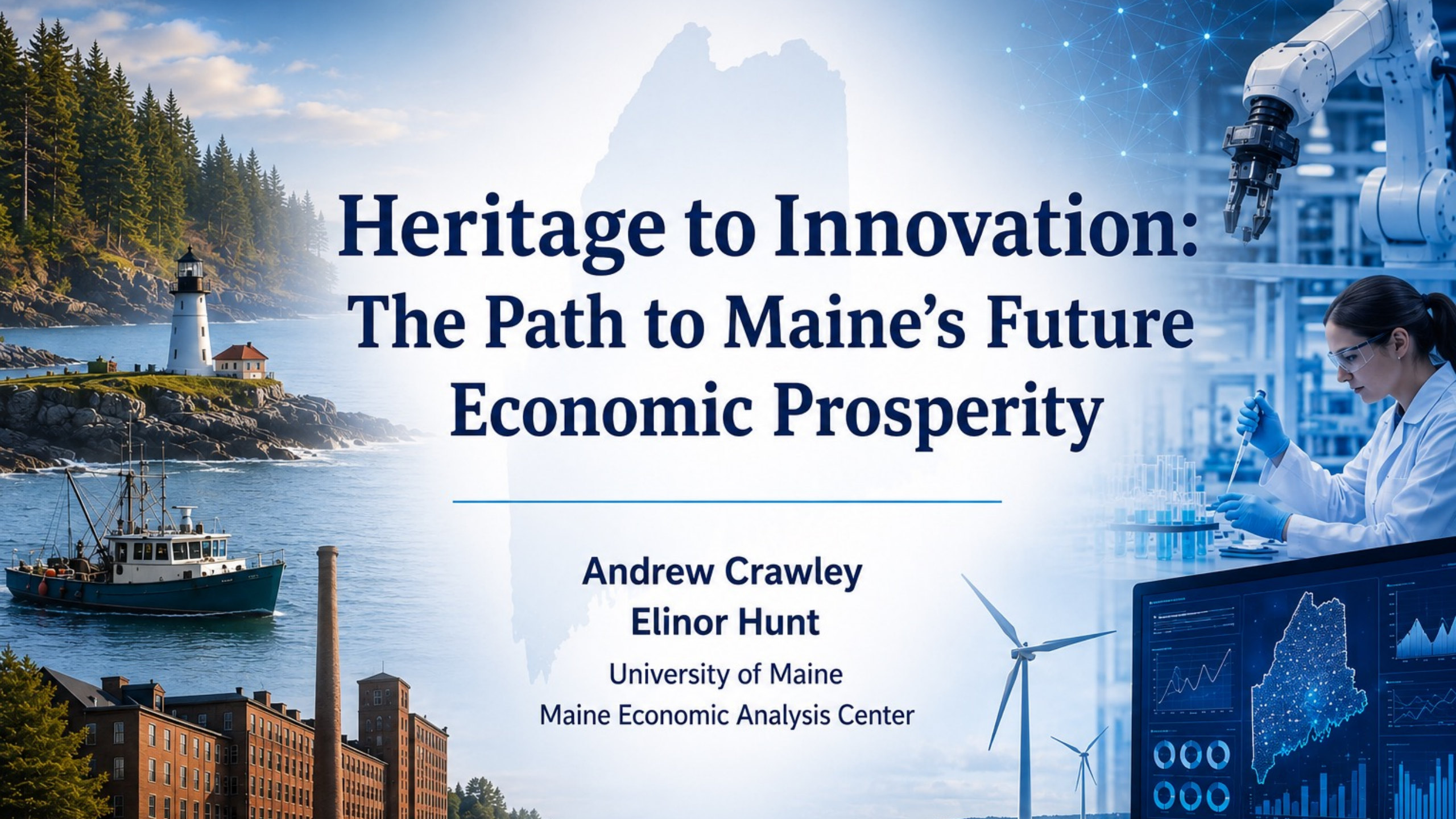




Heritage to Innovation: The Path to Maine's Future Economic Prosperity

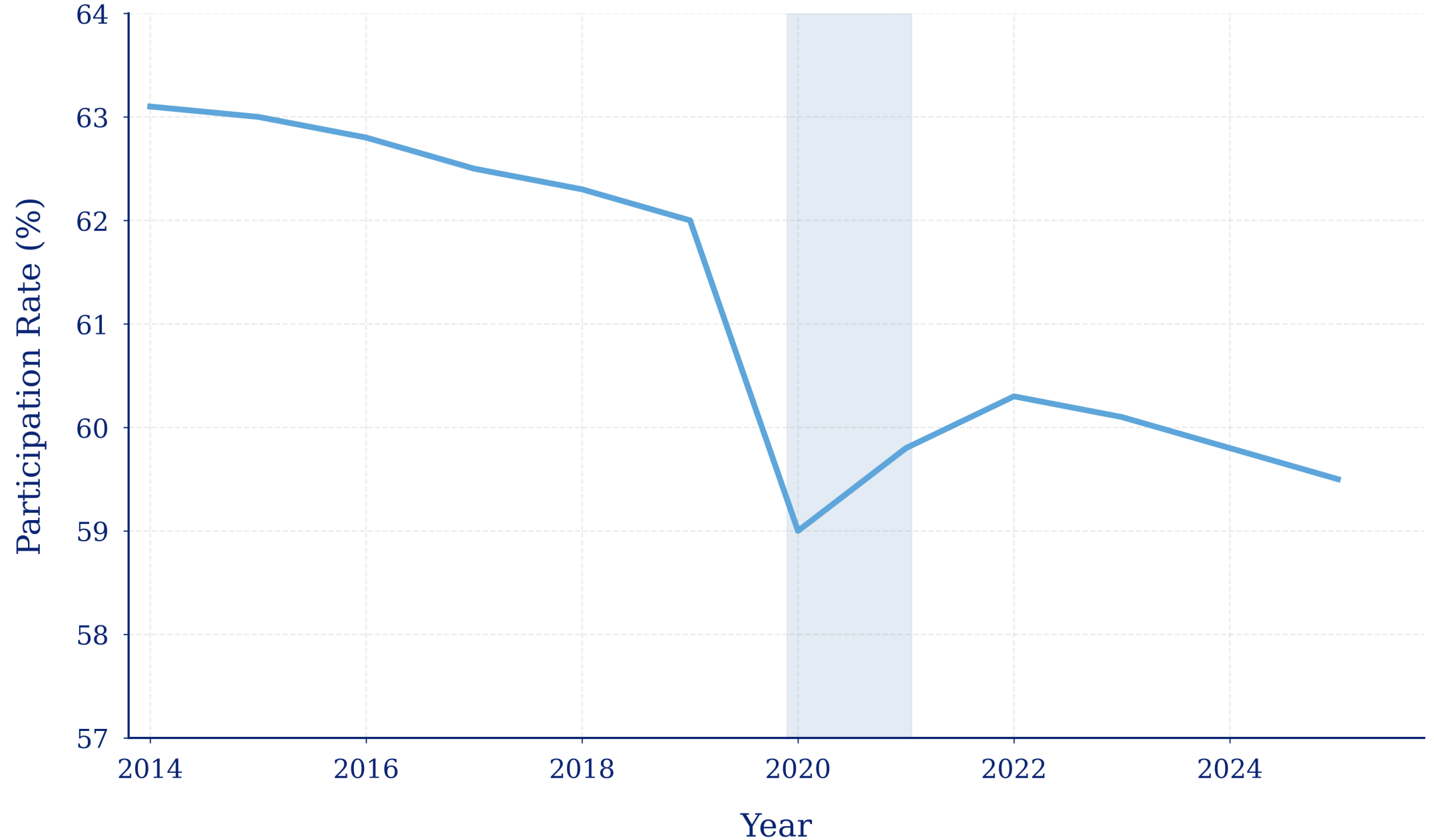
Andrew Crawley
Elinor Hunt

University of Maine
Maine Economic Analysis Center

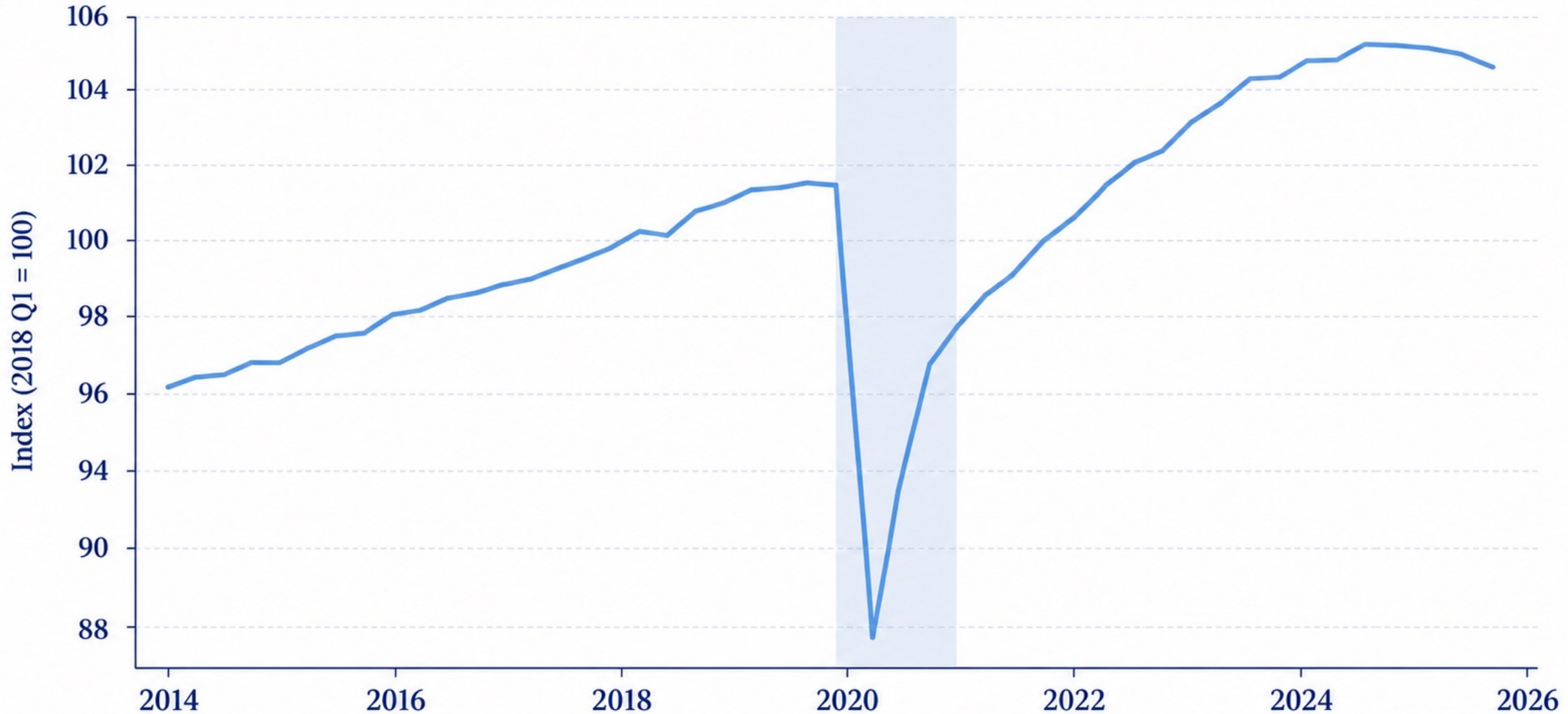
Overview

- This presentation focuses on three core measures of economic performance: **wages, employment, and GDP/productivity**
- The analysis begins with statewide economic trends before examining performance across Maine's major industry sectors
- Special attention is given to sectors critical to Maine's long-term competitiveness, resilience, and workforce development
- The presentation concludes by exploring how Artificial Intelligence (AI) and changing skill demands may shape Maine's future economy and labor market

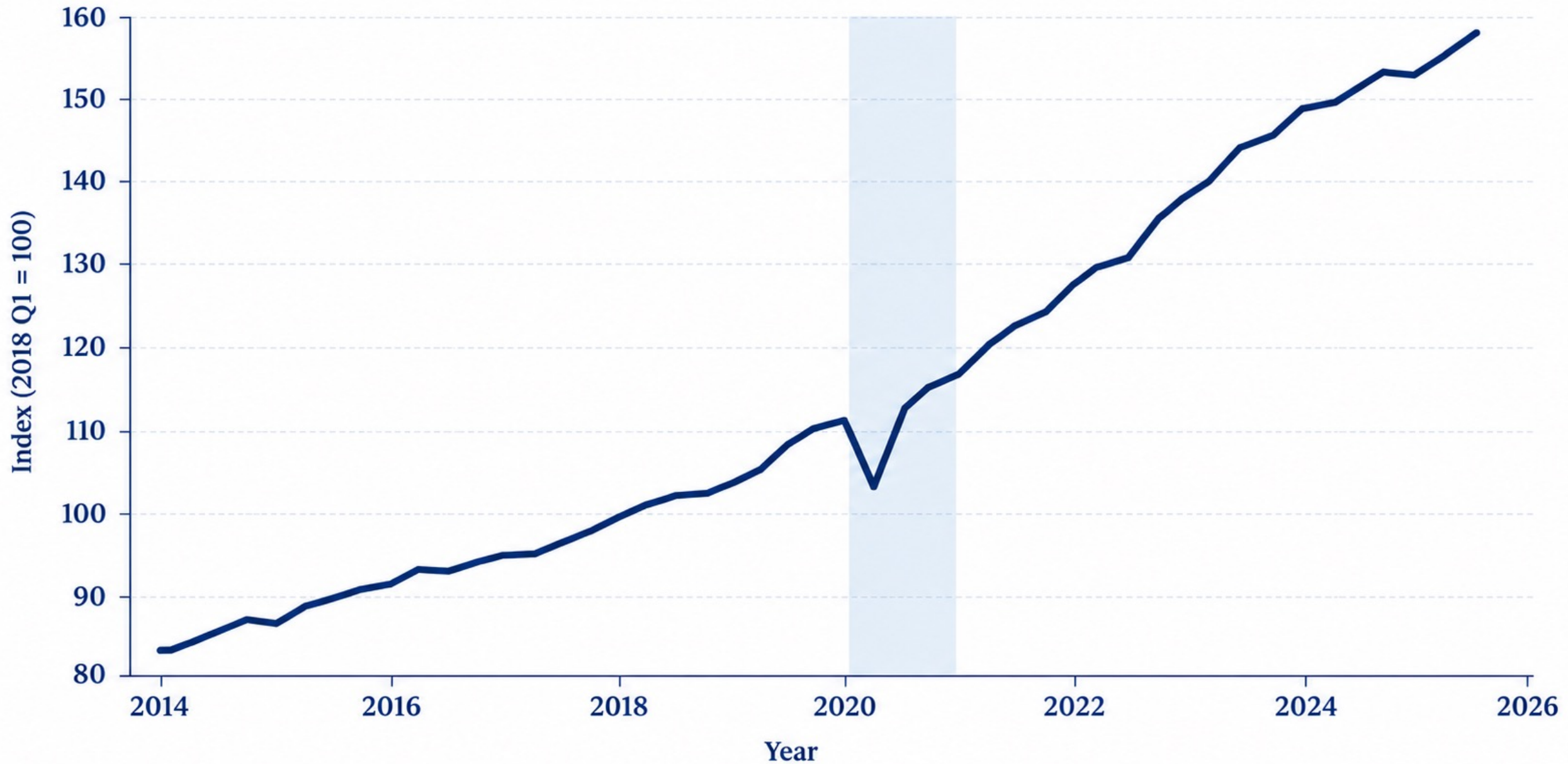
Maine Labor Force Participation Rate



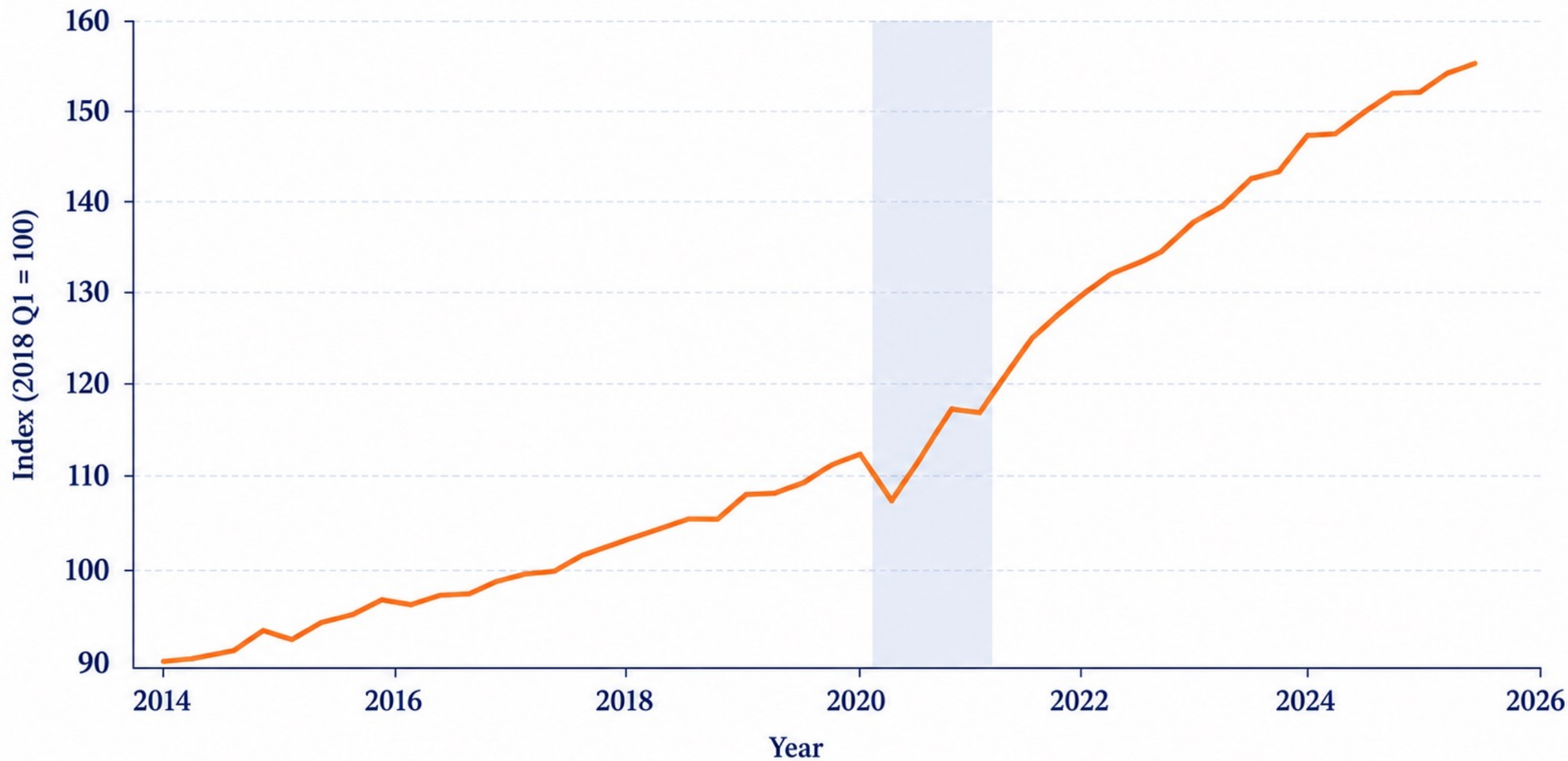
Maine Employment, Indexed to 2018 Q1 = 100



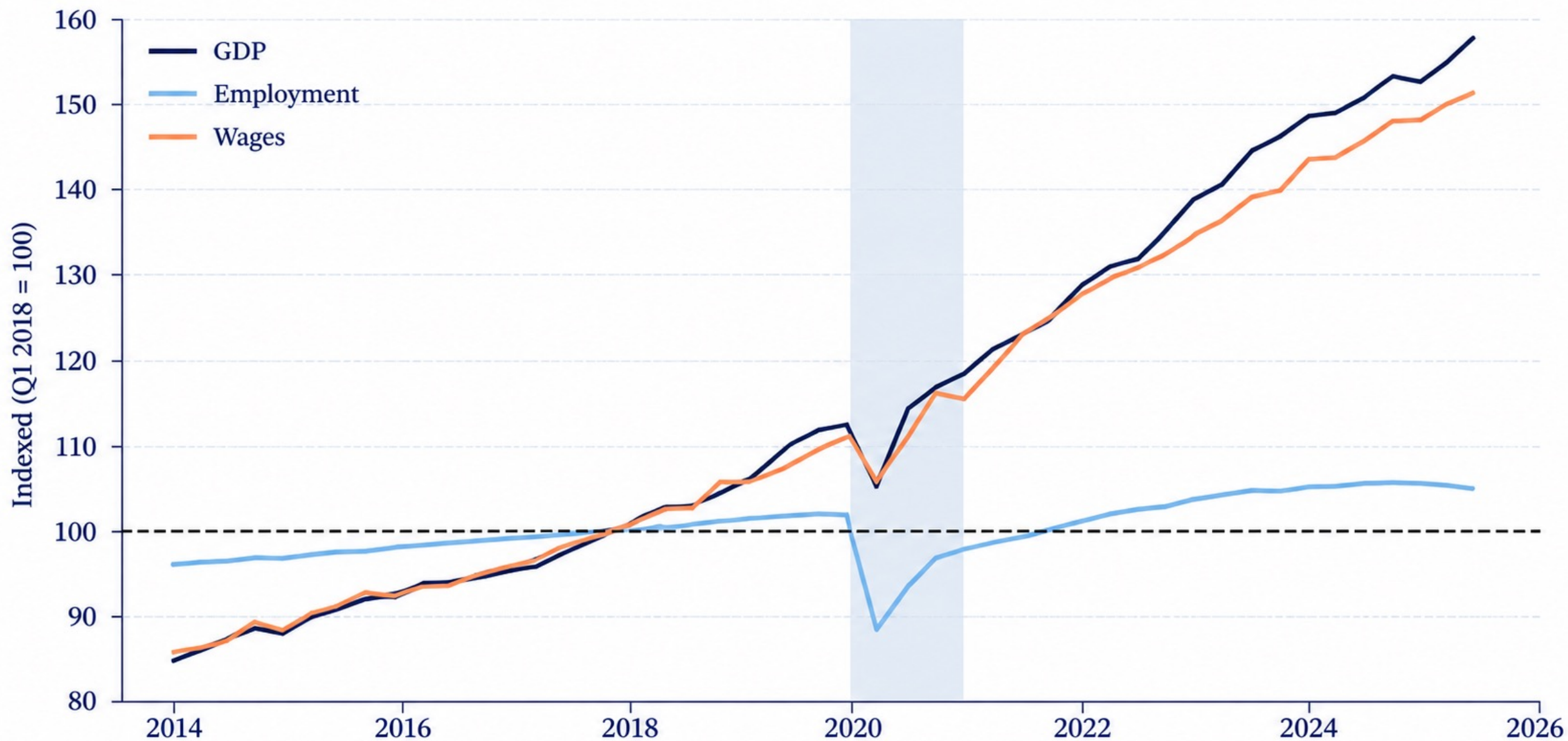
Maine Real GDP, Indexed to 2018 Q1 = 100



Maine Wages, Indexed to 2018 Q1 = 100

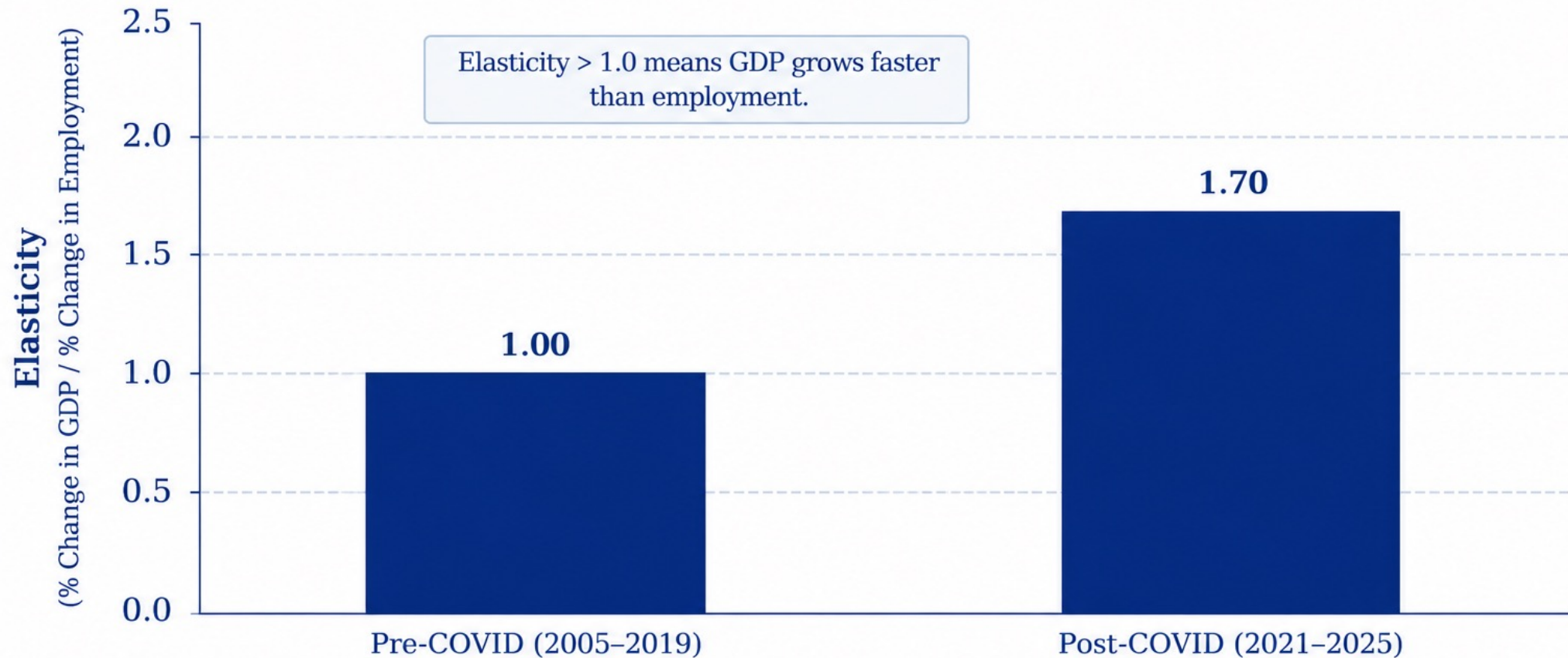


Maine GDP, Employment, and Wages, Indexed to 2018 Q1 = 100



Employment Elasticity of Output

How Much Economic Growth Does Maine Generate From Additional Workers?



Pre-COVID (2005-2019)

A 1% increase in employment was associated with about **1.0%** growth in real GDP.



Post-COVID (2021-2025)

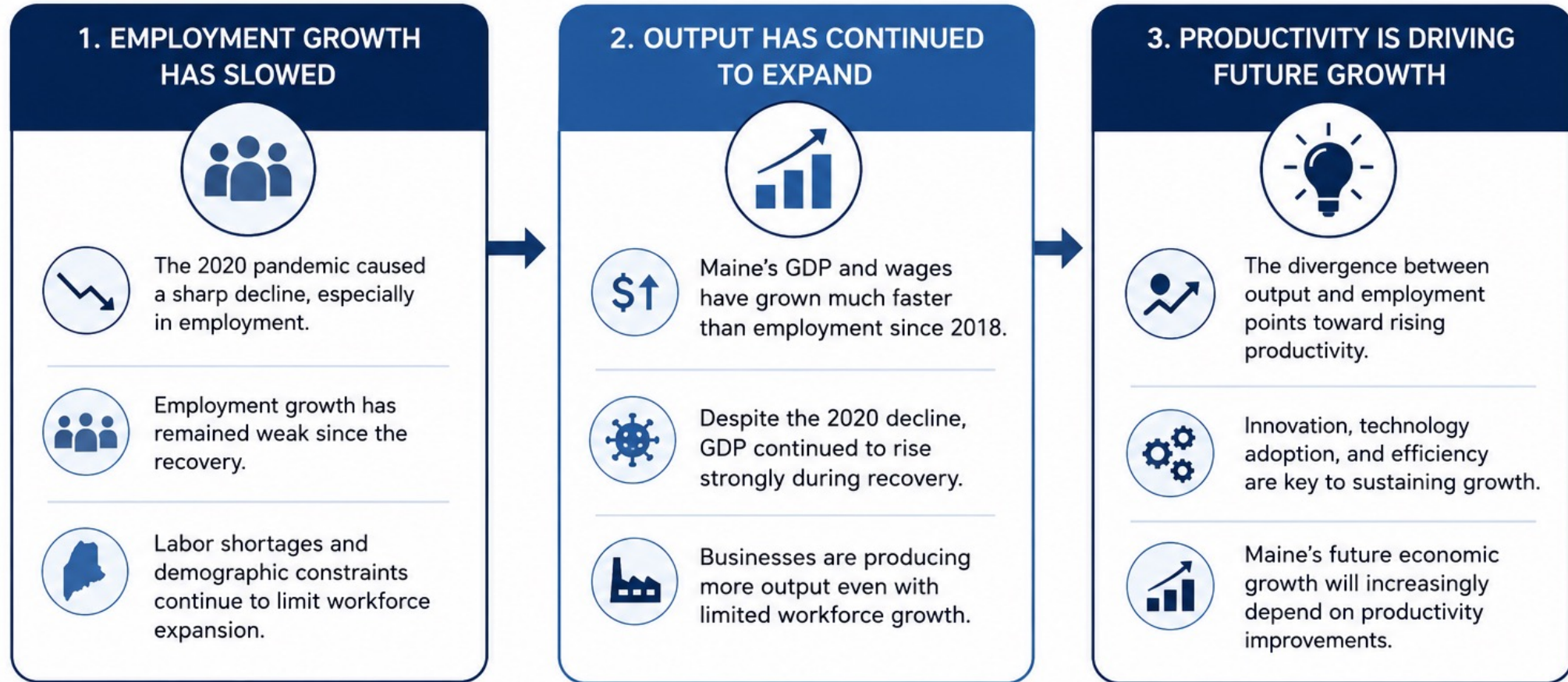
A 1% increase in employment is associated with about **1.7%** growth in real GDP.

Source: BEA Real GDP (Chained 2017 Dollars) and BLS CES Nonfarm Employment

Note: Elasticity calculated as: $\ln(\text{GDP}_{\text{end}}) - \ln(\text{GDP}_{\text{start}}) / \ln(\text{Employment}_{\text{end}}) - \ln(\text{Employment}_{\text{start}})$

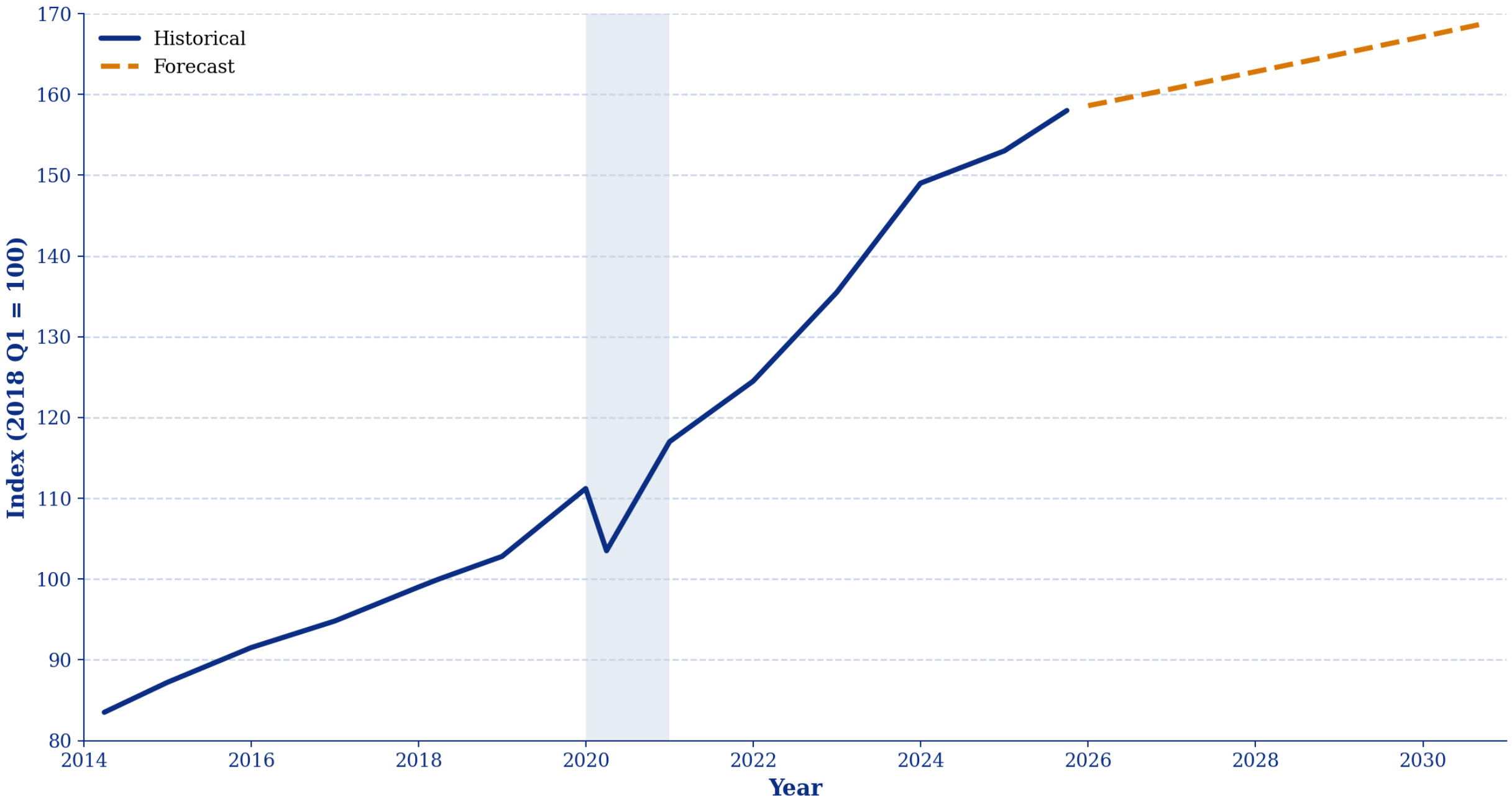
Maine Economic Trends Summary

Since 2018, Maine's economy has grown stronger—but with slower employment growth, pointing to rising productivity as a key driver of future prosperity.

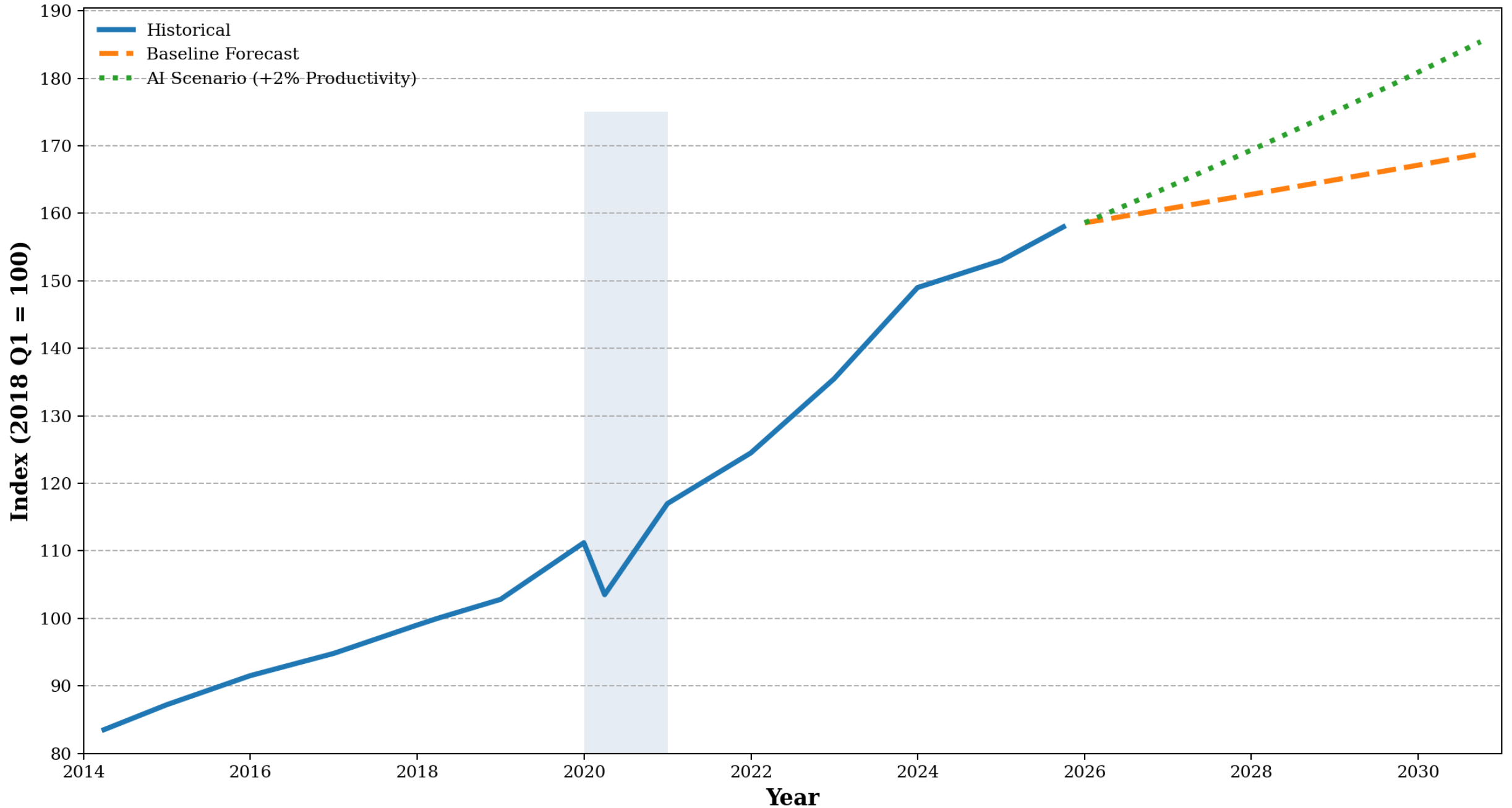


Maine's future economic growth is likely to depend more on productivity gains than workforce expansion.

Maine Real GDP, Indexed to 2018 Q1 = 100



Maine Real GDP, Indexed to 2018 Q1 = 100



How does this affect key sectors in Maine?



Biotechnology



Composite/
Advanced Materials



Environmental
Tech



Information
Tech



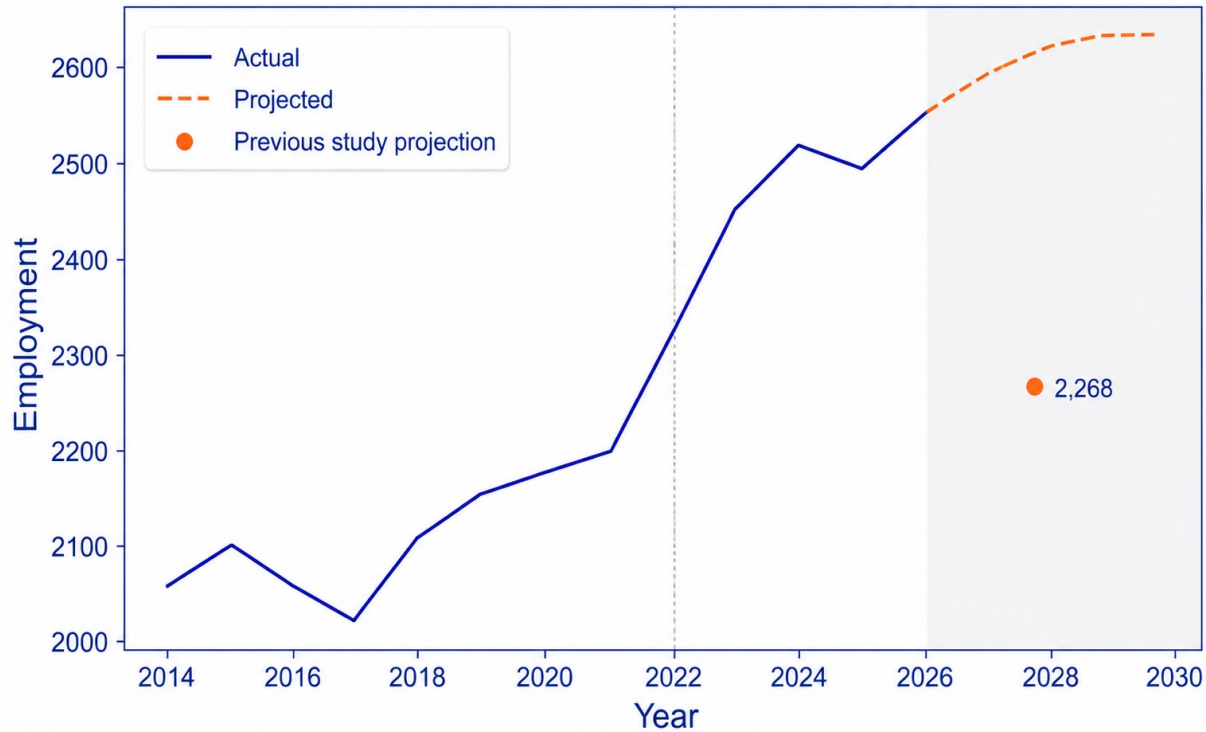
Advanced Forestry/
Agriculture



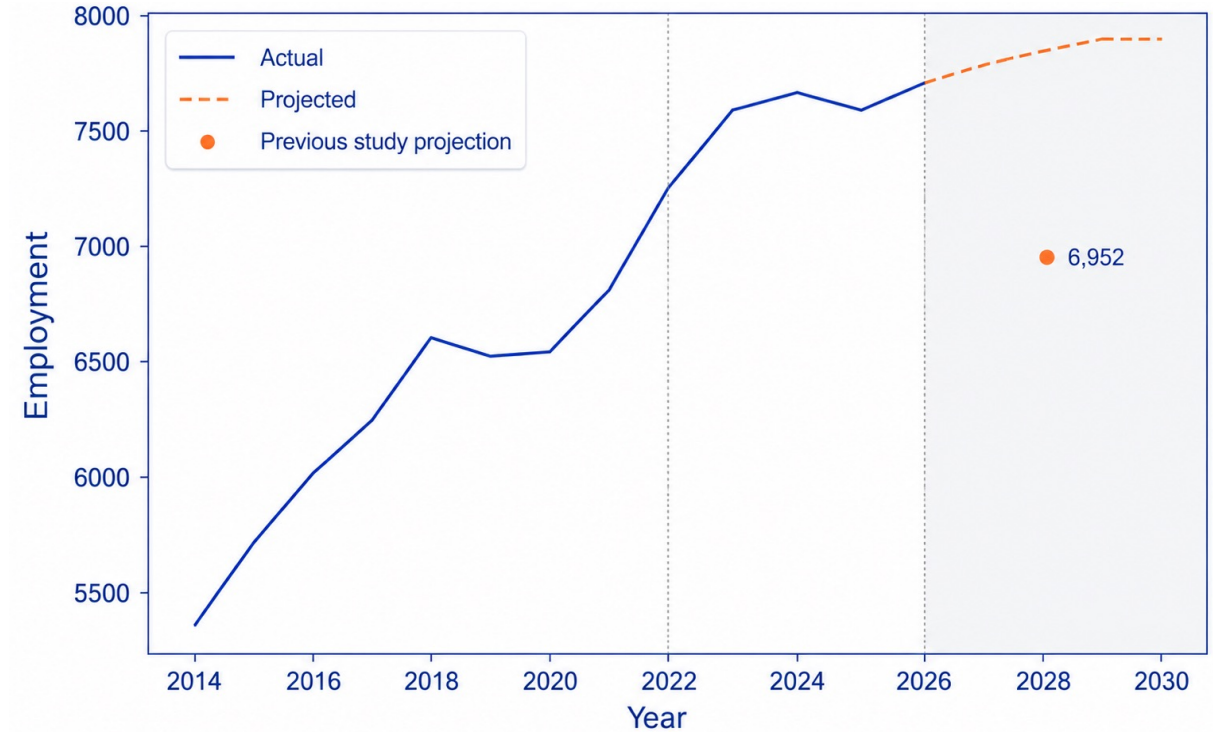
Precision
Manufacturing

Employment Forecasts

Environmental Technologies

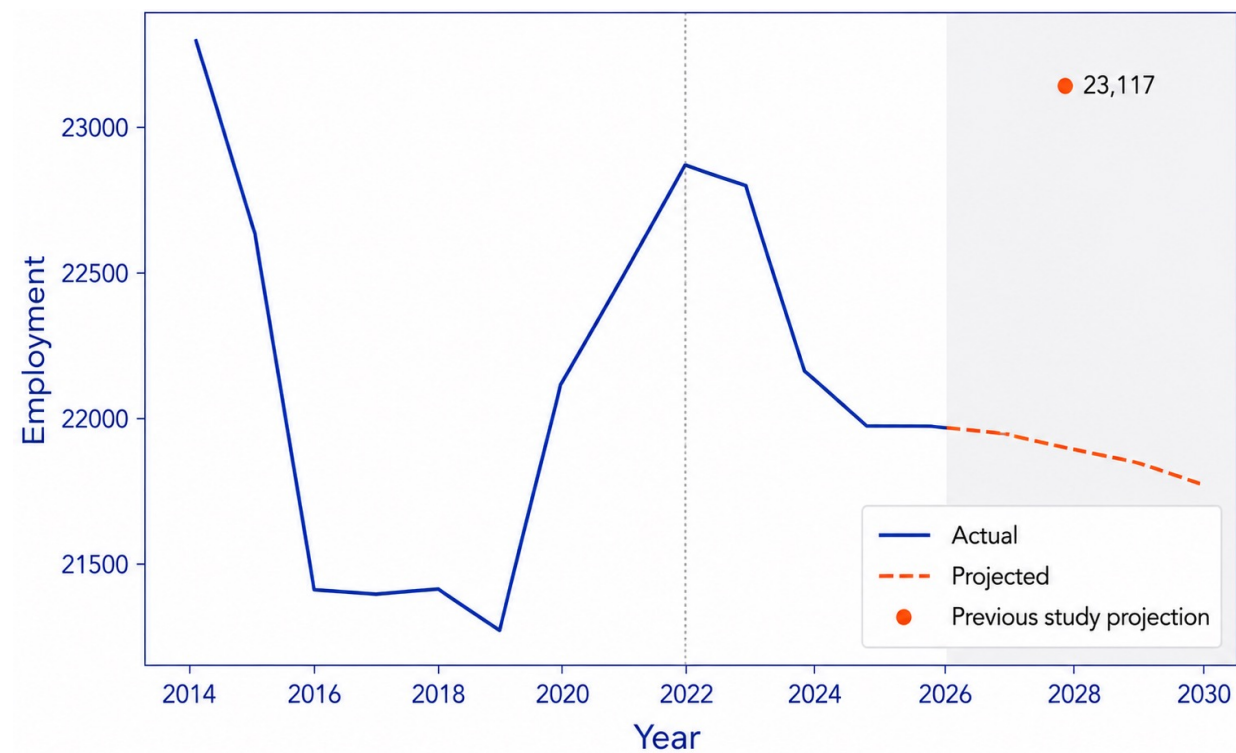


Composites and Advanced Materials

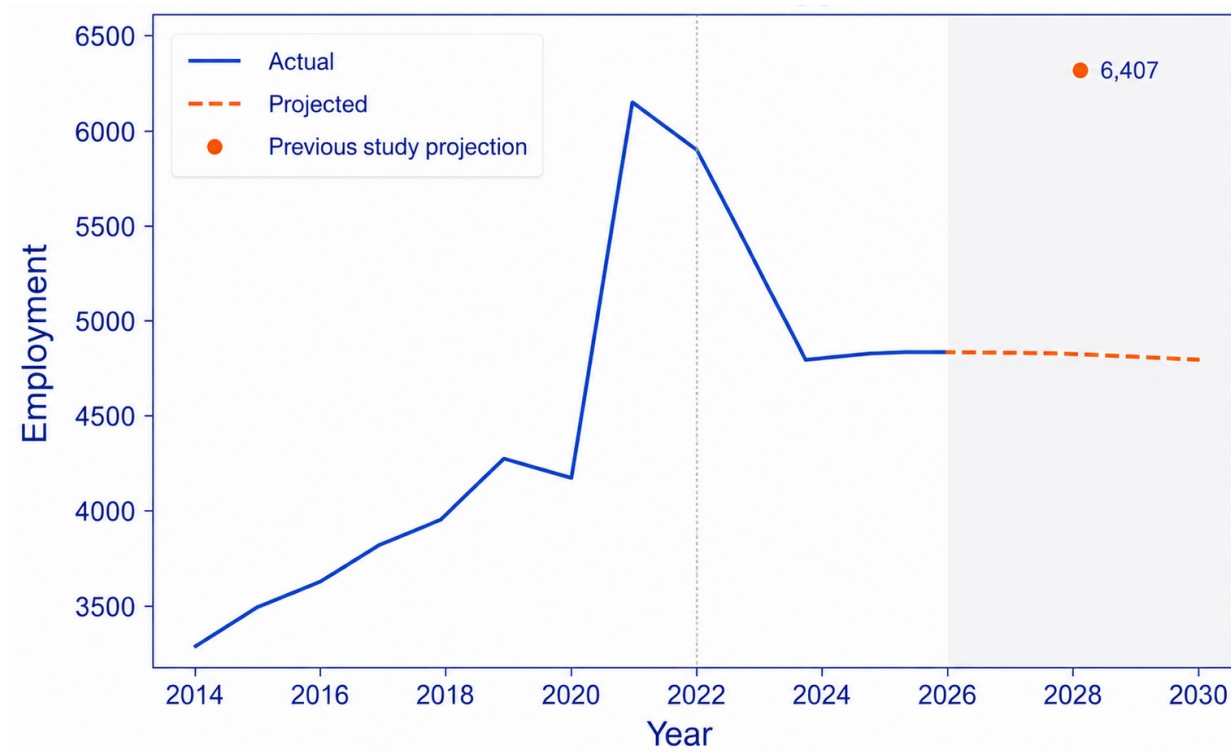


Employment Forecasts

Advanced Technology for Forestry and Agriculture

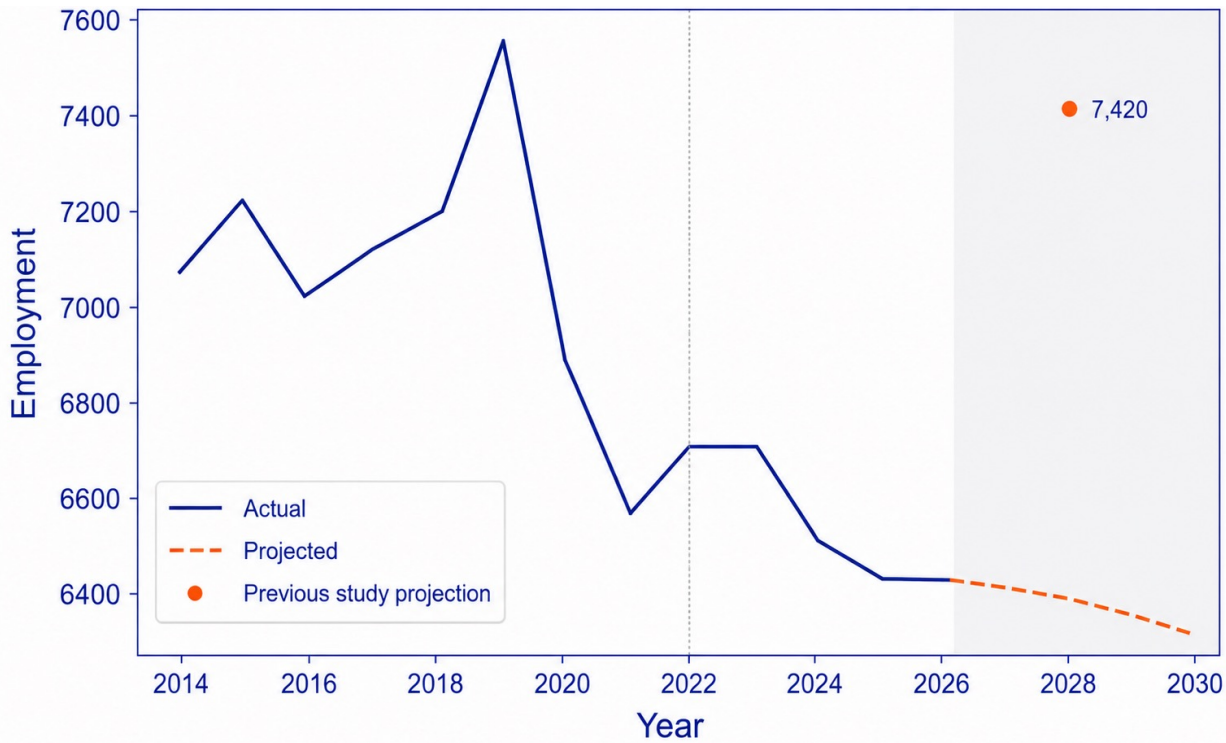


Biotechnology

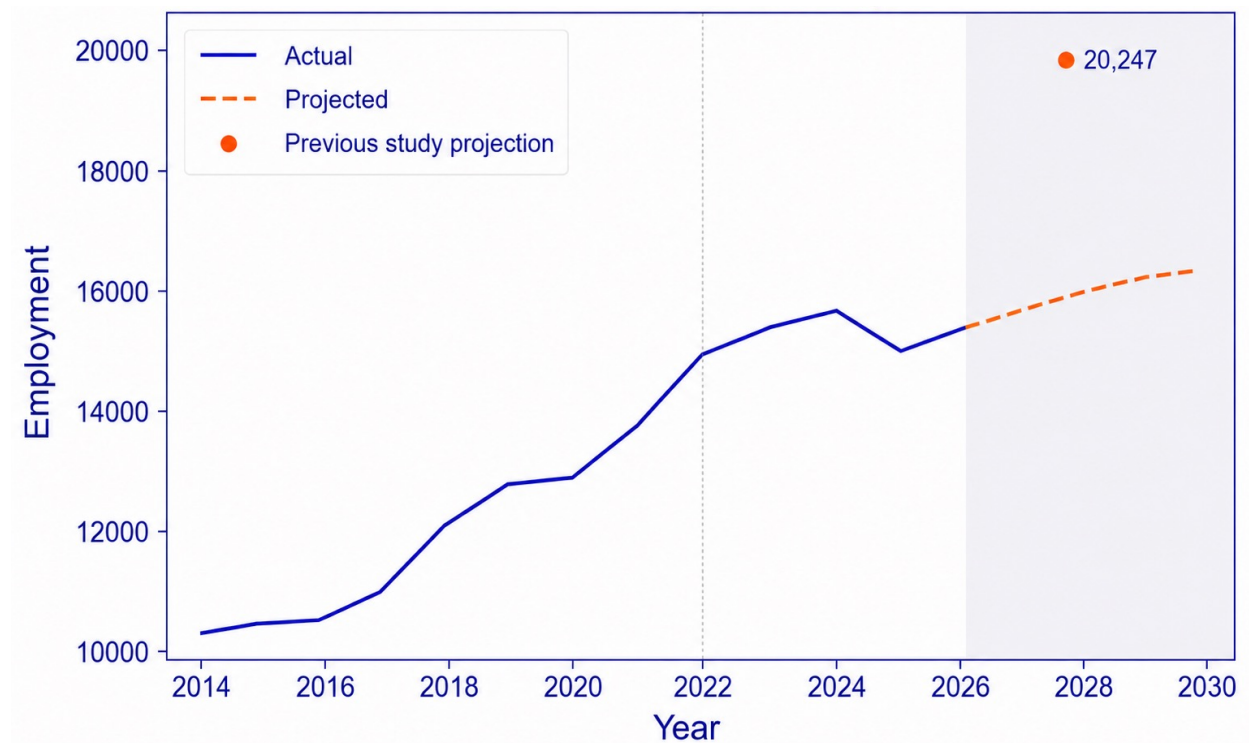


Employment Forecasts

Precision Manufacturing

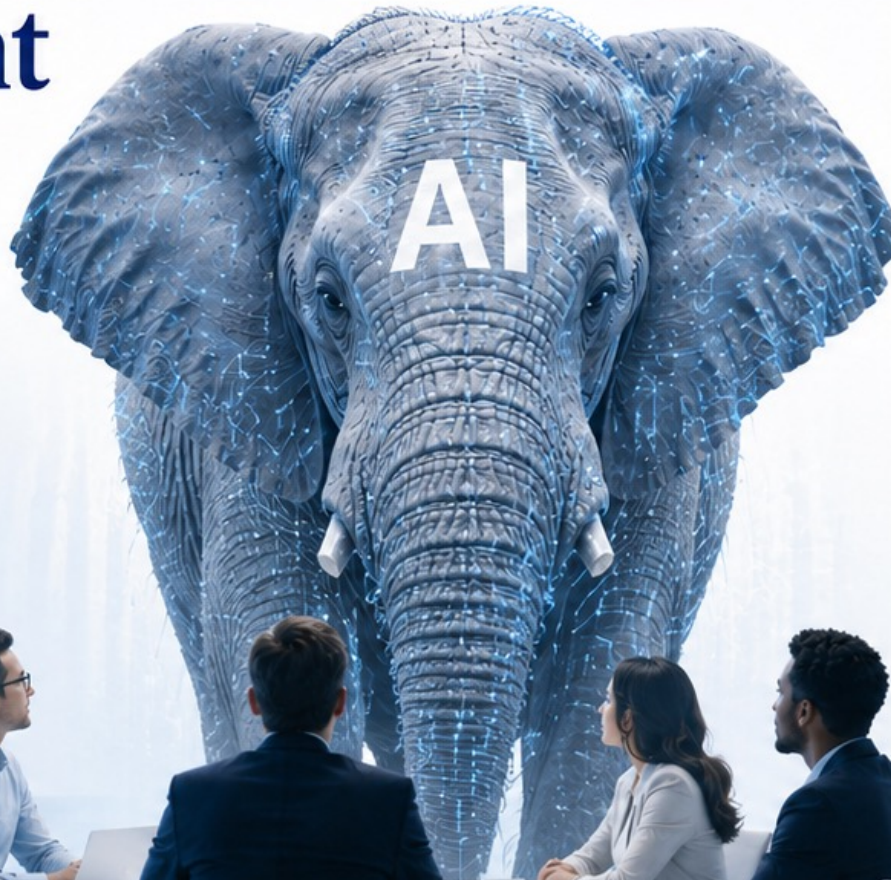


Information Technologies



AI: The Elephant in the Room

AI is here—and it's transforming labor market **productivity**.



BOOSTING PRODUCTIVITY

AI is accelerating output, automating tasks, and enhancing worker capabilities.



RESHAPING WORK

Changing the nature of jobs, skills in demand, and how work gets done.



DRIVING COMPETITIVENESS

Firms and regions that adopt AI effectively will lead the future.

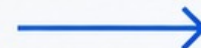


WIDENING DIVIDES

The benefits of AI may not be evenly distributed without intentional action.



AI ISN'T JUST A TOPIC OF DISCUSSION.
IT'S A FORCE RESHAPING OUR ECONOMY.



The question isn't whether AI will impact productivity.
It already is.



AI Is Increasing Labor Market Productivity

*Leading economists, researchers, and business leaders agree:
AI is a powerful driver of productivity growth.*

“ AI has the potential to boost labor productivity by up to 40% over the next decade.”



McKinsey Global Institute
The Economic Potential of Generative AI, 2023

“ AI technologies have the potential to raise global GDP by up to 7% by 2030 through productivity gains and labor augmentation.”



PwC
Sizing the Prize: What's the Real Value of AI for Your Business and How Can You Capitalize?, 2017

“ Generative AI tools are already delivering significant productivity gains by automating tasks, augmenting decision-making, and accelerating innovation.”



Deloitte
State of Generative AI in the Enterprise, 2024

“ AI will not just automate tasks—it will augment workers, enabling them to be more productive and create more value.”



Goldman Sachs
The Potentially Large Effects of AI on Economic Growth, 2023

“ Firms that adopt AI at scale are seeing measurable increases in worker productivity and operational efficiency.”



MIT Sloan Management Review
The Business Value of AI, 2022

“ History shows that general purpose technologies like AI drive productivity growth, higher wages, and new opportunities across the economy.”



Federal Reserve Bank of St. Louis
AI and the Future of Productivity, 2024



AI is a transformative technology with the potential to increase productivity, raise living standards, and strengthen Maine's long-term economic prosperity.

<https://doi.org/10.1038/s41591-024-02850-w>

837

What the Research Shows: AI's Uneven Reach

Anthropic's research analyzes AI exposure across 24 occupation categories.



THEORETICAL VS. OBSERVED EXPOSURE

Theoretical AI coverage (blue) estimates how many tasks in an occupation could be performed by AI. Observed AI coverage (red) measures actual usage today.



HIGH POTENTIAL, LOW ADOPTION

Many knowledge-based occupations show high theoretical exposure but low current adoption—highlighting a gap between what AI could do and what it's doing.

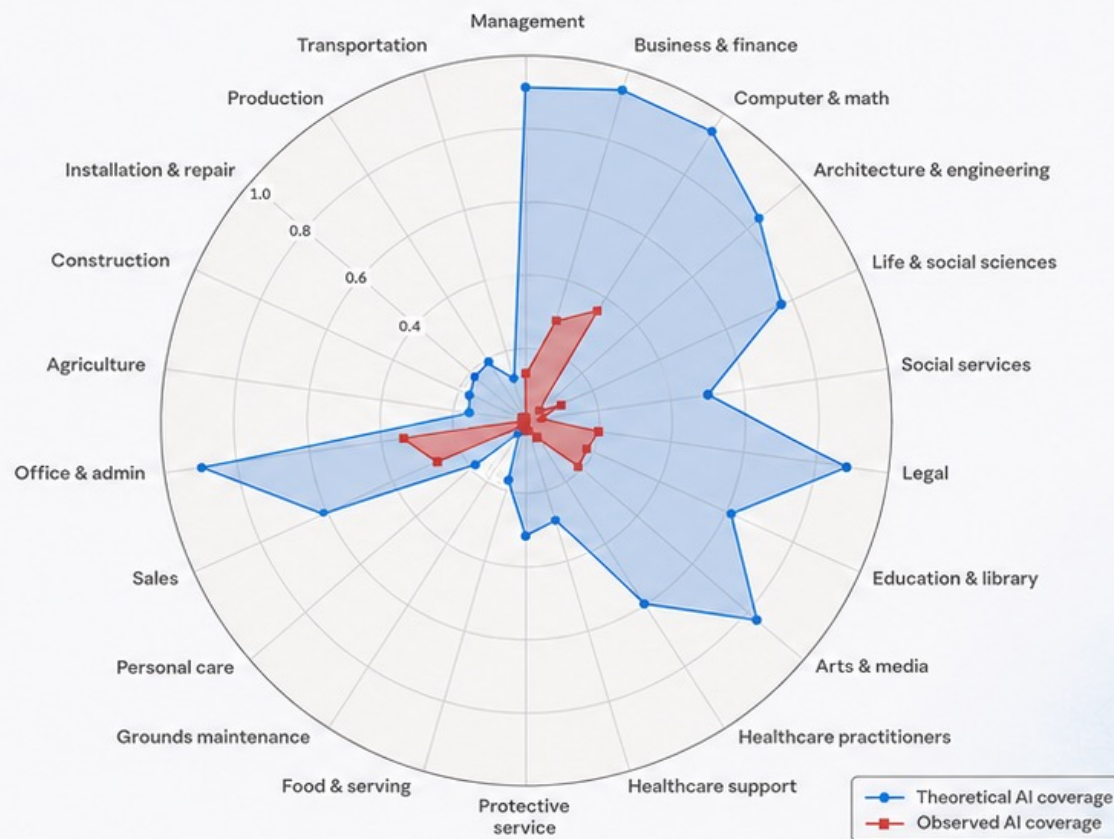


HUMAN WORK REMAINS ESSENTIAL

Hands-on, physical, and caregiving roles show low exposure—underscoring the enduring value of human expertise and presence.

AI Exposure Across Occupations

(Source: Anthropic, 2026)



AI's impact will not be uniform.

POLICY, INVESTMENT, AND WORKFORCE STRATEGIES MUST REFLECT REAL-WORLD DIFFERENCES.



Conclusion

- There has been a fundamental decoupling of output and employment.
- This has lead to a perceived increase in productivity across a significant range of sectors.
- Maine's priority sectors have not been immune and labor growth remains slow.
- The impact of AI cannot be ignored.
- Maine's future prosperity will likely be determined through the new capital-labor ratio.