



Output, Hours and Labor Productivity

Center for Workforce Research and
Information

Introduction

Different factors contribute to economic growth.

From the perspective of labor resources, there are two primary factors:

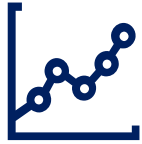
- 1) changes in the amount of labor (*jobs and hours*)
- 2) changes in the value of goods and services produced per hour of work (*labor productivity*)

A long-standing concern about Maine's population age structure is that it could constrain labor force growth and slow economic growth.

So far in the 2000s, slower labor force growth has not similarly constrained the state's economic output.

There is uncertainty about how labor productivity will change in the years ahead. New technologies, such as generative artificial intelligence, are likely to contribute to further productivity gains in the long-run.

Terms



Output

The value of the goods and services produced in the economy. Measured by inflation-adjusted, private sector Gross Domestic Product (GDP).



**Hours Worked
(Aggregate)**

Represents the total number of hours worked by private sector wage and salary job holders, per year.

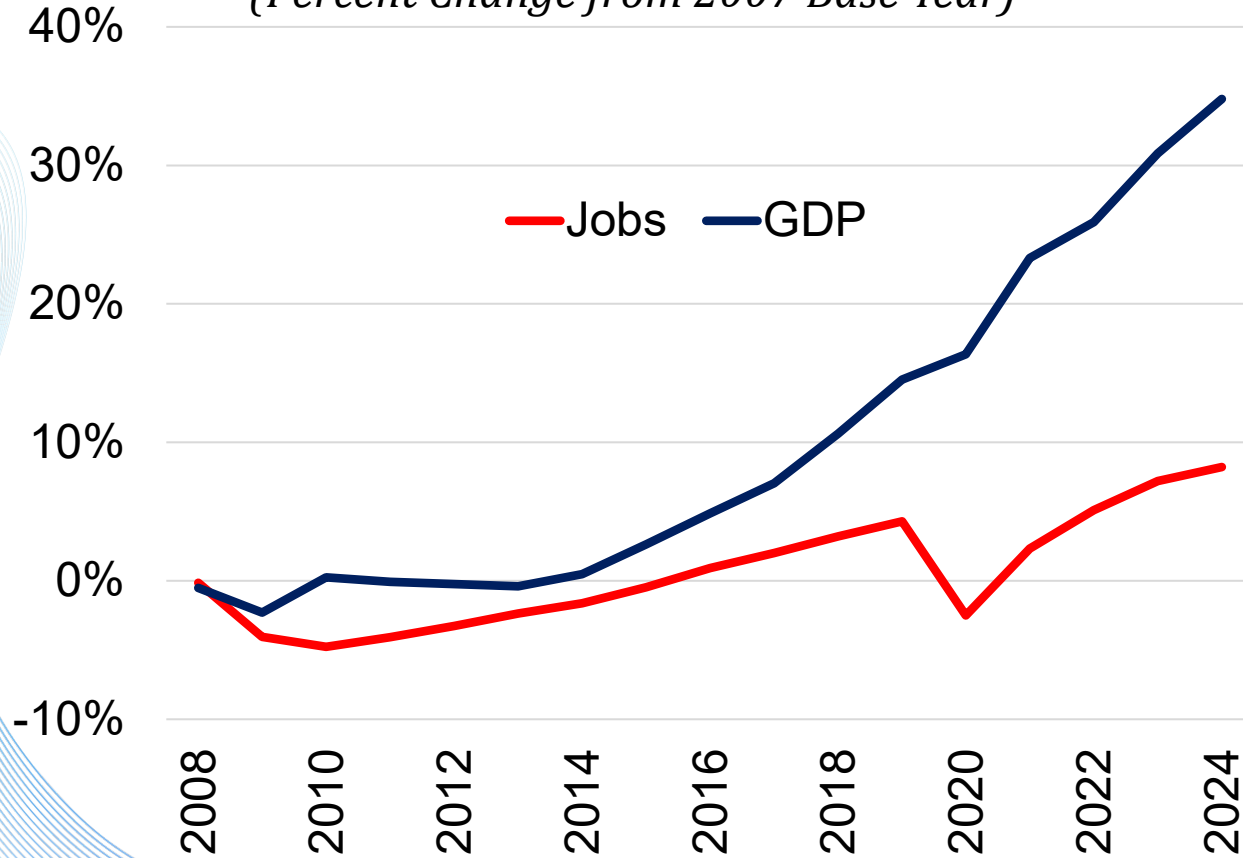


**Labor
Productivity**

Output per hour worked.
Measured as Output
divided by Hours
Worked.

Private Sector GDP and Jobs

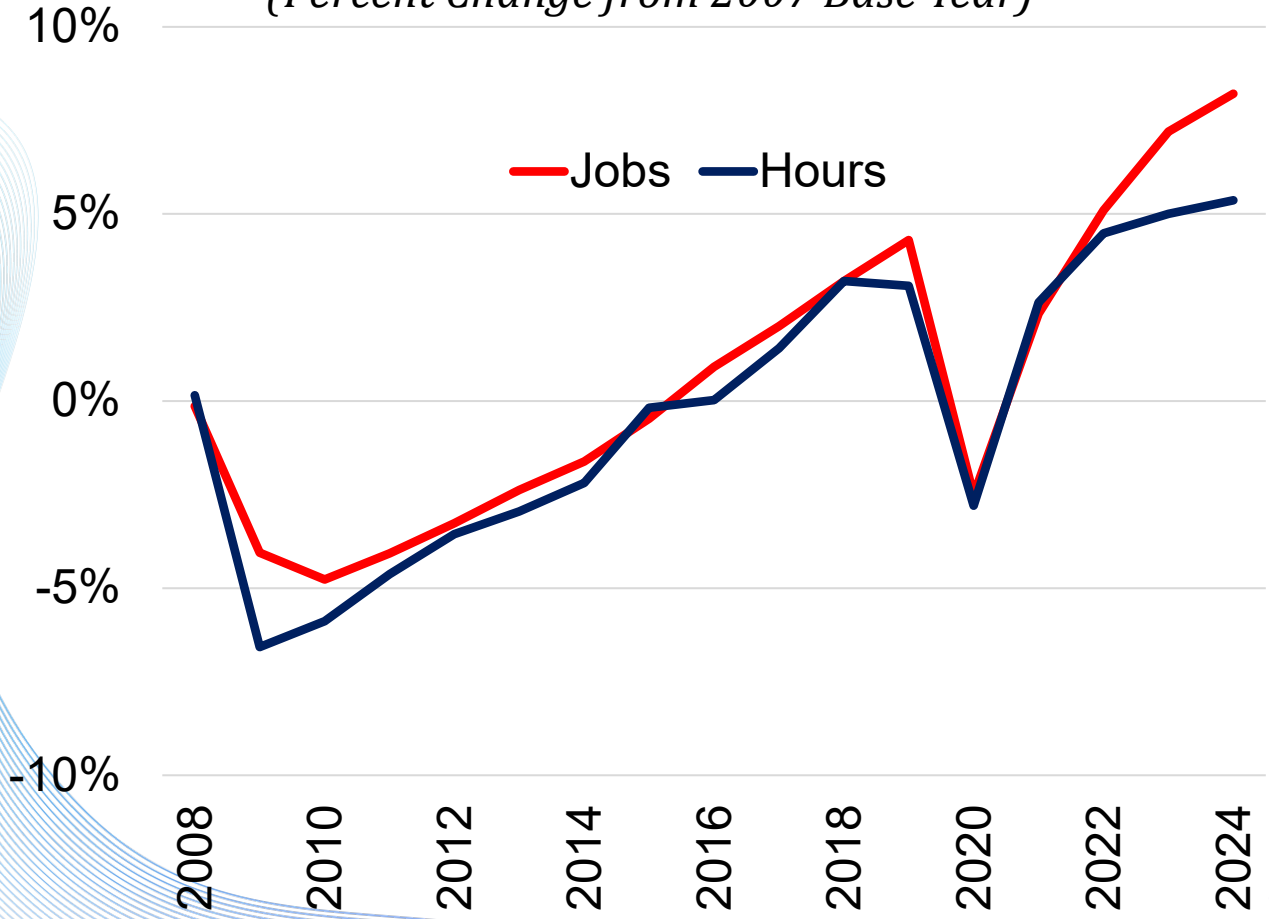
(Percent Change from 2007 Base Year)



In the 2000s, Gross Domestic Product (*GDP, inflation-adjusted*) increased at a much faster rate than jobs. Compared to the period just before the Great Recession, private sector GDP is 35 percent higher whereas private sector employment is 8 percent higher.

Private Sector Jobs and Aggregate Hours

(Percent Change from 2007 Base Year)

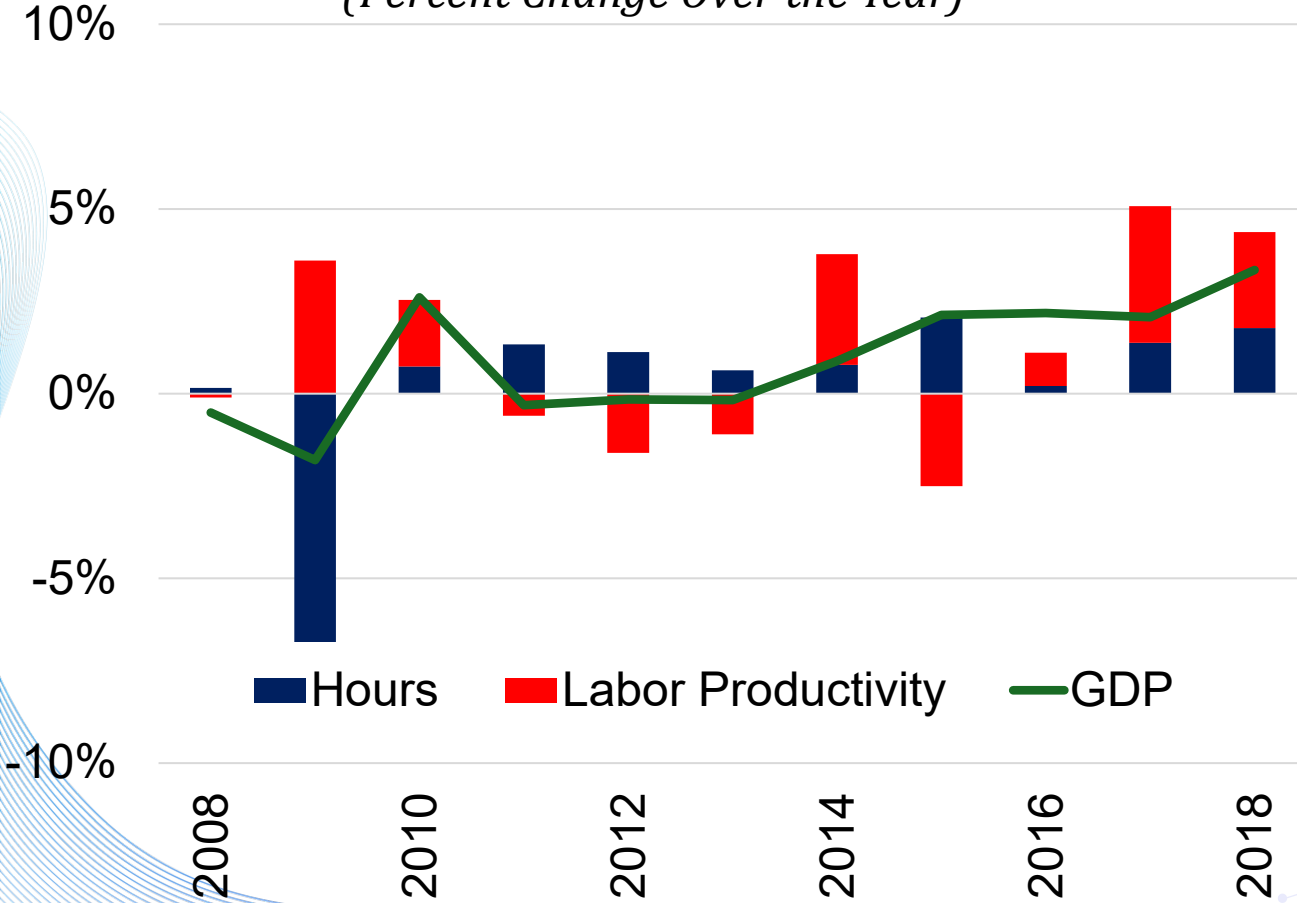


Changes in aggregate work hours have mostly followed the trend in employment. The average private sector workweek was modestly lower in 2023–24 (33.4 hours per week) than previous years (34.1 hours per week on average from 2013-2022).



GDP, Hours and Labor Productivity

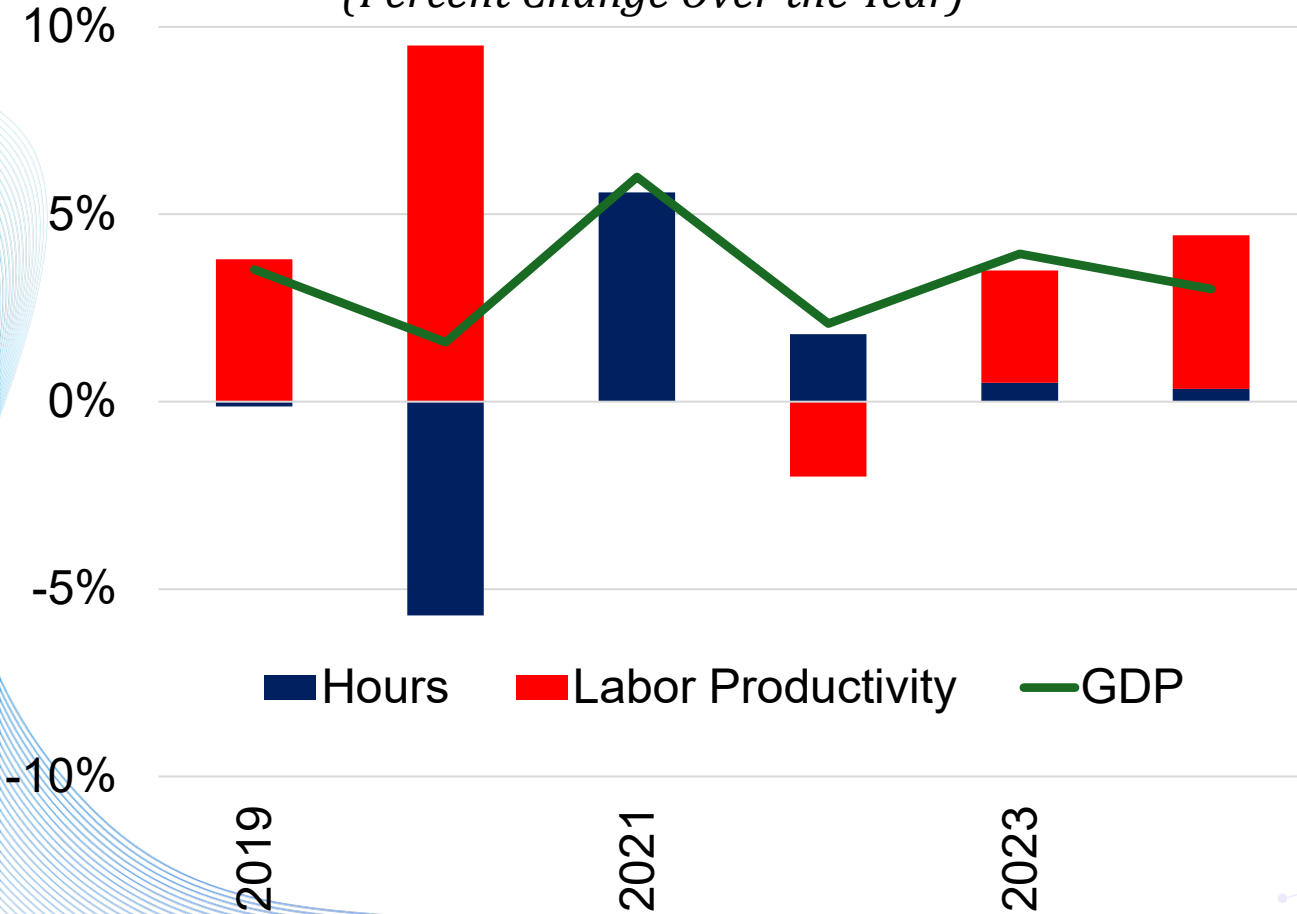
(Percent Change Over the Year)



During the Great Recession as demand for labor declined, aggregate employment and hours both fell sharply. Aggregate hours fell by more than employment as the average workweek became slightly shorter. The recovery in labor demand spanned more than eight years. Gains in labor productivity were a driver of economic growth in the later part of the 2010s.

GDP, Hours and Labor Productivity

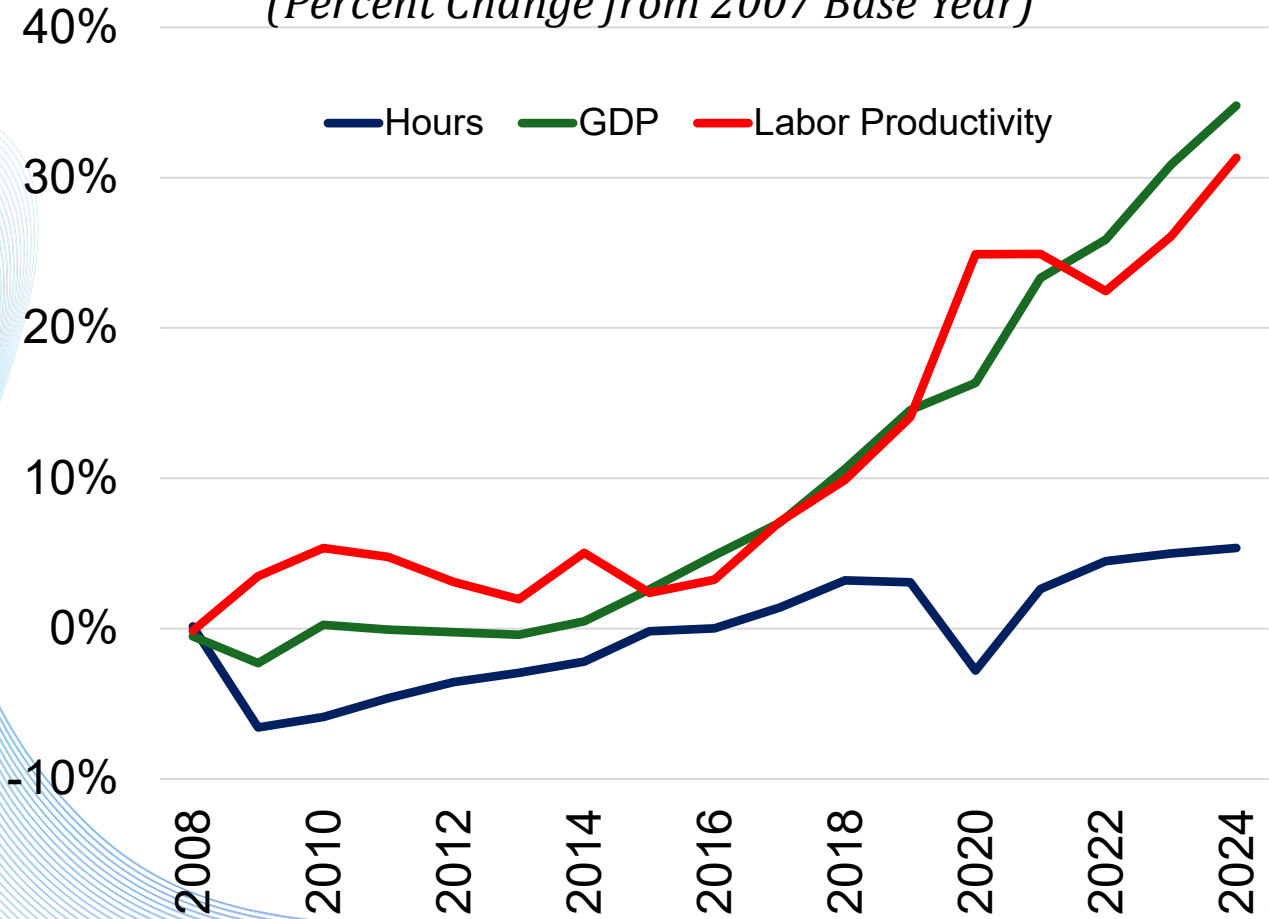
(Percent Change Over the Year)



During the pandemic, job displacement disproportionately affected sectors with lower labor productivity and shorter workweeks on average (resulting in a surge in labor productivity among workers not displaced from a job, which was reversed during the job recovery). Jobs recovered to the 2019 levels by 2022. As changes in employment slowed, gains in labor productivity appear to be a driver of private sector GDP growth in 2023–24.

GDP, Aggregate Hours and Productivity

(Percent Change from 2007 Base Year)



Output growth has come mostly from increases in productivity, rather than hours worked since 2007.

Takeaways

Since 2007:

- Labor productivity increased by an average of 1.7 percent per year.
- Private-sector employment increased by an average of 0.5 percent per year, while aggregate hours grew at a similar but slightly lower rate.

Most of the growth in the state's economic output reflects higher value created per hour worked, rather than increases in the number of workers or hours worked.

The state's population age structure is expected to constrain labor force growth in the years ahead, as many reach retirement ages while fewer youth enter prime working years.

If labor productivity continues to improve, as it has so far in the 2000s, economic output can still grow even as the labor force grows more slowly. Waves of technological change play out differently. It is uncertain how the next wave might further boost productivity and the extent to which those gains might result in rising compensation for workers.



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