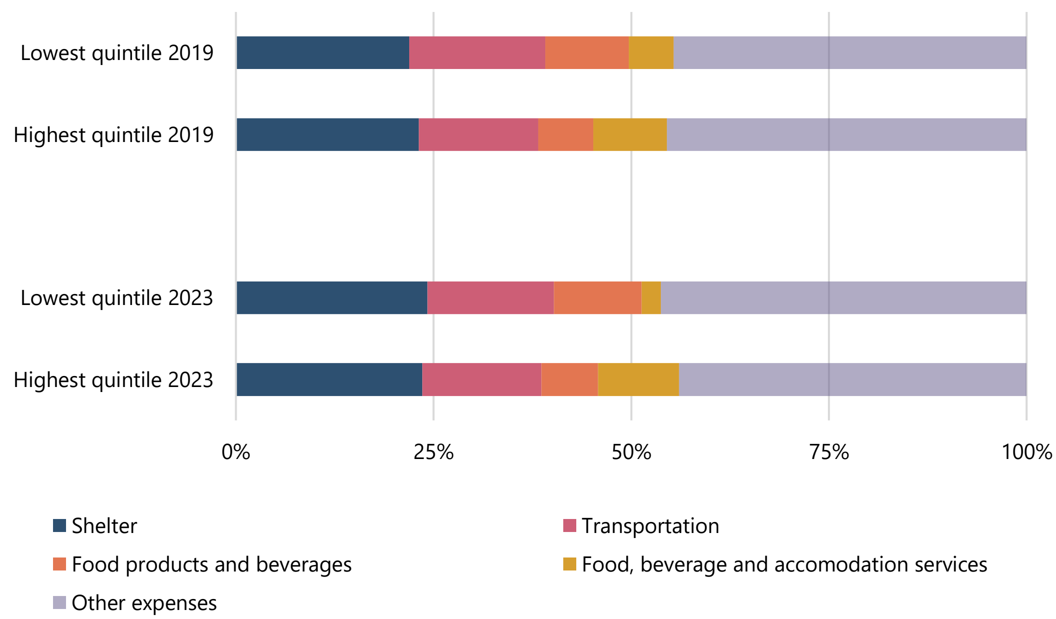
To measure the change in household purchasing power, the PBO used the 2019 consumption bundle as a baseline for all quintiles. Specifically, the weighted average of the quarterly change in prices for each spending category is the measure of inflation used for each quintile. Weights are assigned to each spending category based on the composition of the 2019 consumption bundle. As a result, this measure of inflation is specific to the average household profile in a given quintile. It also excludes substitution effects that may be caused by factors such as changes in price.

Similar consumption profile across quintiles

The data analyzed show that on average—across income quintiles—households spend similar amounts on different spending categories (Figure 4).

Figure 4

Breakdown of household spending, by category



Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

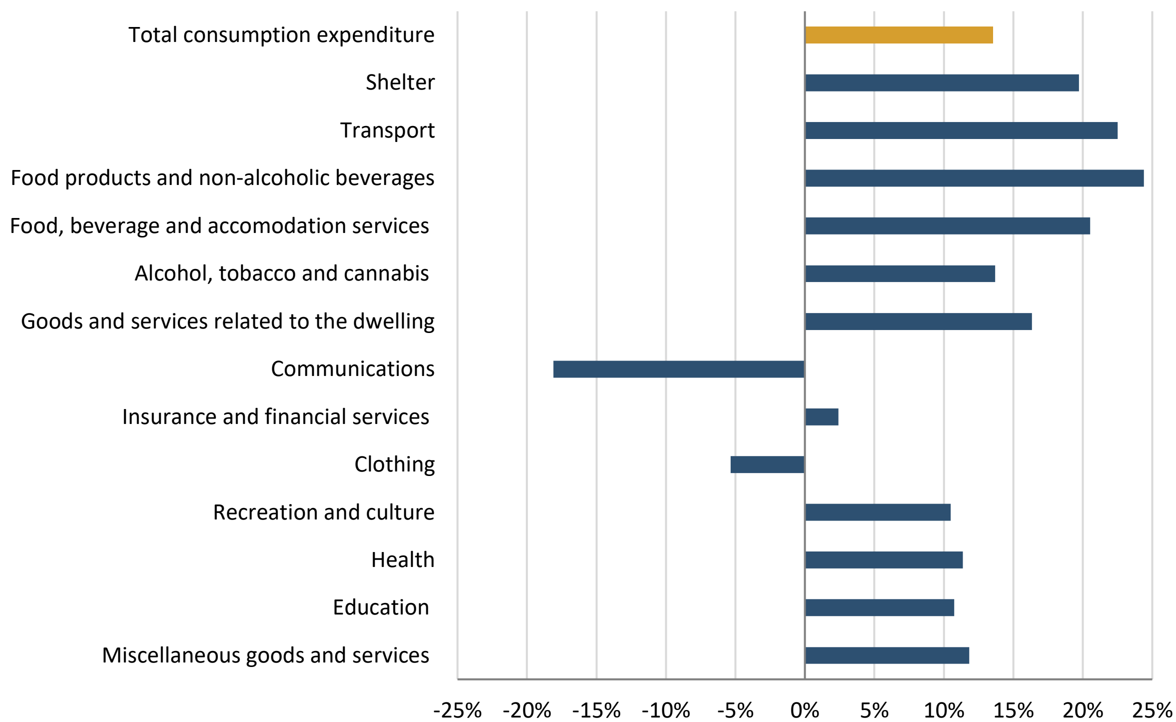
Household spending on shelter[4] accounted for nearly one-quarter of total spending in both 2019 and 2023 across all quintiles. Similarly, households spent approximately 17% on average on transportation.

The main exception was spending on food, beverage and accommodation services. For the highest-income households, this category represented nearly 10% of their total spending in both 2019 and 2023. In contrast, lower-income households saw their spending on food, beverage and accommodation services fall from 6% to 2% over the same period.

This drop for lower-income households coincided with a cumulative price increase of 21% in this category. In comparison, inflation of total consumer expenditure rose by 14% (Figure 5).

Figure 5

Inflation from 2019Q4 to 2024Q1, by consumption category



Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

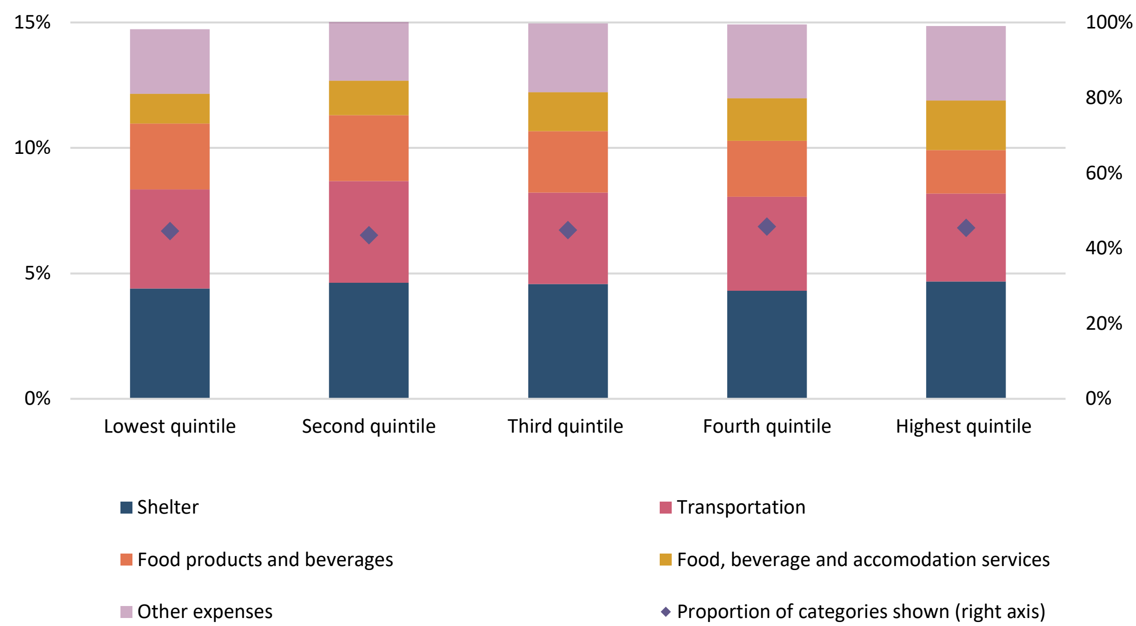
The prices of transportation and shelter—the two largest categories in the household consumption bundle—also increased by 23% and 20%, respectively—well above the price increase of the total consumption basket.

Shelter, transportation and food: the main contributors to inflation

The PBO applied price variations to the average consumer profile for each income quintile to obtain their specific measure of inflation. Figure 6 shows that households—regardless of disposable income—have experienced an average price increase of around 15% since the last quarter of 2019. This homogeneity of inflation across income quintiles is observed because households spend very similar proportions on the various consumption expenditure categories.[5]

Figure 6

Inflation from 2019Q4 to 2024Q1, by income quintile



Source:

Office of the Parliamentary Budget Officer and Statistics Canada.

It is also interesting to note that while spending on food, shelter and transportation makes up less than half of the 2019 consumption bundle it accounted for more than three-quarters of inflation since the last quarter of 2019.

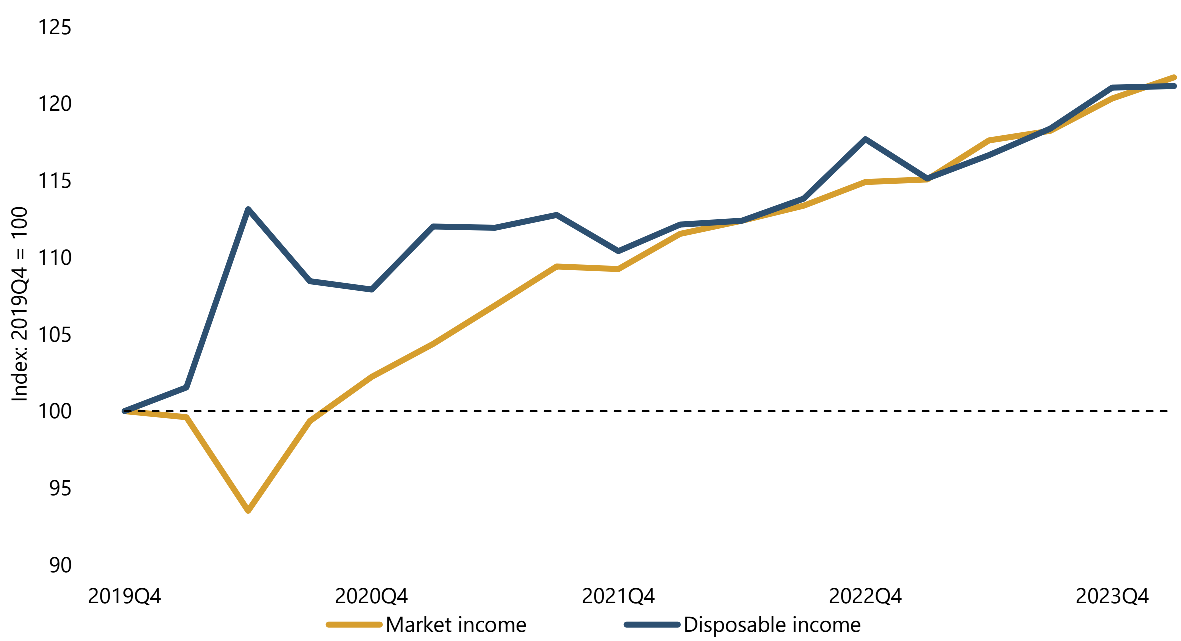
Changes in income

The PBO considered two related income measures for this analysis: market income and disposable income. Market income is income before transfers and income tax, while disposable income is market income, government transfers received and income tax[6] paid. The PBO also looked at the components of various income types and their variations, from compensation of employees to current transfers paid. This analysis gave the PBO an understanding of the reasons for the income changes.

Wage increases have supported market income growth since 2022

In the first quarters of the COVID-19 pandemic, the gap between market income growth and disposable income growth increased significantly for all households (Figure 7). From the last quarter of 2019 to the second quarter of 2020, market income fell by 3%, while disposable income increased by 6.4% on average.

Figure 7
Income growth since the last quarter of 2019



Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

In the first two quarters of 2020, the decline in market income coincided with a near complete shutdown of several sectors of the economy and a drop in the number of employed people by more than 2.5 million. In the face of these economic disruptions, employment income slumped as governments introduced income support measures such as the Canada Emergency Response Benefit (CERB). These government transfers supported the increase in disposable income during this period.

As the Canadian economy reopened under the administration of health measures, employment income began to rise. As of 2022, the gap between market income growth and disposable income growth has narrowed from quarter to quarter. This trend is the result of the gradual end of income support measures related to the COVID-19 pandemic, at a time when Canadian households were seeing significant wage increases, spurred in part by labour market tensions.[7]

In the first quarter of 2024, temporary income support measures offset the cost of living and marked the growth of disposable income. At the same time, recent wage negotiations consolidated the market income increase.

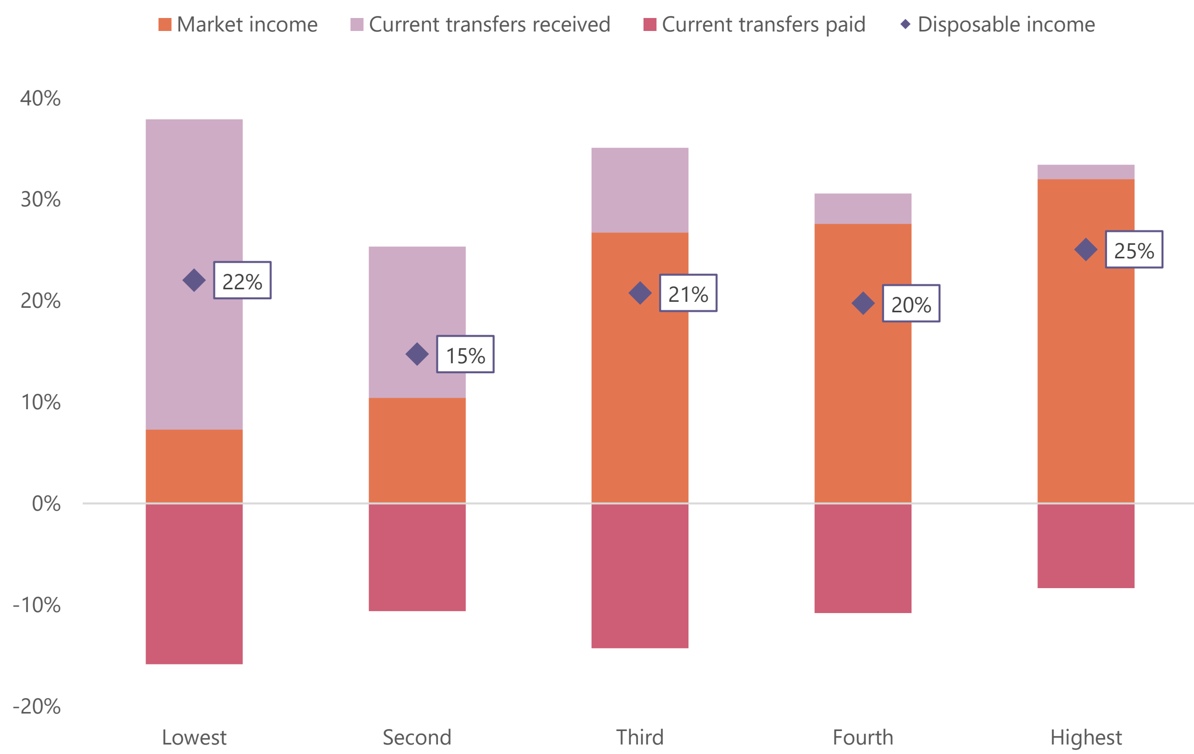
Disposable income increased for all households, with some distinctions

Although disposable income had increased on average for households across all income groups at the end of the first quarter of 2024 (Figure 8), there were some distinctions for households in the first two quintiles.

Current transfers received contributed most to their disposable income growth, which increased by 22% and 15%, respectively, compared with the last quarter of 2019. However, their own sources of income did not drive this growth, as it had risen by only 7.3%. In this respect, the PBO noted that government transfers supported the disposable income of these households. The increase in disposable income for the other households across the income distribution was primarily the result of the increase in market income at the end of the first quarter of 2024.

Figure 8

Contribution to disposable income growth from 2019Q4 to 2024Q1, by quintile

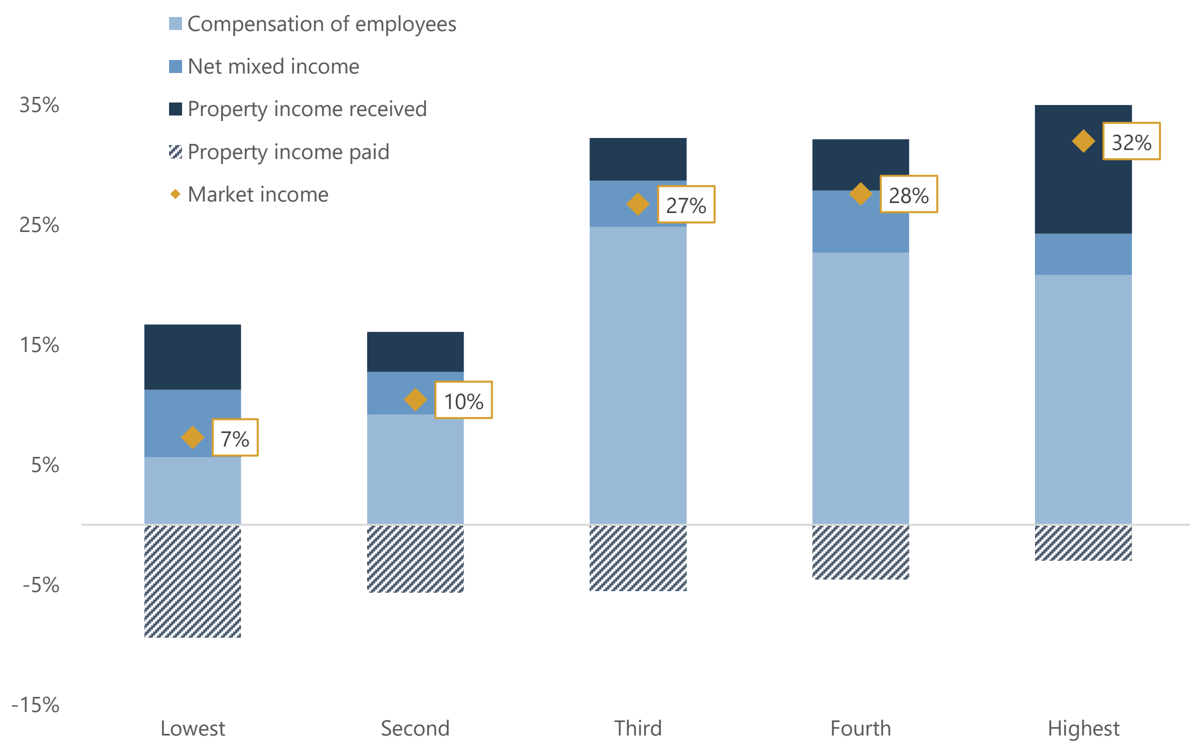


Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

Uneven market income growth since 2019

By the end of the first quarter of 2024, market income had increased for households in every income group (Figure 9). However, this snapshot reveals more striking contrasts between quintiles. The market income of households in the first two income groups grew more slowly than the others, increasing by 7% and 10%, while the top 60% of households with the highest incomes saw increases of over 25%.

Figure 9
Contribution to market income growth from 2019Q4 to 2024Q1



Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

Gaining better insights into what has driven the rise in market income requires analyzing its components, their contribution to its growth and the total change since the last quarter of 2019. More specifically, market income is made up of compensation of employees (employment income), net mixed income (e.g., self-employment income[8]), property income received (investment income[9]) and property income paid (interest payments and other borrowing costs).

The different speeds at which employment income grew set the initial tone for these differences. From the third quintile onward, households enjoyed substantial wage increases that stimulated most of the growth in market income.

Regarding net investment income, monetary policy set the subsequent tone for disparities between income quintiles. For example, the average situation of households in the lowest quintile is compared with that of households in the highest quintile. For households in the lowest quintile, interest payments had a significant negative impact on the variation in market income at the end of the first quarter of 2024, thus slowing its growth. In addition, the assets of lower-income households are generally in cash or other short-term deposits. Therefore, it seems that the returns they have generated have not offset the increase in borrowing costs.

In contrast, households in the highest quintile have seen the sharpest rise in market income (+32%) since the last quarter of 2019. They are the only income group whose higher investment income contributes the most to private income growth, after wage gains. Unlike lower-income households, they have been able to take advantage of higher returns in a high interest rate environment.

In other words, the changes in income in Figure 9 also depict the short-term distributive effects of monetary policy. Coupled with disparities in employment income, they essentially explain the differences observed in the purchasing power changes at the end of the first quarter of 2024.

Changes in purchasing power

Purchasing power is the quantity of goods and services that can be bought with a given income. Therefore, it factors in both income and price levels. Thus, changes in purchasing power correspond to the difference between changes in household income and changes in prices.

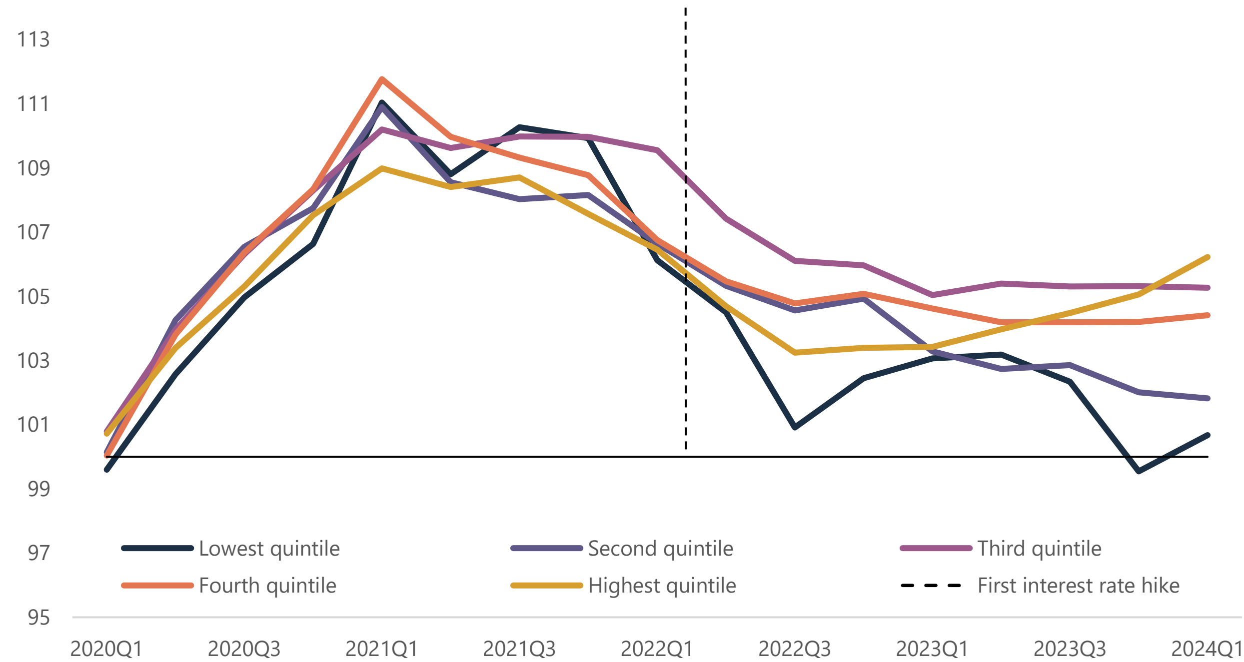
For the purposes of this analysis, the measure of purchasing power for the average household in each quintile is defined as the ratio of the value of the 2019 basket of goods and services to average disposable income. An index is used to help interpret changes in purchasing power. The growth of this index corresponds to the inverse of the growth of a four-quarter moving average of our purchasing power ratio.[10] Thus, the growth of the index corresponds to an improvement in household purchasing power.

2020–2022: Impact of the pandemic

In the first quarters of the COVID-19 pandemic, prices rose well below the Bank of Canada's 2% inflation target, while household incomes were supported by government transfers, leading to an improvement in purchasing power for all income quintiles (Figure 10). In 2021, although prices resumed their growth, household purchasing power was maintained as incomes grew at a comparable rate.

Figure 10

Changes in the purchasing power index



Source:
Office of the Parliamentary Budget Officer.

2022: Inflation and tighter monetary policy impact purchasing power

In 2022, inflation grew sharply, leading to a general decline in household purchasing power. In response, the Bank of Canada raised its key rate seven times from the first quarter of 2021 to the third quarter of 2023—for a total increase of 4.75 percentage points. While household purchasing power was relatively stable over the preceding two years, stricter monetary policy would have an asymmetrical impact on households.

Higher interest rates not only increased investment income but also interest payments on consumer credit, mortgages and non-mortgage loans. Due to the composition of their family wealth, the investment income of households in the highest quintile grew faster than their interest payments. Because this net increase in income outpaced inflation, the average purchasing power of these households improved in 2023.

For households in the other income quintiles, interest payment increases were higher on average than investment income payments in 2023. As a result, the average purchasing power of households in the third and fourth quintiles stagnated, while it deteriorated for the two lowest quintiles.

In summary, the purchasing power of most households remained higher in the first quarter of 2024 than in the last quarter of 2019. However, since 2022, rising inflation and tighter monetary policy have eroded purchasing power, particularly among lower-income households.

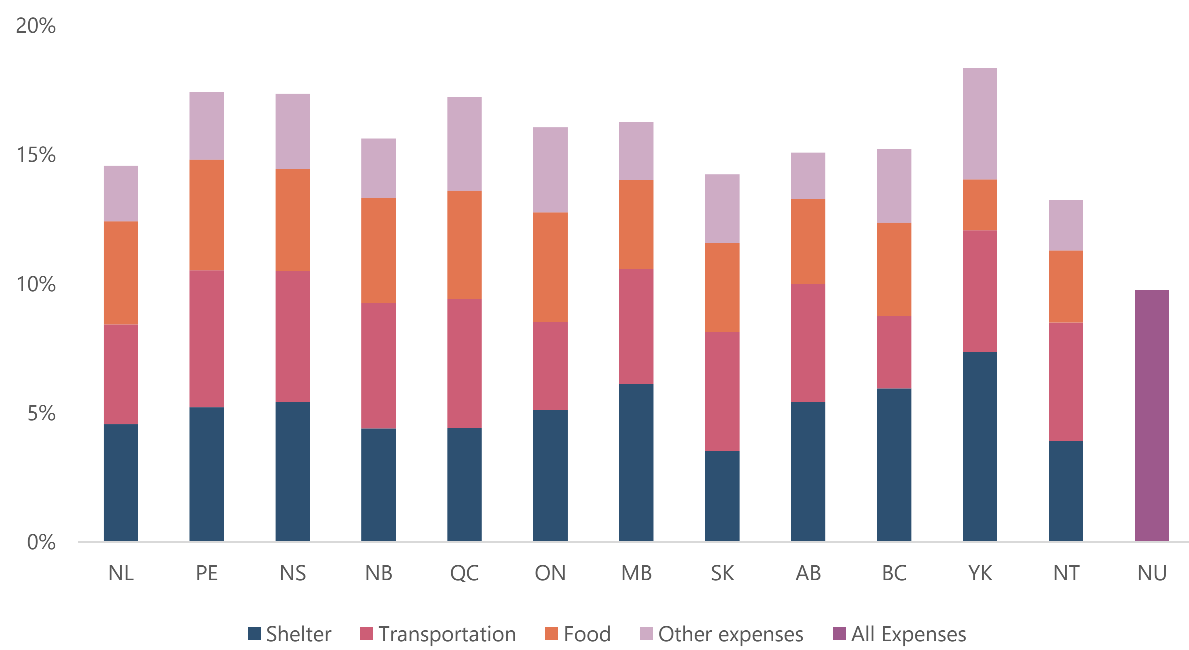
Provincial profile

Because some of the data series used at the national level are not available for the provinces and territories, the methodology used in the rest of this report has been modified to provide an analysis of changes in purchasing power for all households in each province and territory.[11]

On average, households in the various provinces and territories have seen the price of their typical consumption bundle increase by 13% to 18% since the last quarter of 2019, compared with around 15% at the national level (Figure 11). As observed nationally, rising shelter, transportation and food prices account for most of the inflation in the provinces over this period.

Figure 11

Inflation from 2019Q4 to 2024Q1, by province



Source:
Office of the Parliamentary Budget Officer.

In terms of household disposable income, Figure 12 shows that it increased from one region to another, but at different speeds. The increase ranges from 7% in Newfoundland and Labrador to 46% in the Northwest Territories. This is primarily because of the increase in market income. In this respect, geographical differences are essentially dictated by wage gains.

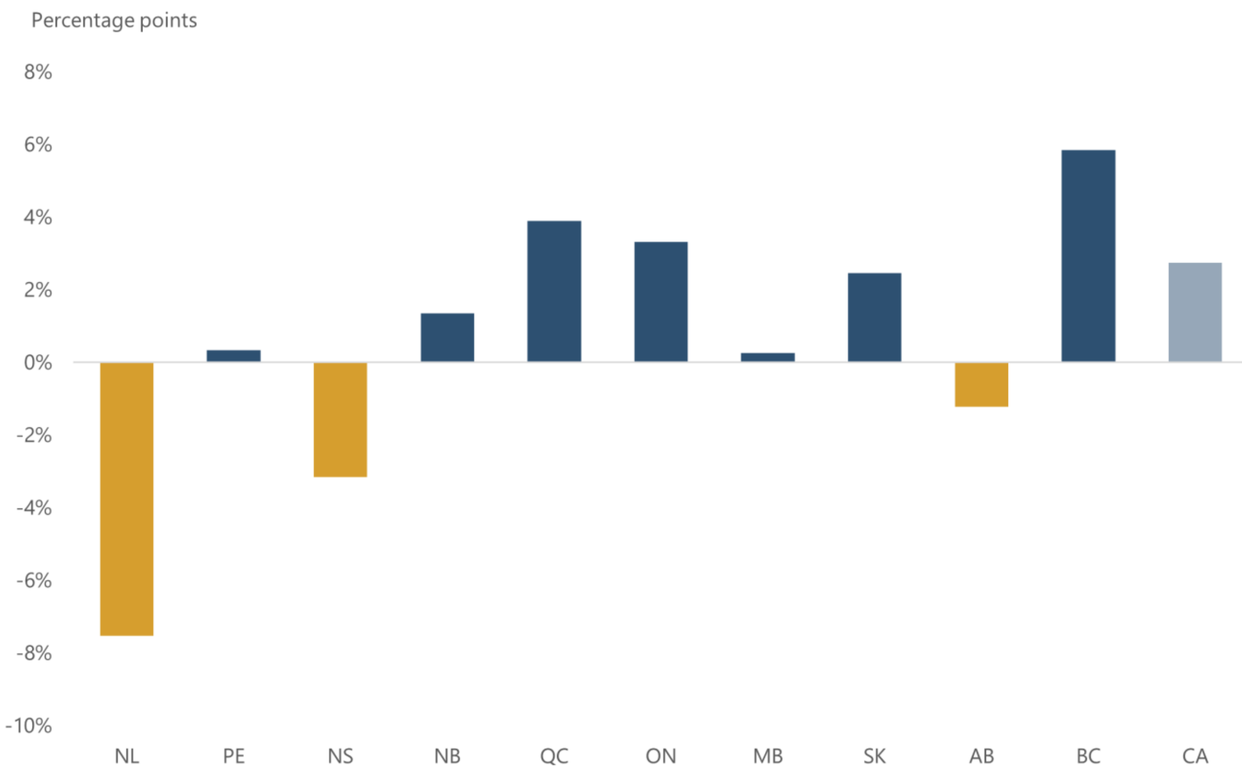
Figure 12

Contribution to the change in disposable income from 2019Q4 to 2024Q1, by province and territory

Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

Like the national analysis, changes in purchasing power are calculated using the purchasing power index, which combines changes in disposable income and the 2019 consumption bundle price for each province and territory (Figure 13).

Figure 13
Changes in the purchasing power index from 2019Q4 to 2024Q1



Source:

Office of the Parliamentary Budget Officer and Statistics Canada.

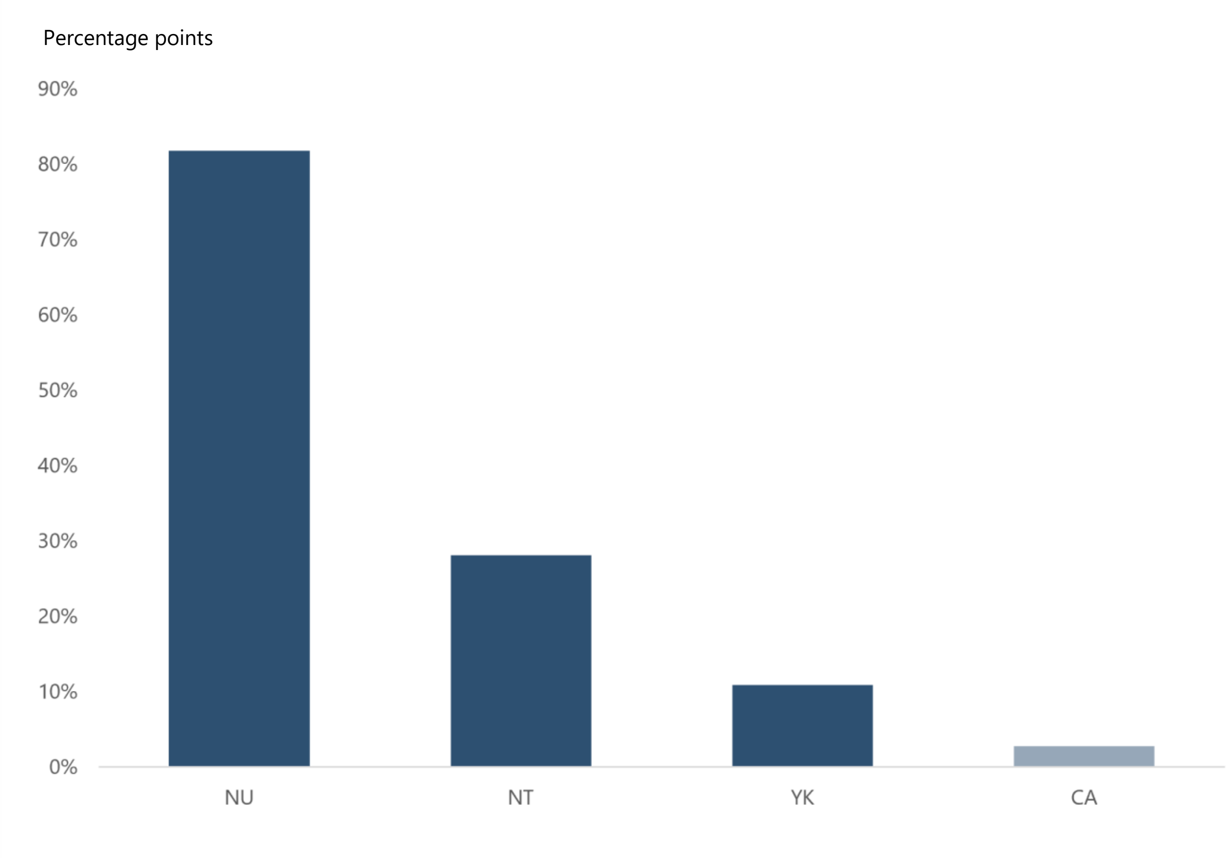
Note:

A positive cumulative change in the purchasing power index corresponds to an improvement in purchasing power over the last quarter of 2019.

To ensure comparability across geographies, the value for Canada was calculated using the subnational methodology.

Purchasing power trends varied by province. Quebec, Ontario and British Columbia are among the provinces that saw an increase in purchasing power, while Newfoundland and Labrador, Nova Scotia and Alberta saw a decline. For these provinces, inflation offset the increase in disposable income. As for the territories, since the last quarter of 2019, the purchasing power of all households saw some of the highest growth in Canada. In their case, the increase in disposable income clearly outweighed the rise in prices.

Figure 14
Change in the purchasing power index from 2019Q4 to 2024Q1, by territory



Source:
Office of the Parliamentary Budget Officer and Statistics Canada.

Note:
To ensure comparability across geographies, the value for Canada was calculated using the subnational methodology.

Notes

[1] This cumulative price increase corresponds to the measure of inflation used for the rest of our analysis. It is the cumulative increase in the price of the 2019 basket of goods and services. However, CPI-measured inflation was 16.6% over the same period.

[2] For a discussion on the redistribution effects of inflation, see Fiscal Monitor (IMF, April 2023) and OECD Economic Surveys (OECD, September 2023).

[3] This report is in part an update to the June 2023 report titled "Household purchasing power at different income levels since 2019."

[4] The "shelter" category includes rents paid and charged, water, electricity, gas, and other fuels.

[5] It is important to note that the methodology selected assumes that all households face the same price dynamics for each of the spending categories. As such, the variances can only be explained by the different proportions allocated to the spending categories. A more detailed analysis of household consumption could reveal greater variances in the inflation average households in each income quintile faced.

[6] See Statistics Canada's Income Reference Guide for more information on definitions of income.

[7] In its annual report, "Benchmarks for assessing labour market health," the Bank of Canada provides indicators for measuring Canada's labour market tension. For 2022 and early 2023, these tools indicated an absence of excess capacity in the labour market.

[8] Self-employment income (i.e., mixed income) refers to net income from farm and non-farm self-employment from unincorporated businesses and professional practices, and net rental income. For more details, consult Statistics Canada's section on mixed income.

[9] Investment income received refers notably to investment income from various investment and savings vehicles, life insurance, and pension plans. For more details, consult Statistics Canada's section on property income received.

[10] This approach analyzes changes in purchasing power in a way that reduces the impact of the volatility of the underlying series and assumes that households make their consumption decisions over a horizon longer than one quarter.

[11] To measure inflation for a typical consumption bundle, the 2019 weights of the main consumer price index subcategories were applied to total household consumption expenditure to assign a value to each expenditure category. The corresponding price indexes were then used to obtain the basket value for each quarter. Income measures were obtained from Statistics Canada’s distributions of accounts and then seasonally adjusted.

RP-2425-016-S_e
T_RP_3.1.0e