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# COVID-19 Working Paper: The Impact of COVID-19 Pandemic on Food-Away-From-Home Spending

Keenan Marchesi and Patrick W. McLaughlin

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## Abstract

This paper summarizes national changes in the frequency and dollar amount of U.S. consumers' food-away-from-home (FAFH) purchases during the COVID-19 pandemic. The analysis draws on frequently updated proprietary data sources to measure national FAFH trends in average monthly spending and the weekly changes in store transactions. Both spending and transactions at restaurants substantially fell following the onset of the pandemic and have remained below pre-pandemic levels more than 1 year later. Differences in the decline in spending and transactions across restaurant types and mealtimes are notable. Although restaurant restrictions are loosening across the country in the first half of 2021, visits and spending have been slow to recover to their pre-pandemic levels.

**Keywords:** COVID-19, food away from home, FAFH, spending, restaurants, NPD

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## What Is the Issue?

The Coronavirus (COVID-19) pandemic caused an unprecedented change to many sectors of the U.S. economy, with commercial foodservice being no exception. Following the national emergency declaration on March 13, 2020, many States began to issue emergency measures, including closure and restrictions of on-premises dining at restaurants and other foodservice businesses. Considering these changes, this study aims to measure national-level trends in consumer spending at and visits to food-away-from-home (FAFH) establishments during the pandemic.

## What Did the Study Find?

Restaurants of all types operating in the United States saw spending and the number of transactions substantially decrease following the declaration of the national emergency. Although restaurant spending and the number of transactions generally trended upward in November 2020–January 2021, both metrics have been slow to recover to pre-pandemic levels. Furthermore, these impacts were heterogeneous across type of restaurant and meal, particularly in the following aspects of foodservice:

- At the onset of the pandemic, the average spending at restaurants in March–May 2020 plummeted 29 percent compared with the same period in 2019. Spending remained below previous-year levels for all restaurants throughout the remainder of 2020, with estimates as of October–December 2020 lower by 8 percent than October–December 2019.
- Average total dollars spent at quick-service restaurants (QSRs) first showed positive year-to-year growth in July–September 2020 and maintained growth through at least early 2021. For instance, QSR sales in December 2020–February 2021 were estimated at \$23.79 billion, about 2.5 percent higher than the \$23.22 billion in December 2019–February 2020.
- Despite spending at QSRs increasing throughout the pandemic, transactions remained about 8 percent lower the last full week of April 2021 compared with the same week in April 2019, implying higher average spending per transaction, due partly to increases in party size.
- Full-service restaurant (FSR) spending returned slowly in 2021. The average total dollars spent in February–April 2021 was \$11.31 billion, which was 21.52 percent lower than the same period pre-pandemic, February–April 2019, though this spending is still 23.18 percent higher than February–April 2020 spending.
- Breakfast spending generally returned to pre-pandemic levels (2021 versus 2019), while lunch and dinner spending in February–April 2021 remained down.

In short, while the recovery from the pandemic has been heterogenous, food away from home (FAFH) purchases decreased substantially across all aspects of the sector following the onset of the pandemic. The FAFH decrease likely reflects a host of causes, such as increased food prices, impacts of both the implementation and lessening of public health restrictions, less activity outside the home, and changes to household income.

## How Was the Study Conducted?

This study relied on proprietary data from The NPD Group, a U.S.-based market research provider that gathered information at relatively close intervals from consumer surveys on food-away-from-home (FAFH) acquisition habits. These data provided estimates of spending at visits to FAFH sellers that are trackable to pre-pandemic levels. Estimates of changes in spending and visits are examined for restaurants overall—as well as FAFH sold by food retailers, such as grocery stores, meant for immediate consumption—and by restaurant type and mealtime.

# The Impact of COVID-19 Pandemic on Food-Away-From-Home Spending

## Introduction

The COVID-19 pandemic has caused an unprecedented change to many sectors of the U.S. economy, and commercial foodservice is no exception (Weinstock, 2021). Following the national emergency declaration on March 13, 2020, many States began to issue distancing measures, stay-at-home orders, and the mandatory closing of high-contagion-risk industries. Restaurants were often included, with many forced to close their on-premise dining locations, if not all of their business interaction with the public. Earlier USDA, Economic Research Service (ERS) reports examined overall changes in U.S. consumer food spending in response to the pandemic and found, for instance, consumers spent 8 percent less on food in 2020 compared with 2019 (Zeballos and Sinclair, 2021). This decrease exceeded predictions that were based exclusively on recessionary effects (e.g., increased unemployment), indicating structural changes in the ways U.S. consumers acquired food during the pandemic (Dong and Zeballos, 2021).

This paper examines national trends in U.S. consumer spending and visits to restaurants and other sellers of food away from home (FAFH) during the pandemic. FAFH is generally referred to as food obtained, though not exclusively, from restaurants, cafeterias, food trucks, and other outlets outside the home (Saksena et al., 2018). We relied on proprietary data from The NPD Group, a U.S.-based market research provider, built on consumer surveys of FAFH acquisition habits collected at a relatively high frequency (e.g., weekly to monthly). These data provided estimates of spending at visits to FAFH sellers that are trackable to pre-pandemic levels (e.g., year-to-year changes). Estimates of changes in spending and visits are examined for restaurants overall—as well as FAFH sold by food retailers like grocery stores—and by restaurant type (i.e., quick-service versus full-service restaurants) and mealtime (i.e., breakfast, lunch, and dinner).

In general, spending and visits to restaurants fell dramatically at the onset of the pandemic in response to the various emergency measures, although this impact and subsequent recovery were experienced differently across restaurant types and mealtimes. Describing these broad and national trends helps policymakers, researchers, and other stakeholders contextualize the numerous changes that occurred during the pandemic, including changes in consumer behavior, disruptions in the food supply, and increases in food prices. These trends serve as indicators of how much FAFH purchasing behavior has returned to pre-pandemic levels, when the U.S. economy was operating as “normal.” Finally, this descriptive analysis can serve as a foundation for future work addressing how and why U.S. consumers changed their FAFH purchasing in response to the pandemic.

## Data Description

This working paper uses two proprietary datasets from The NPD Group to report on the overall changes in food-away-from-home (FAFH) purchasing behavior: Consumer Reports on Eating Share Trends (CREST®) and CREST® Performance Alerts.

### NPD's Consumer Reports on Eating Share Trends (CREST)

CREST provides national estimates of the nominal dollar amount spent at and the number of visits to commercial foodservice purveyors (e.g., restaurants and retail foodservice), along with the characteristics of purchase locations (e.g., purchases by service type) and acquisition methods (e.g., on-premises consumption, takeout, and delivery).<sup>1</sup> The underlying data comprise a consumer panel's online surveys, which are then projected to represent overall food purchasing behavior in the United States. CREST collects 69,000 surveys each month from both FAFH buyers (someone who reports having one or more meals not made at home yesterday)<sup>2</sup> and nonbuyers (someone who reports not having one or more meals not made at home yesterday). Respondents report the dollars spent on FAFH at individual outlets. NPD uses the resulting values in conjunction with its proprietary data on restaurant locations (NPD ReCount®)<sup>3</sup> and a projection factor—based on similar individuals—from the U.S. Department of Commerce, Bureau of the Census' Current Population Survey to generate nationally representative measures of dollars spent on FAFH.<sup>4</sup>

The time frame used in this paper covers January 2019 through April 2021. USDA, ERS receives monthly updates with an additional month of data aggregated as a 3-month rolling total. The variable is a nationally representative estimate of dollars (in billions), which is defined as the total amount spent—including any associated tax, but excluding tips—on meals, snacks, or beverages for immediate consumption on a rolling 3-month basis.<sup>5</sup> NPD provides monthly representative sales data calculated as a 3-month rolling total to preserve the underlying sample size and maintain representativeness across the various demographic and industry groups during the projection and calibration processes completed by NPD.<sup>6</sup> For example, March–May 2020 spending is an estimate based on total purchases made in March, April, and May 2020. This highlights why the timing of spending patterns slightly lags relative to what might be expected. For instance, average total spending as of March–May 2020 is the first estimate available capturing the full impact of the pandemic.

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<sup>1</sup> All dollar estimates are based on consumer-reported nominal figures and do not account for changes in food prices due to inflation occurring throughout the study period.

<sup>2</sup> This results in about half of survey respondents being FAFH buyers each month.

<sup>3</sup> NPD ReCount® provides location and business information on food-away-from-home (FAFH) establishments. Data include exact geographic location, business name, several levels of menu- and service-style categorization, and employee counts. NPD compiles the data using a variety of publicly available and proprietary data sources, such as chain directories from businesses' headquarters, industry literature, and verifications through internet searches and phone calls (Cho et al., 2019).

<sup>4</sup> NPD considers additional adjustment factors for any under-reporting that may occur to improve consistency and representativeness, and to reduce selection bias.

<sup>5</sup> Immediate consumption varies slightly by location of acquisition. Items purchased at a restaurant are considered consumed, and individuals do not report how much of any given item is consumed; if it is reported, it is considered immediately consumed.

<sup>6</sup> The usage of 3 months of surveys on a rolling total improves the validity of the representative estimates by reducing the margin of error and increasing the validity of these results.



## NPD's CREST Performance Alerts

CREST Performance Alerts are weekly reports on the number of restaurant transactions occurring each week using cell phone GPS data and NPD ReCount. It reports the percent change from last year (PCLY) in total transactions at the national and regional level each week, and it then also reports by restaurant segments (e.g., quick-service/full-service) and channels (e.g., quick-service hamburger, midscale, casual dining). NPD synthesizes these data with its CREST data and compares its GPS data with the NPD ReCount database to obtain coverage estimates. The sample period covers the week of January 6, 2019, through May 30, 2021. Starting in January 2021, the percent change in weekly transactions was calculated relative to 2-years ago to capture a pre-pandemic baseline of food service transactions.

## NPD Classifications

NPD defines quick-service restaurants (QSRs) as restaurants that typically specialize in a particular type of food (e.g., hamburger, pizza, chicken) and where customers order and pay at a counter prior to consumption. In other words, QSRs can be perceived as fast food. In contrast, full-service restaurants (FSRs) are establishments that typically offer table service and include the following categories: (1) midscale (not quick-service restaurants or upscale, reservations not accepted, may serve alcohol), (2) casual dining, and (3) fine dining restaurants (not perceived as fast food, reservations accepted, alcohol served, and typically including a full bar). Retail foodservice includes stores that sell food, such as grocery, warehouse, drug, and convenience stores. In reporting on dollars spent on food away from home (FAFH), retail foodservice dollars only account for items purchased from retailers and then eaten within 6 hours on the reporting day. Examples include items from a hot bar at a grocery store eaten upon return to the office or drinks from a convenience store that are to be consumed for a meal within 2 hours of purchase.

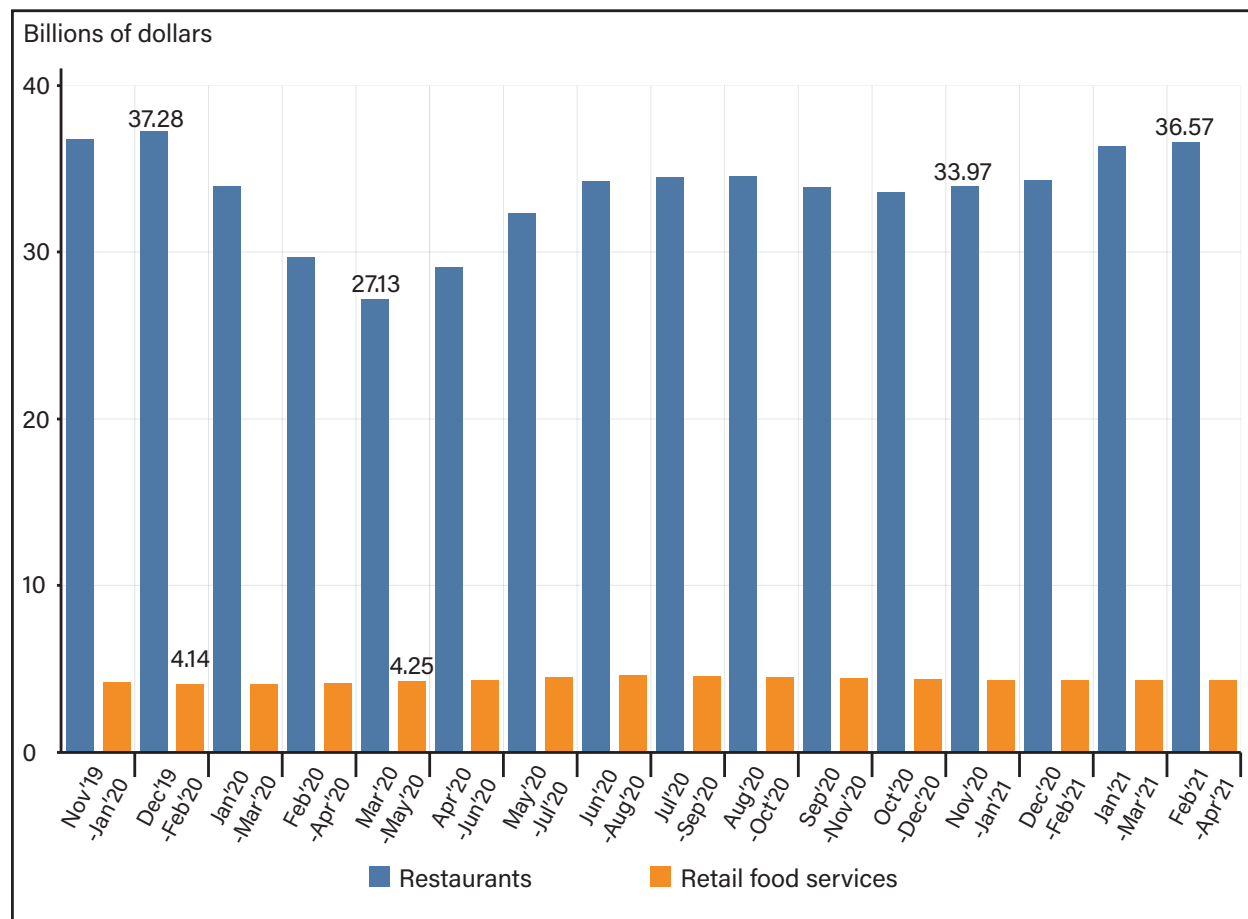
In its reporting, NPD separates spending by the time of day in which food consumption occurred. For transaction information in CREST Performance Alerts, NPD defines breakfast as eaten between 5 a.m. and 10:59 a.m., lunch as between 11 a.m. and 2:59 p.m., and dinner as between 5 p.m. and 8:59 p.m., whereas the mealtime distinction is consumer-reported in the dollars spent data in CREST.

# Findings

## Overview of Spending on Food Away From Home

First, we present the 3-month average of total dollars spent and the percent change in average total dollars spent relative to 1-year and 2-years prior to 2021 at both restaurants and retail foodservice (e.g., food away from home [FAFH] from a grocery store). The average total dollars spent at restaurants dropped from \$37.28 billion in December 2019–February 2020 to \$27.13 billion in March–May 2020, following the onset of the pandemic (figure 1). While the average total dollars spent in December 2019–February 2020 was 3.13 percent higher than the average dollars in December 2018–February 2019, the average total dollars spent in March–May 2020 was 29.19 percent lower than the average spent in March–May 2019 (figure 2). This latter figure—a 29.19-percent decrease—was the largest (in absolute value) year-to-year change in average total dollars throughout the pandemic.

Figure 1  
**Monthly average total dollars spent on FAFH (restaurants and retail foodservice stores)**



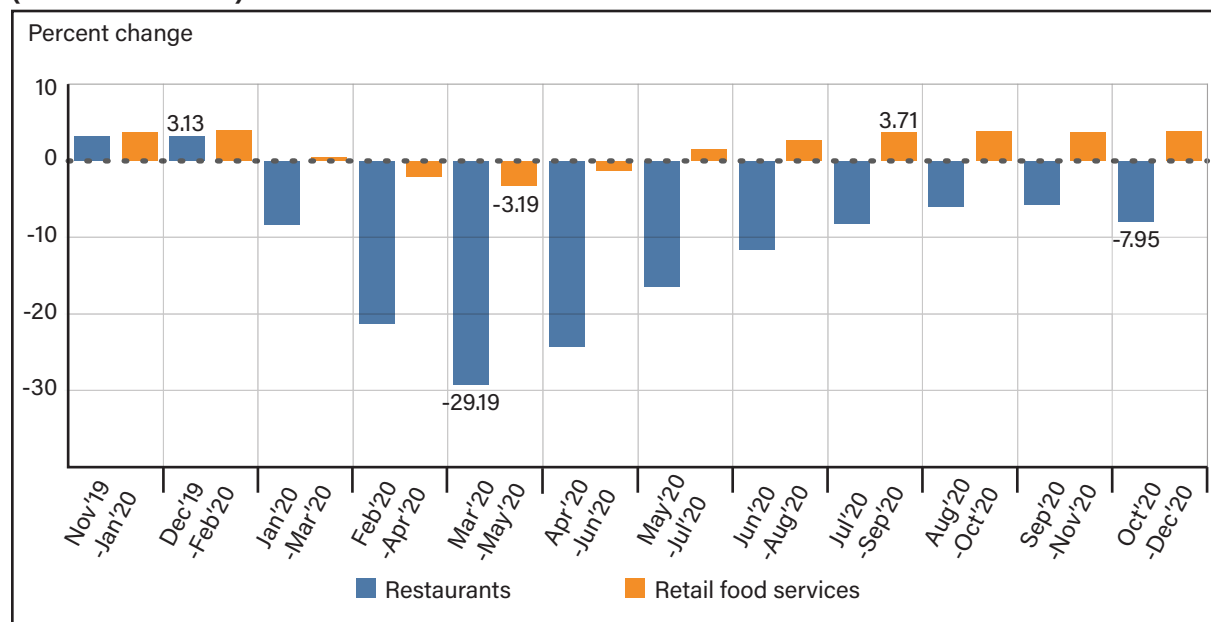
FAFH = food away from home.

Note: Results based on the 3-month rolling average of total nominal dollars spent during the listed time period. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

Figure 2

**Percent change in monthly average dollars spent on FAFH compared with 1 year prior (2020 versus 2019)**



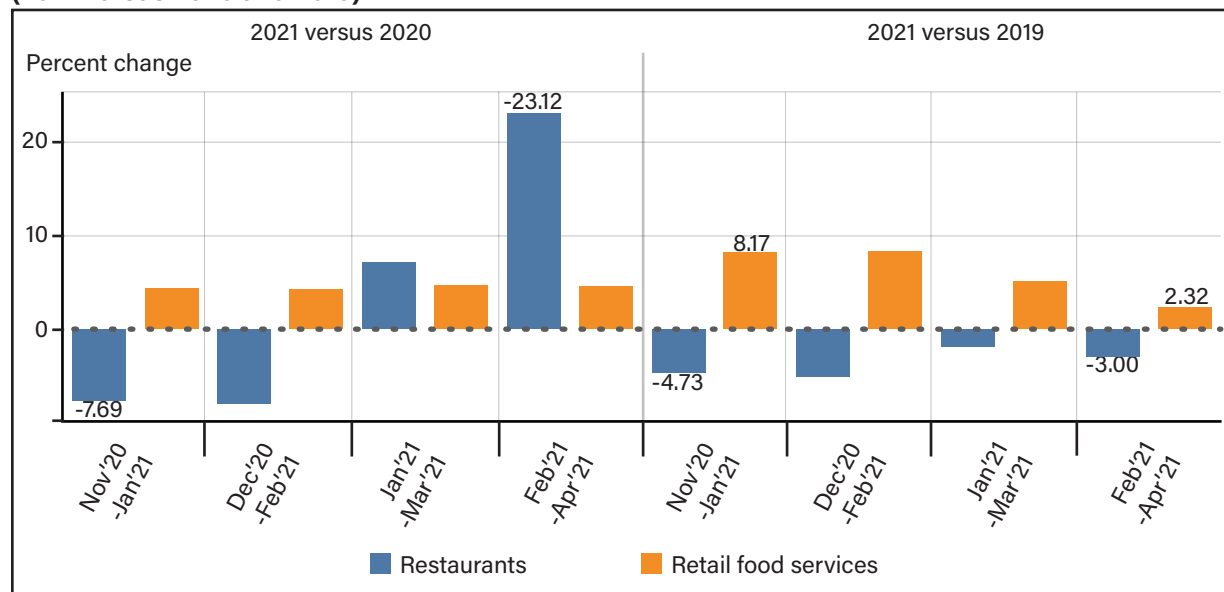
FAFH = food away from home.

Note: Results based on the percent change in the 3-month rolling average of total nominal dollars spent over the listed time period compared with the same period in the prior year. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

Figure 3

**Percent change in monthly average dollars spent on FAFH compared with 1 and 2 years prior (2021 versus 2020 and 2019)**



FAFH = food away from home

Note: Results based on the percent change in the 3-month rolling average of total nominal dollars spent compared with the same period in the years prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

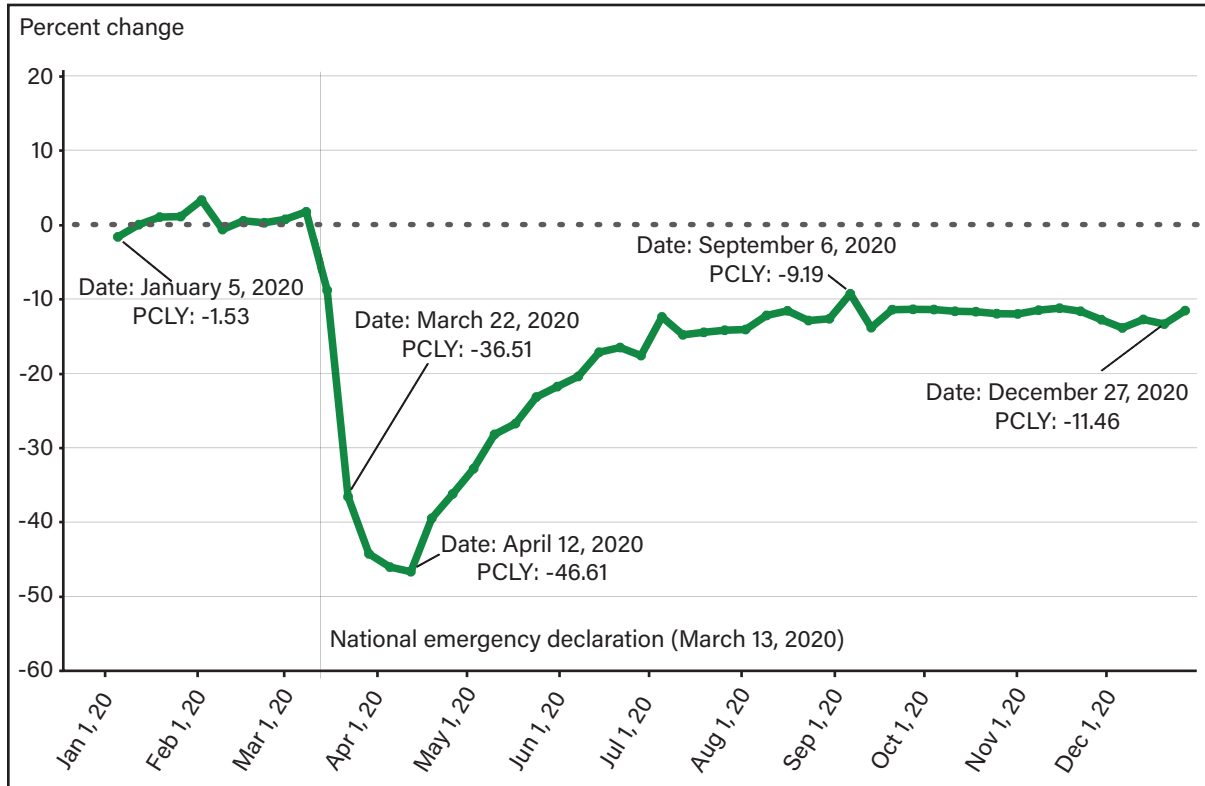
The average total dollars spent at restaurants during a 3-month period rose from the March–May 2020 low, reaching an average total of \$33.97 billion in November 2020–January 2021 and 36.57 billion in February–April 2021 (figure 1). These totals are associated with a -7.69- and a 23.12-percent change in average total dollars spent when compared with the same 3-month periods 1 year prior, respectively (figure 3). However, given the February–April 2021 statistics reflect changes after the onset of the pandemic, we also examined changes in 2021 relative to 2019. The change in total dollars spent in November 2020–January 2021 was -4.73 percent compared with 2 years prior (2021 versus 2019), and the change in February–April 2021 was 3 percent lower than February–April 2019.

In contrast, average consumer spending at retail foodservice generally increased, albeit modestly, in terms of both levels and year-to-year changes. Prior to the pandemic, the average total spending at retail foodservice was around \$4.14 billion in December 2019–February 2020 and reached \$4.25 billion in March–May 2020. Despite this relatively small average increase, average spending in March–May 2020 was 3.19 percent lower than average spending in March–May 2019, indicating that while the average total spending at retail foodservice was increasing early in the pandemic, it remained lower than previous years. However, the average spending at retail foodservice in July–September 2020 was 3.71 percent above July–September 2019 levels and did not fall below this level through the end of 2020. In looking at the change in average spending compared with the same time 2 years ago at retail foodservice, average spending in November 2020–January 2021 was 8.17 percent higher; however, in February–April 2021, average spending was only 2.32 percent higher.

## Changes in Weekly Restaurant Transactions

The year-to-year and year-to-2-year changes in weekly restaurant transactions for 2020 and 2021 show many effects of the pandemic. During the first full week following the national emergency declaration on March 22, 2020, there were 36.51 percent fewer restaurant transactions than the same week in 2019 (March 24, 2019). The largest year-to-year changes in weekly restaurant transactions occurred the week of April 12, 2020 (versus April 11, 2019), when transactions were down 46.61 percent (figure 4). On average, the year-to-year change in weekly transactions was 11.87 percent lower—the smallest percent change since the pandemic started—between September and December 2020.

Figure 4  
**Weekly percent change in national restaurant transactions compared with 1 year prior (2020 versus 2019)**



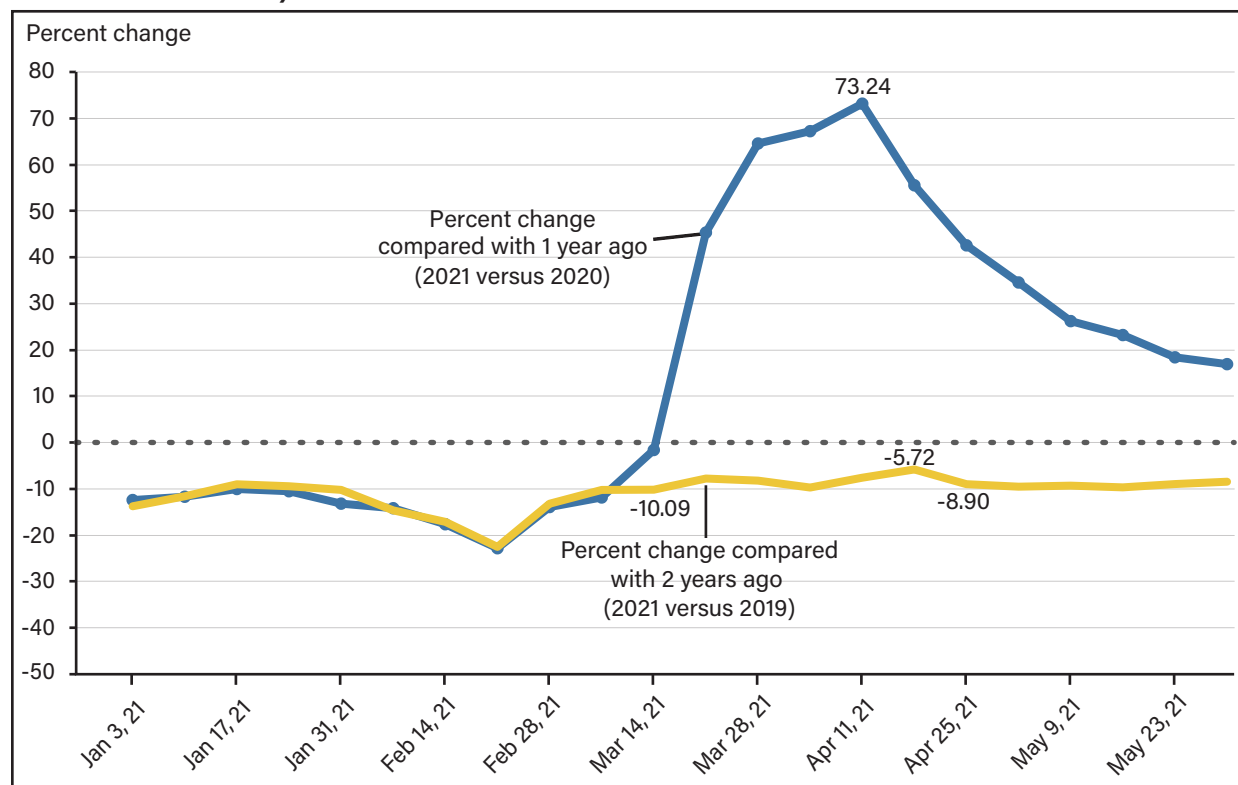
PCLY = percent change from last year.

Note: Results based on the percent difference in national restaurant transactions compared with the same week 1 year prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from the NPD Group's CREST Performance Alerts.

When the year-to-year and year-to-2-year change in weekly transactions are compared, the two measures trend closely together until the week ending March 14, 2021, which is expected as the year-to-year point of comparison is the week of the national emergency declaration (figure 5). After March 14, 2021, there were between -5.72 and -10.09 percent fewer transactions each week in 2021 than in the same weeks of 2019.

Figure 5  
**Weekly percent change in national restaurant transactions compared with 1 and 2 years prior (2021 versus 2020 and 2019)**



Note: Results based on the percent difference in national restaurant transactions compared with the same week 1 and 2 years prior. Data current as of January 2022.

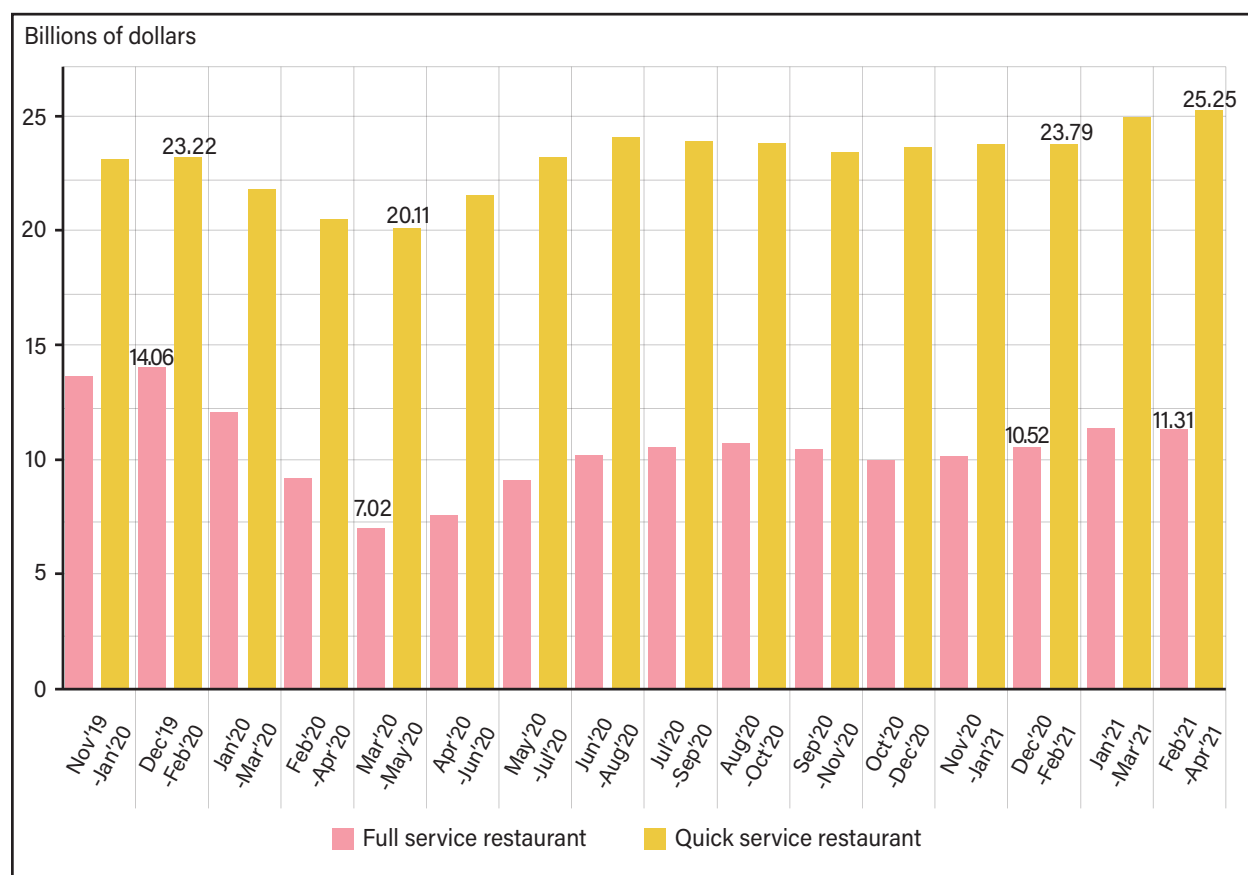
Source: USDA, Economic Research Service using data from The NPD Group's CREST Performance Alerts.

These findings together show that, first, national average spending and the number of transactions at restaurants generally remained below pre-pandemic levels 1 year after the onset of the pandemic. However, recent numbers are trending upward, suggesting a recovery in national FAFH spending. Second, when restaurants closed, consumers slightly increased spending at retail foodservice for meals from outside the home but did not offset the spending decrease at restaurants since the retail foodservice share of total FAFH is small.

## Changes in Spending by Restaurant Type

In both pre- and post-pandemic onset, the estimated average of total dollars spent at quick-service restaurants (QSRs) was higher than at full-service restaurants (FSRs). Prior to the pandemic, average spending was \$23.22 billion at QSRs and \$14.06 billion at FSRs in December 2019–February 2020 (figure 6). During the following months, the average total dollars spent fell to \$20.11 billion at QSRs and to \$7.02 billion at FSRs in March–May 2020. These changes in average total dollars spent correspond to a change relative to the previous year of -15.41 percent for QSRs and -51.71 percent for FSRs in March–May 2020 (figure 7).

Figure 6  
**Monthly average total dollars spent (billions) at restaurants by restaurant type**



Note: Results based on the 3-month rolling average of total nominal dollars spent during the time period listed. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

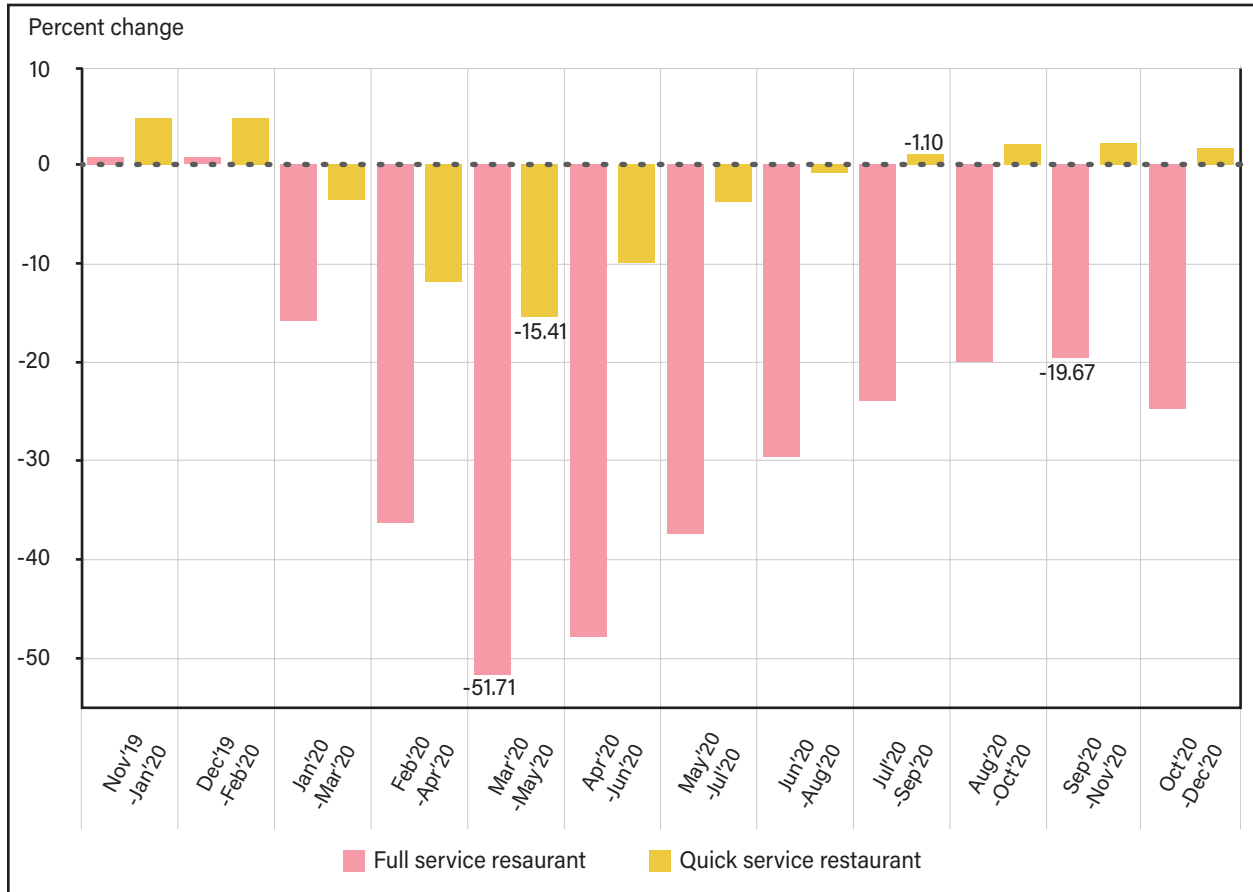
Average total dollars spent at QSRs did increase following the decrease in March–May 2020, such that the year-to-year change in average total dollars spent in July–September 2020 was 1.1 percent higher than in July–September 2019. In addition, year-to-year changes in QSR spending remained positive throughout the rest of 2020. Average total dollars spent at FSRs began to increase as well, with an increase in average spending from the low in March–May 2020. Yet the change from the previous year's spending did not rise above -19.67 percent throughout 2020.

Throughout 2021 thus far, the average total dollars spent at QSRs have reached a sample period high of \$25.25 billion in February–April 2021, which, when compared to 2020, was 23.09 percent higher (figure 8). However, when compared to February–April 2019, this level was 8.46 percent higher. For FSRs, the year-to-year change in average total dollars spent in February–April 2021 was 23.18 percent higher than the average spending as of February–April 2020 (overlapping with the pandemic). However, when compared to total dollars spent in February–April 2019 (with no pandemic), average spending at FSRs remained 21.52 percent lower. This suggests that while QSR spending has increased relative to the initial spending decrease following the onset of the pandemic, FSR spending has yet to return to pre-pandemic levels.



Figure 7

**Percent change in monthly average total dollars spent compared with 1 year prior (2020 versus 2019), by restaurant type**



Note: Results based on the percent change in the 3-month rolling average of total nominal dollars spent during the time period listed compared with the same period 1 year prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

Figure 8

**Percent change in monthly average total dollars spent compared with 1 and 2 years prior (2021 versus 2020 and 2019), by restaurant type**



FSR = Full-service restaurant. QSR = Quick-service restaurant.

Note: Results based on the percent change in the 3-month rolling average of total nominal dollars spent during the time period listed compared with the same period 1 and 2 years prior. Data current as of January 2022.

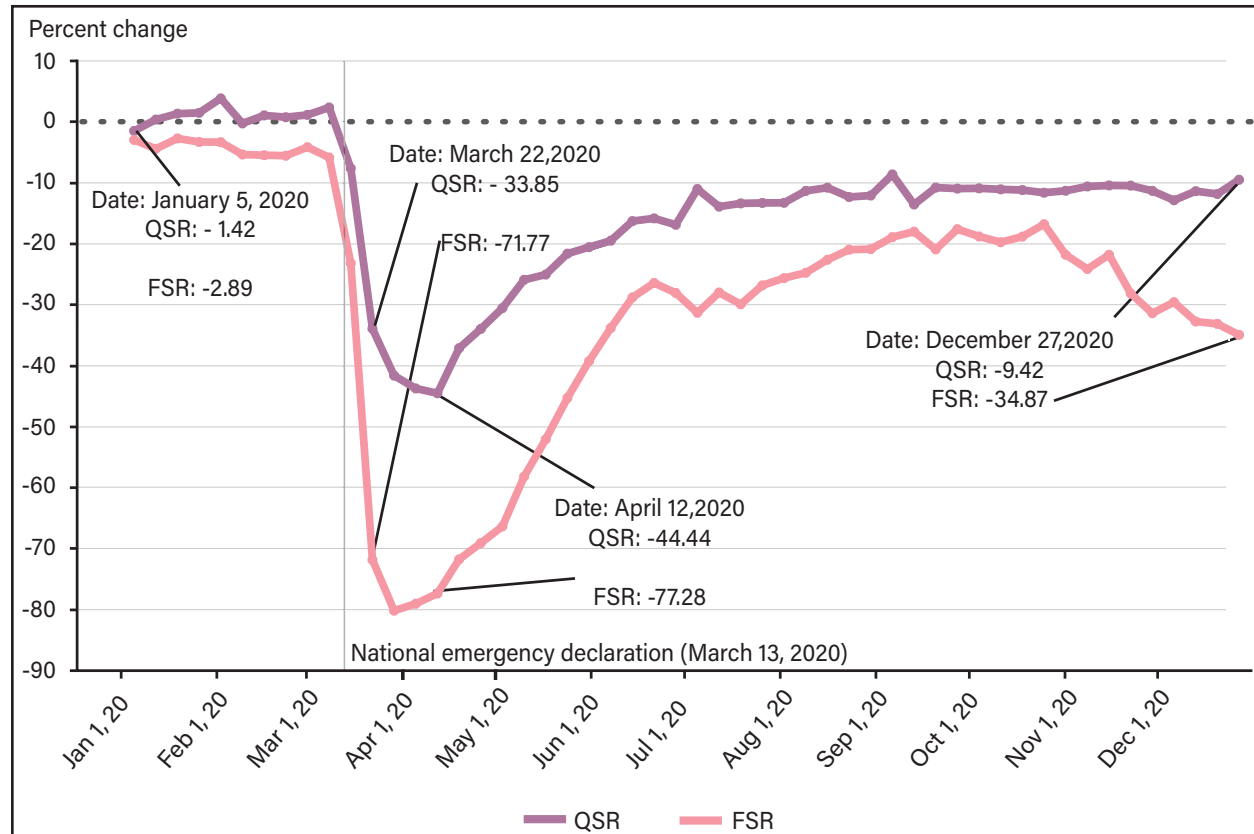
Source: USDA, Economic Research Service using data from The NPD Group's CREST.

**Changes in Weekly QSR and FSR Transactions for 2020-21**

As observed for all restaurants (figure 4), transactions at both QSRs and FSRs decreased the first full week following the declaration of the national emergency (March 22, 2020) relative to the same week a year prior by -33.85 and -71.77 percent, respectively (figure 9). The difference in year-to-year changes in weekly transactions between QSRs and FSRs continued to increase (in absolute terms) in the early weeks of April 2020. For the remainder of the year, the year-to-year change in weekly transactions shrank (in absolute terms) for both FSRs and QSRs. However, throughout November and December 2020, there was a notable increase in the difference between weekly transactions at FSRs, with 34.87 percent fewer transactions the week of December 27, 2020.

Figure 9

**Weekly percent change in national QSR and FSR transactions compared with 1 year prior (2020 versus 2019)**



FSR = Full service restaurant. QSR = Quick service restaurant.

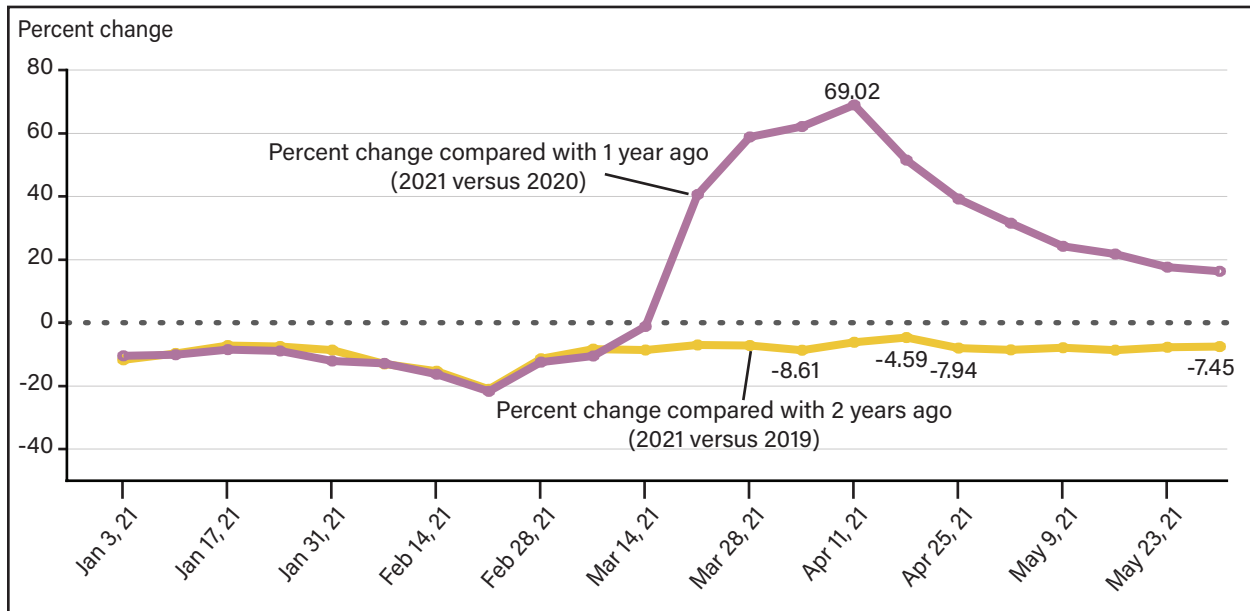
Note: Results based on the percent difference in QSR and FSR transactions compared with the same week 1 year prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

The year-to-2-year change in weekly transactions at QSRs ranged between -8.61 and -4.59 percent between March 14 and May 30, 2021 (figure 10). This was similar to increases in spending in 2021 relative to 2019; however, the difference between them could be due to consumers still visiting QSRs less frequently than previously as the average dollar spent started to rise on these trips. The year-to-2-year changes in transactions for FSRs ranged between -29.3 and -17.4 percent for the same timeframe (figure 11). We see similar patterns in terms of average dollars spent and transactions for FSRs, both with year-to-2-year changes near -22 percent.

Figure 10

**Weekly percent change in national QSR transactions compared with 1 and 2 years prior**



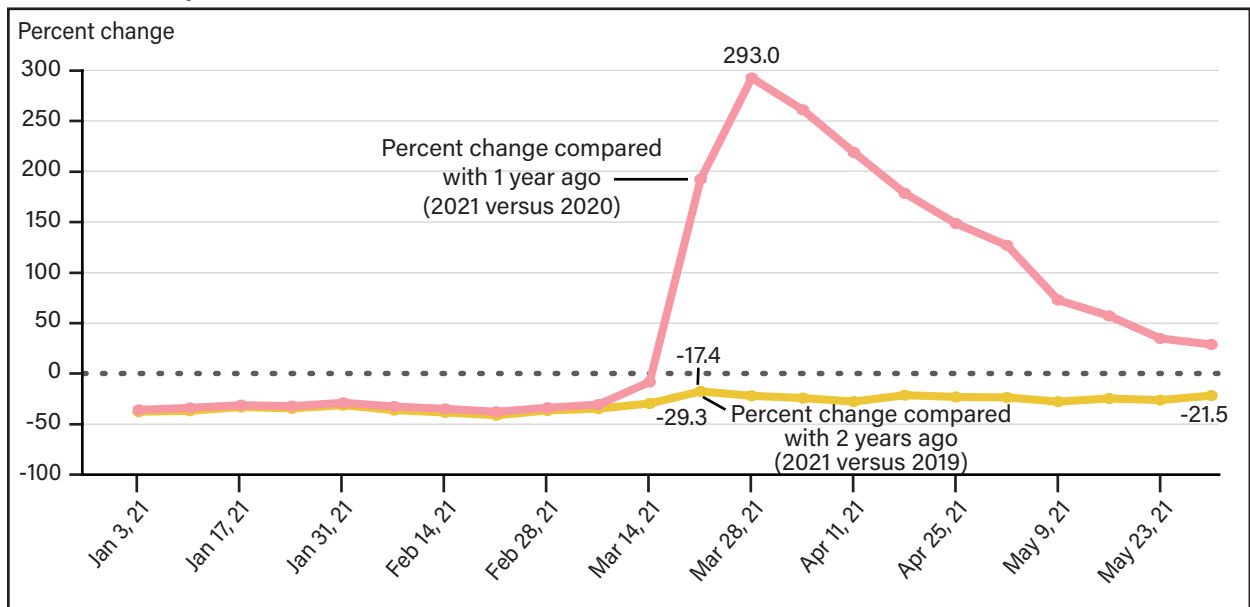
QSR = quick service restaurant.

Note: Results based on the percent difference between 2021 national QSR transactions and 1 and 2 years prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

Figure 11

**Weekly percent change in national FSR transactions compared with 1 and 2 years prior (2021 versus 2020 and 2019)**



FSR = Full-service restaurant.

Note: Results based on the percent difference in national FSR transactions compared with the same week 1 and 2 years prior. Data current as of January 2022.

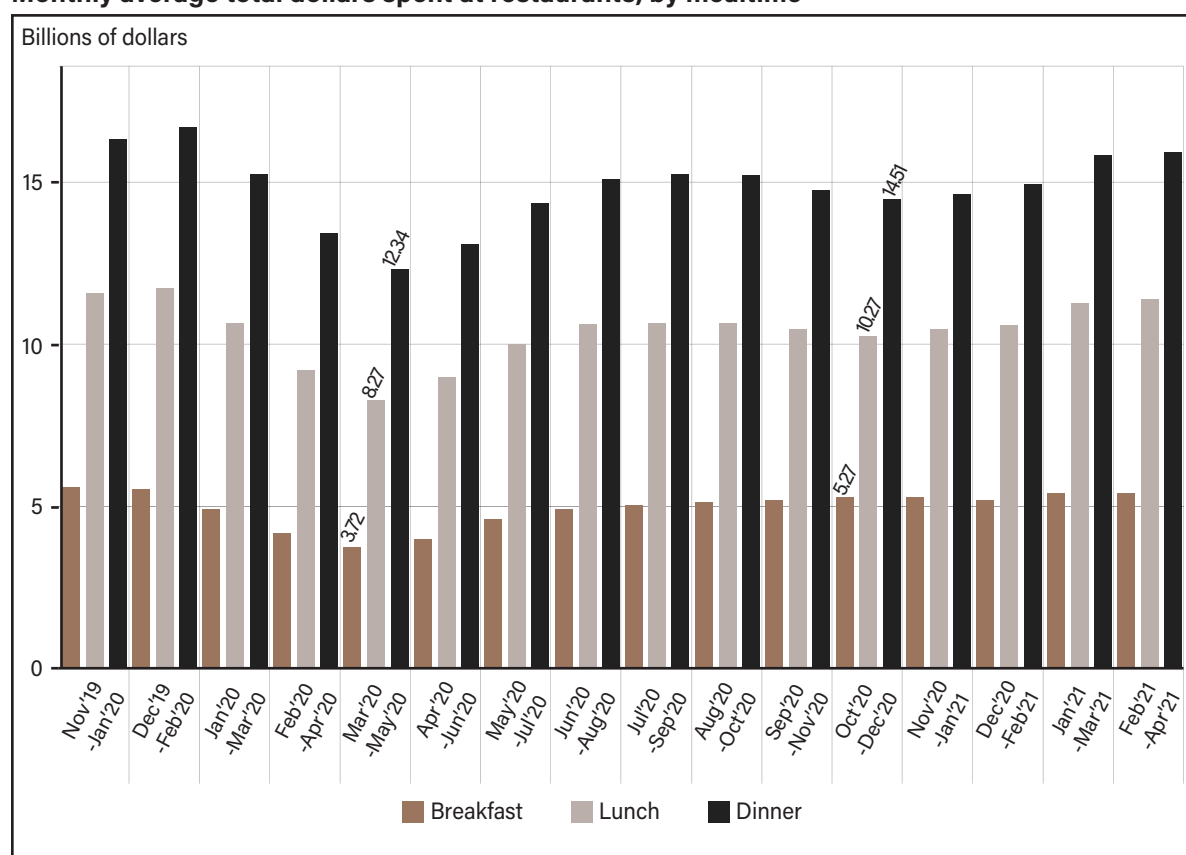
Source: USDA, Economic Research Service using data from The NPD Group's CREST.

## Changes by Mealtime

Generally, both before and after the pandemic began, spending at restaurants was highest at dinner and lowest at breakfast. Regardless of mealtime, there was not a positive year-to-year change in total dollars spent throughout the pandemic.

Year-to-year spending for breakfast dropped substantially in the early months of the pandemic—down to \$3.72 billion in March–May 2020, but in the proceeding months, the average total dollars spent rose (e.g., \$5.27 billion in October–December 2020). In October–December 2020, year-to-year changes in spending for breakfast were -6.7 percent lower, the second-lowest percentage (-6.79 percent in September–November 2020) since January–March 2020 (-8.1 percent) for this mealtime (figure 12). On the other hand, average spending during dinner was 10.25 percent lower in October–December 2020 than the average total dollars spent in October–December 2019 (figure 13).

Figure 12  
**Monthly average total dollars spent at restaurants, by mealtime**

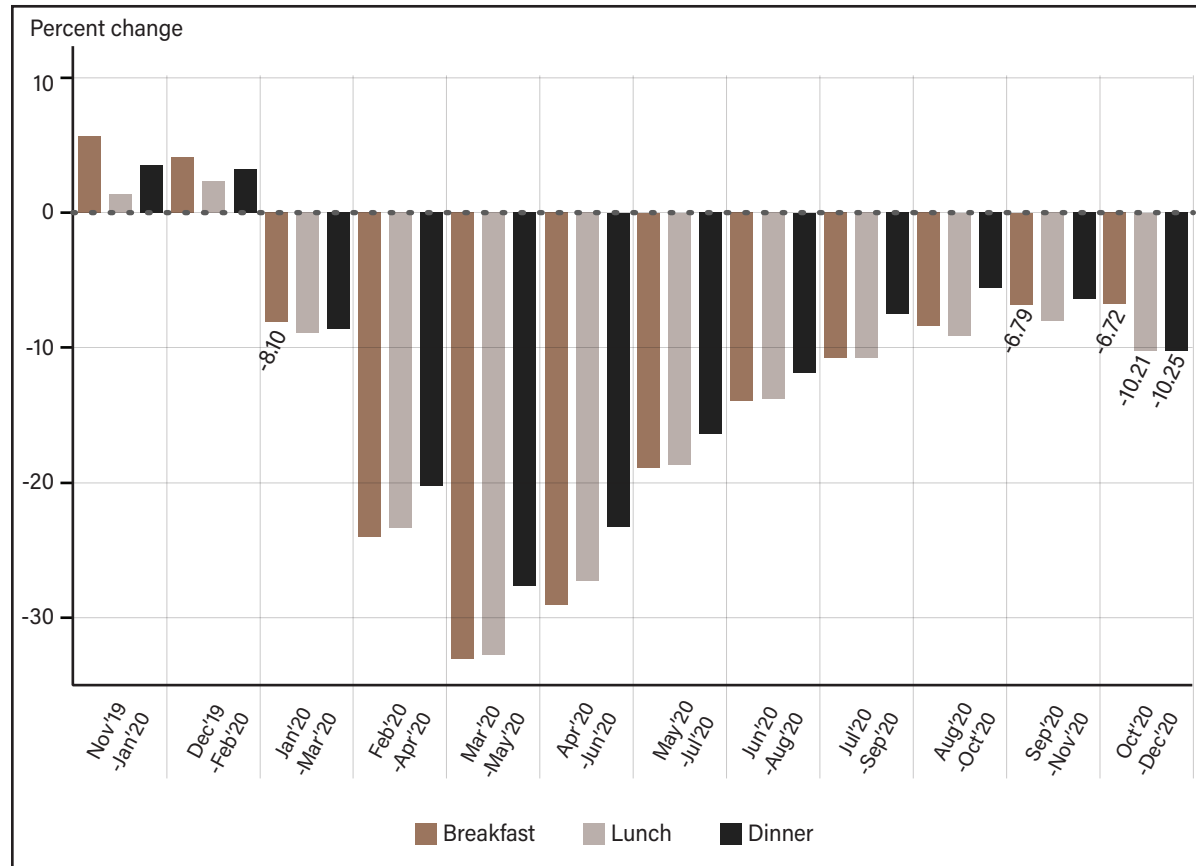


Note: Results based on the 3-month rolling average of total nominal dollars spent during the time period listed. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

Figure 13

**Percent change in monthly average total dollars spent compared with 1 year prior (2020 versus 2019), by mealtime**



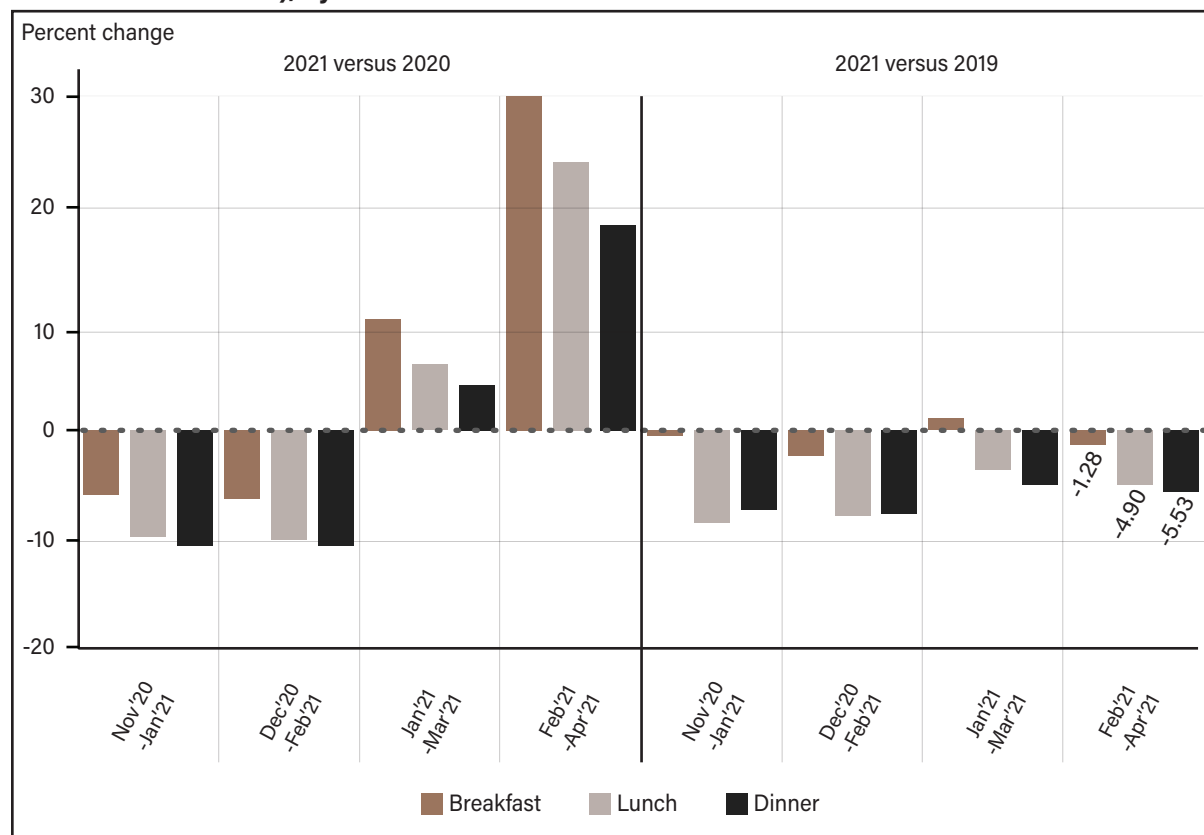
Note: Results based on the percent change in the 3-month rolling average of total nominal dollars spent during the time period listed compared with the same period 1 year prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

The average total dollars spent each month increased in 2021 for all mealtimes (figure 12). Comparing changes in 2021 spending relative to 2019, breakfast spending was near 2019 levels—1.28 lower in February–April 2021 than in February–April 2019 (figure 14). The percent difference between the average total dollars spent at both lunch and dinner decreased (in absolute terms): average lunch spending was 4.9 percent lower in February–April 2021, and average dinner spending was 5.53 percent lower in February–April 2019. In other words, breakfast spending levels were near pre-pandemic levels compared with lunch and dinner spending.

Figure 14

**Percent change in monthly average total dollars spent compared with 1 and 2 years prior (2021 versus 2020 and 2019), by mealtime**



Note: Results based on the percent change in the 3-month rolling average of total nominal dollars spent during time period listed compared with the same period 1 and 2 years ago. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

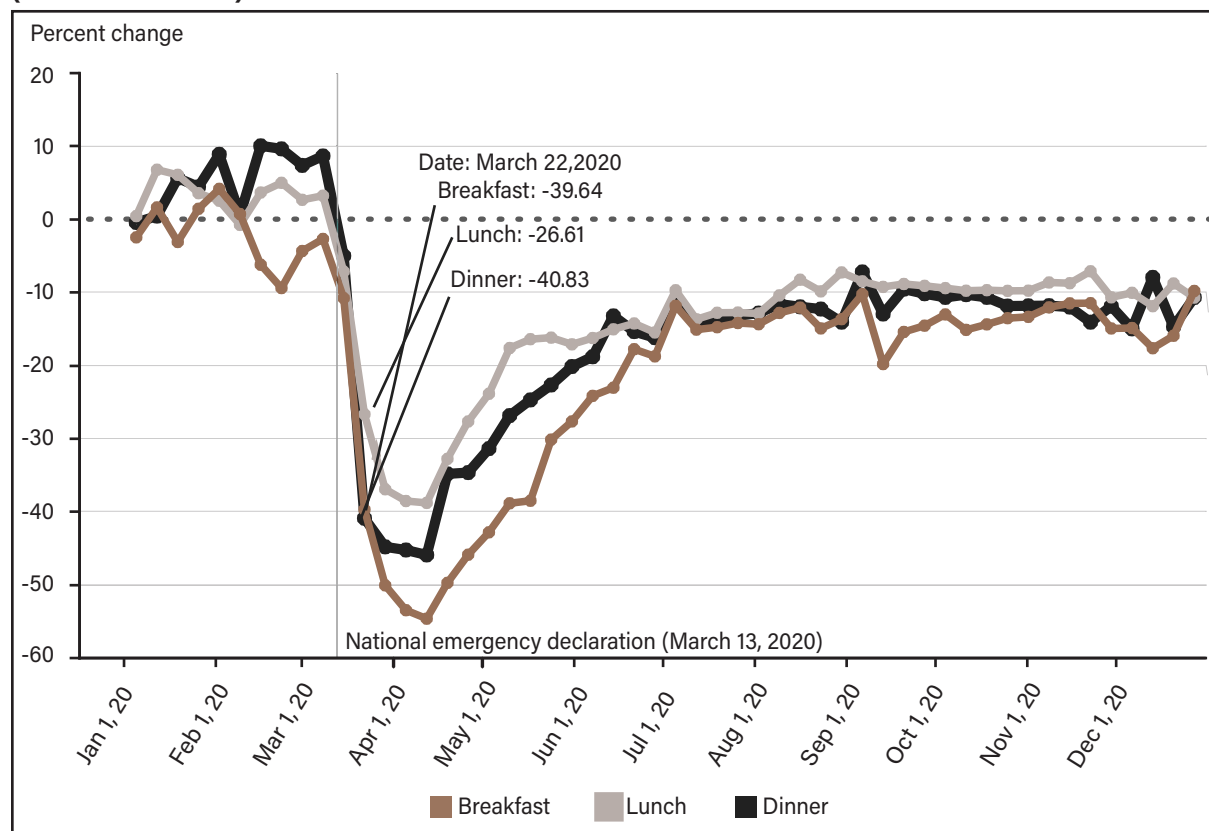
### Changes in Weekly Mealtime Transactions for 2020-21

The first full week following the national emergency declaration (March 22, 2020) had a nationwide drop in the number of overall mealtime transactions compared with the year prior. This decrease was mirrored to various degrees in mealtime occasions: Breakfast transactions were down 39.64 percent, lunch transactions were down 26.61 percent, and dinner transactions were down 40.83 percent (figure 15). The difference between weekly transactions in 2020 compared with 2019 shrank (in absolute terms) through the summer months. From the end of September through the end of 2020, weekly year-to-year changes in transactions were on average -13.91 percent lower for breakfast, -9.4 percent for lunch, and -11.32 percent for dinner.<sup>7</sup>

<sup>7</sup> These values are the average of year-to-year change during the last 14 weeks of the year 2020 from the week ending September 27, 2020, through the week ending December 27, 2020.

Figure 15

**Weekly percent change in national restaurant transactions by mealtime compared with 1 year prior (2020 versus 2019)**



Note: Results based on the percent difference in national restaurant transactions by mealtime compared with the same week 1 year prior. Data current as of January 2022.

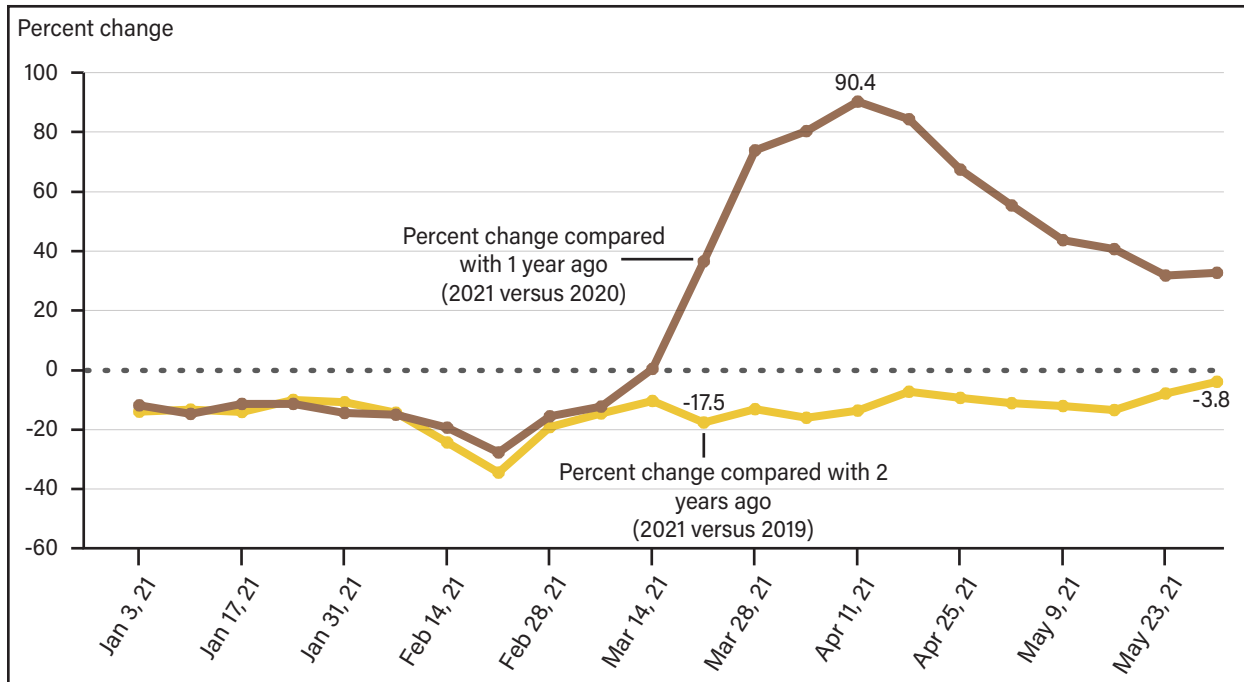
Source: USDA, Economic Research Service using data from The NPD Group's CREST.

Average weekly transactions in 2021—specifically for the weeks of March 14 through May 30, 2021—compared with the same weeks in 2019 indicate breakfast transactions were about 11.2 percent lower, despite increases in their frequency between 2021 and 2019 (figure 16). Similarly, for lunch (figure 17) and dinner (figure 18), 2021 transactions were down an average 6.47 percent and 4.25 percent, respectively, from the week of March 14 through May 30, 2021, versus the same period in 2019. These persistent changes in transactions at various mealtimes are potentially related to consumer shifts in behavior (e.g., increased, sustained work from home). In addition, despite restrictions lifting, consumers have been slow to return to pre-pandemic behaviors such as dinner food-away-from-home (FAFH) meals or takeout food for lunch. One caveat, however, is that average spending on breakfast compared with a year prior has nearly returned to pre-pandemic levels despite persistently negative year-to-year changes in transactions, which could be attributed to an increase in party size per trip or an increase in the number of items ordered.



Figure 16

**Weekly percent change in national breakfast transactions compared with 1 and 2 years prior (2021 versus 2020 and 2019)**

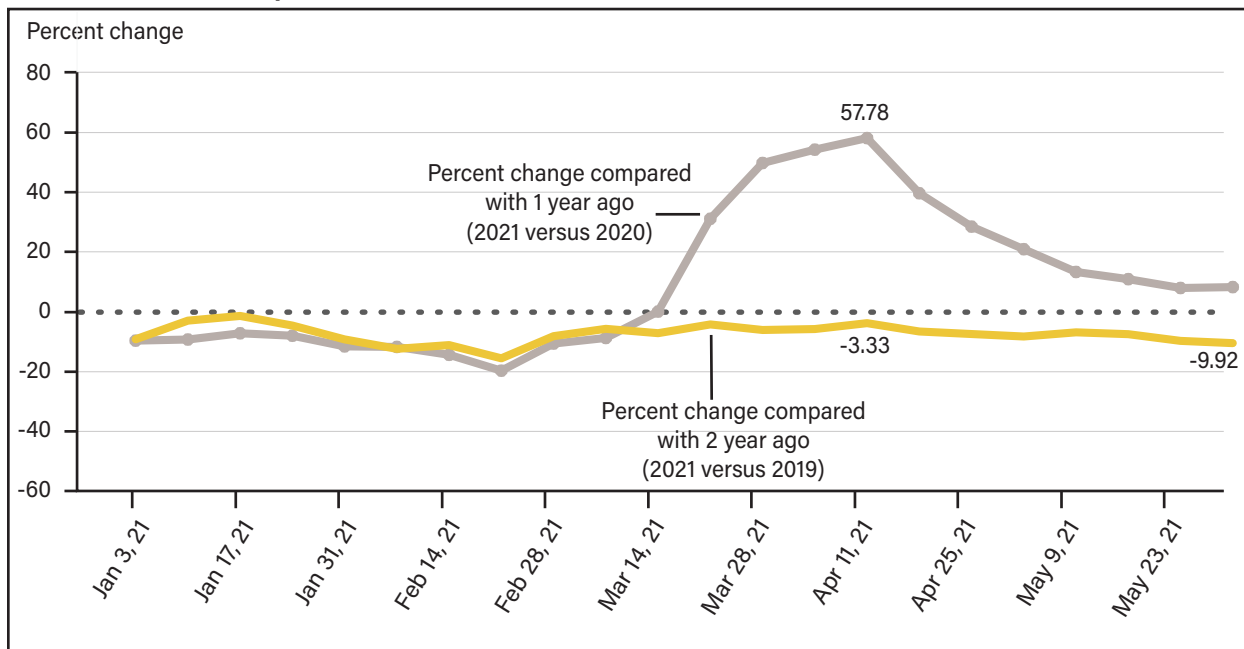


Note: Results based on the percent difference in national restaurant transactions compared with the same week 1 and 2 years prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST Performance Alerts.

Figure 17

**Weekly percent change in national lunch transactions compared with 1 and 2 years prior (2021 versus 2020 and 2019)**

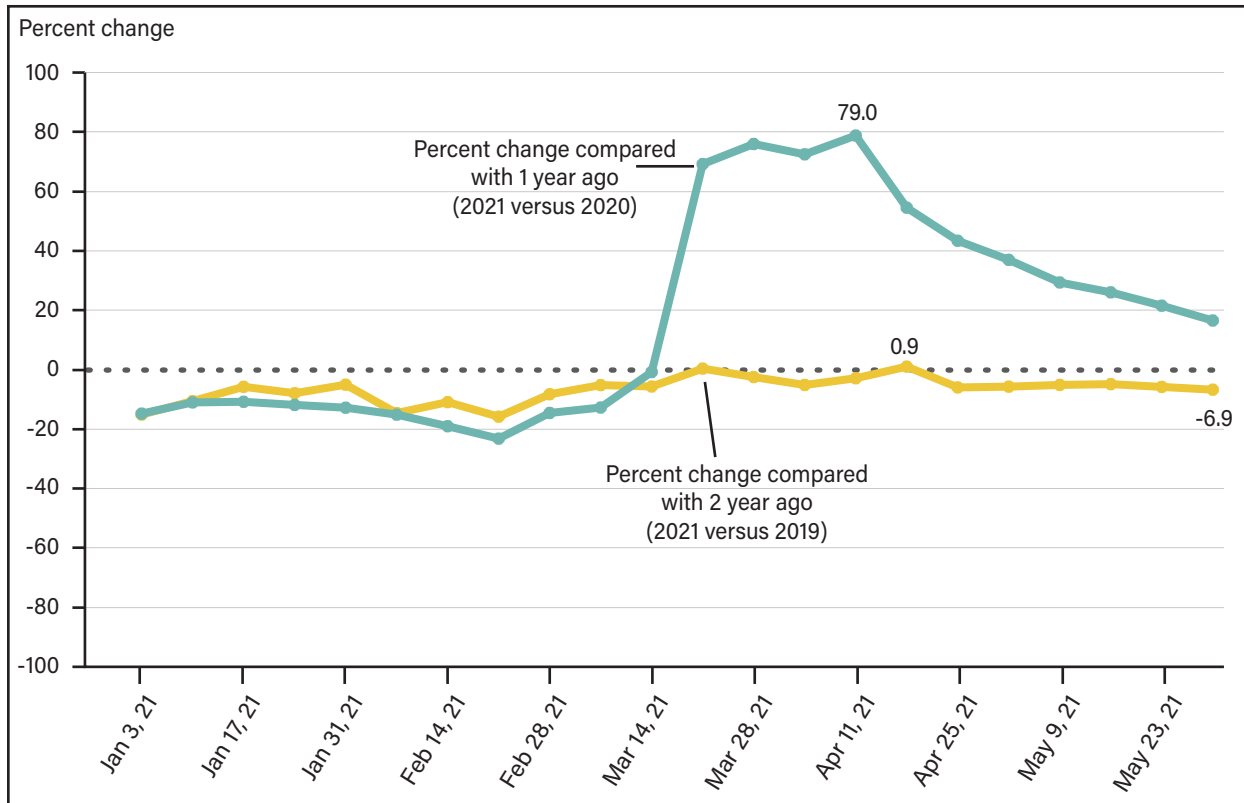


Note: Results based on the percent difference in national restaurant transactions at lunch compared with the same week 1 and 2 years prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST.

Figure 18

**Weekly percent change in national dinner transactions compared with 1 and 2 years prior (2021 versus 2020 and 2019)**



Note: Results based on the percent difference in national restaurant transactions at dinner compared with the same week 1 and 2 years prior. Data current as of January 2022.

Source: USDA, Economic Research Service using data from The NPD Group's CREST Performance Alerts.

## Discussion and Conclusion

Total dollars spent in the entire restaurant sector plunged following the onset of the COVID-19 pandemic. Despite some recovery that began in December 2020–February 2021, consumer spending has been slow to return to pre-pandemic levels. In particular, year-to-year changes in spending were 29 percent lower in the early months of the pandemic (March–May 2020),<sup>8</sup> and remained negative for all restaurants throughout the remainder of 2020, with the change in average total dollars spent in October–December 2020 showing an 8-percent decrease when compared to the same period in 2019. Similar changes occurred in the number of restaurant transactions—with 11.5 percent fewer transactions the week of December 27, 2020, than the same week a year prior. Retail foodservice spending, which accounts for food away from home (FAFH) acquired from places such as grocery stores and convenience stores, absorbed some of the decline in restaurant spending. However, this subsector’s share of FAFH spending remained minor both before and after the pandemic began.

Although restaurants of all types experienced a substantial decline initially, decreases in consumer spending and transactions were steeper for full-service restaurants (FSRs) compared with quick-service restaurants (QSRs). At QSRs, spending initially fell but quickly increased, even passing pre-pandemic levels: In December 2020–February 2021, average total spending was \$23.79 billion, only 2.48 percent higher than December 2019–February 2020 before pandemic restrictions began. Despite growth in total dollars spent, QSR transactions as of May 30, 2021, were lower than 2 years ago, with a -7.45-percent decline.

While QSRs eventually saw an increase in total dollars spent compared with levels prior to the pandemic, FSRs saw a large drop in total dollars spent, which has been slow to return to pre-pandemic levels. For instance, total dollars spent in FSRs in December 2020–February 2021 were \$10.52 billion, which was 25.18 percent lower than February 2020. The number of transactions at FSRs has remained similarly low, with the total remaining 21.5 percent lower for the week of May 30, 2021, than for the same week 2 years earlier.

Though understanding the causes of these differences is outside the scope of this paper, there are a few possibilities that could be explored by future works. For example, the discrepancy between growth in dollars spent and fewer transactions could be due to higher-volume consumption—such as more items being purchased per trip—on FAFH occasions or due to higher food prices. In considering what could be contributing to the additional differences between spending and transactions between FSRs and QSRs, it could be related to pre-established infrastructure prior to the onset of the pandemic. For instance, many QSRs were designed for a more grab-and-go experience, whereas the main source of FSR revenue, dine-in seating, was shuttered across the country or required adjustments that limited the number of customers due to various COVID-19 restrictions.

In regard to spending by mealtime, total dollars spent fell across all mealtimes as of February–April 2021 and have yet to return to pre-pandemic levels. During the initial onset of the pandemic, decreases in the number of transactions compared with the year prior were particularly pronounced for breakfast, although year-to-year spending declines were similar across mealtimes. While spending and transactions recovered similarly across mealtimes later in 2020, some differences persisted in February–April 2021. For instance, breakfast spending largely returned to pre-pandemic levels despite relatively lower transactions. Meanwhile, lunch and dinner spending and transactions remained about 5 and 8.5 percent below pre-pandemic levels, respectively.

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<sup>8</sup> This result is generally consistent with estimates by Dong and Zeballos, 2021, which showed the total change due to COVID-19 (pandemic restrictions and economic recession) was predicted to lead to a decrease of about 23 percent in FAFH spending.

Given the uniqueness of the datasets used for this paper, it is important to discuss potential differences relative to available data sources. Currently, there is no published research at present writing that compares the statistical properties of NPD’s CREST to other established high-quality Federal surveys, such as the U.S. Bureau of Labor Statistics (BLS) Consumer Expenditure Surveys (CE). While both CREST and CE survey food expenditures—among other things—from nationally representative household panels, there are several important differences between the two sources in terms of design and scope. First, for capturing overall expenditure trends, CREST and CE are designed to measure total and average expenditures, respectively. Although a total estimate can be recovered from the average obtained in CE, CREST uniquely uses additional data sources such as restaurant location information in developing projections.

Second, CREST and CE differ in the scope of FAFH purchases. CREST, for instance, differentiates food spending at restaurants and retail food service (e.g., food intended for immediate consumption from grocery stores) from other potential venues. CE includes these venues but additionally measures food spending at concession stands, cafeterias, vending machines, mobile vendors, schools, and special catered affairs (e.g., weddings), and this paper focuses on the former two categories.<sup>9</sup> Furthermore, the CREST estimates of food expenditures include taxes but not tips while CE includes both. Finally, the CREST estimates include both nonalcoholic and alcoholic beverages, while CE measures FAFH alcohol expenditures separately.

The impact of these differences is observable in each estimate of what each source calls FAFH: for example, \$499 billion in CREST versus \$450 billion in CE for 2019.<sup>10</sup> Despite a narrower scope of FAFH and not including tips in the estimate, the higher estimate in CREST is likely driven by the inclusion of alcohol away from home. In 2020, the estimates fell to \$450 billion in CREST and \$311 billion in CE. The larger relative annual decrease captured by CE likely reflects substantial decreases in spending at some of the venues only included in CE. For example, public health restrictions on public gatherings and business likely eliminated much of the food acquisitions from concessions stands and catered events. Nevertheless, despite the meaningful differences between CREST and CE, both sources point to substantial decreases in FAFH spending in response to the pandemic.

In summary, following the declaration of the national emergency on March 13, 2020 (i.e., the economic onset of the COVID-19 pandemic), U.S. consumer spending and visits to restaurants fell substantially. While business has recuperated somewhat from the initial dropoff, the recovery has been unequal across restaurant types and mealtimes. In fact, QSRs even saw growth in food spending several months after the pandemic’s initial onset. Despite loosening restrictions on restaurants and other businesses, restaurant spending and visits have been slow to recover to their pre-pandemic levels.

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<sup>9</sup> The Consumer Expenditure Surveys (CE) glossary on the U.S. Bureau of Labor Statistics website defines food away from home (FAFH) as “all meals (breakfast and brunch, lunch, dinner and snacks and nonalcoholic beverages) including tips at fast food, take-out, delivery, concession stands, buffet and cafeteria, at full-service restaurants, and at vending machines and mobile vendors. Also included are board (including at school), meals as pay, special catered affairs, such as weddings, bar mitzvahs, and confirmations, school lunches, and meals away from home on trips.” Food at home (FAH), in contrast, is defined as “total expenditures for food at grocery stores (or other food stores) and food prepared by the consumer unit on trips.”

<sup>10</sup> Consumer Expenditure Surveys’ (CE) total estimate is calculated using the “average annual expenditures and characteristics of all consumer units, Consumer Expenditure Surveys, 2013–2020” data from 2020 found on the U.S. Bureau of Labor Statistics website.

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