

# The Curious Surge of Productivity in U.S. Restaurants

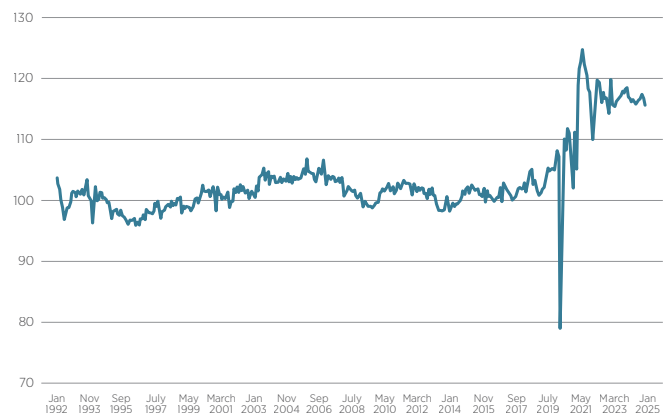
Based on BFI Working Paper No. 2025-39, “[The Curious Surge of Productivity in U.S. Restaurants](#),” by Austan Goolsbee, Federal Reserve Bank of Chicago; Chad Syverson, University of Chicago; Rebecca Goldgof, New York University; and Joe Tatarka, University of Chicago

Real labor productivity at US restaurants surged over 15% during the COVID pandemic. Mobile phone tracking data reveal that this appears driven by take-out customers who spend 10 minutes or less at restaurants.

Following a brief dip at the outset of the pandemic, the restaurant industry experienced an unprecedented surge of 15% in **real labor productivity**. Both sales and visits per employee, measures that had been relatively steady for decades before, rose sharply. In this paper, the authors use micro-level data on mobile phone visits for over 100,000 fast food restaurants across the United States, combined with debit and credit card transaction data, to study the drivers of this surge. They find the following:

- Productivity grew most in restaurants where the amount of time that consumers spend when they visit, their “dwell times,” decreased. Decreased dwell times were widespread during the pandemic, with the share of the visits lasting less than ten minutes rising particularly sharply. This pattern is strong enough that nearly the entire productivity increase that the authors observe is attributable to decreased in dwell times.
- The reduction in dwell times, and the associated productivity gains, appear to stem from increased demand for take-out and delivery. By serving a greater number

Figure 1 • Annualized Sales per Employee



Note: Figure shows an index (1992 = 100) of annualized monthly real sales per employee for the Food Services and Drinking Places industry. Nominal seasonally adjusted sales are from the Census Monthly Retail Trade Survey report. Real sales obtained by deflating by CPI series for food away from home. Seasonally adjusted employment from the Bureau of Labor Statistics.

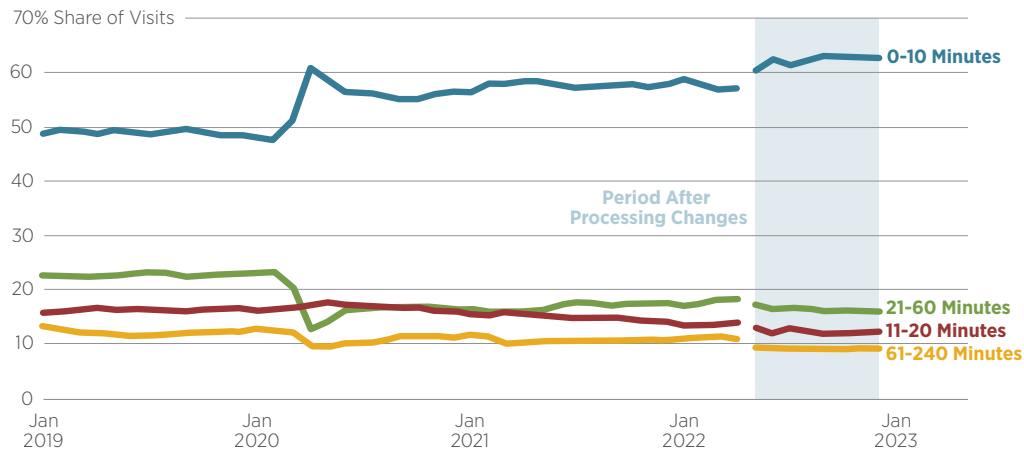
of quick-turn customers without adding staff, restaurants effectively boosted output per worker, translating into a genuine and measurable rise in productivity.

The authors also use their data to rule out three alternative explanations for the productivity surge:

- Falling demand during the pandemic cannot explain the sustained increase in

**real labor productivity:** the amount of inflation-adjusted output (e.g., sales or visits) produced per worker

**Figure 2** • Average Customer Visit Dwell Time Shares



Note: Figure shows average share of panel restaurants' customer visits by dwell time category. The shaded area indicates period after processing changes in SafeGraph's Monthly Patterns beginning in May 2022.

productivity. While there was an initial drop, **real consumption** in the industry has since rebounded and now exceeds pre-pandemic levels by about 20 percent.

- **Economies of scale** are not a factor. The average number of employees per restaurant remained flat or declined, indicating that restaurants did not become more efficient simply by getting bigger.
- Increased market power is also unlikely. While restaurants could have raised prices, the authors account for inflation-adjusted spending and shows that productivity gains were tied instead to behavioral shifts—specifically, shorter customer visits and a rise in takeout—rather than pricing changes.

What makes the restaurant industry's COVID-era productivity spike especially notable is that it appears to stem not from technological upgrades or industry consolidation, but from a fundamental change in customer behavior. The rise of quick-turn visits, take-out, and delivery effectively altered the “technology” of demand, enabling restaurants to serve more customers with the same labor force. This one-time, demand-driven jump in productivity has persisted even as broader conditions returned to normal. The findings raise an important question: if a change in how services are consumed can so dramatically boost productivity in restaurants, might other service-sector industries have experienced similar transformations? Exploring this possibility offers a promising path for future research.

**real consumption:** the total amount of goods and services consumed, adjusted for inflation to reflect true purchasing power

**economies of scale:** cost advantages that occur when increasing production leads to lower cost per unit

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