



## Consumer Spending and the COVID-19 Pandemic

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### GLOSSARY

**Complements:** Goods that are used together, such as coffee and sugar.

**Cost of living:** The amount of income needed to achieve a given living standard.

**Consumer price index (CPI):** A measure of the average change over time in the prices paid by urban consumers for a market basket of consumer goods and services.

**Durable good:** Something that lasts at least three years, such as a home appliance or an automobile.

**Nondurable good:** Something that lasts less than three year, such as food or clothing.

**Pandemic:** An epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people.

**Producer price index (PPI):** A measure of the change over time in the prices received by producers of goods and services.

**Recession:** A period of declining real income and rising unemployment; significant decline in general economic activity extending over a period of time.

**Services:** Actions that can satisfy people's wants, such as a haircut or a visit to the dentist.

**Substitutes:** Goods that can replace the use of other goods, such as pens for pencils.

"You wear a mask, they wear a mask, you protect each other."  
—Dr. Anthony Fauci

### Introduction

At the start of 2020, the COVID-19 epidemic reached global proportions and became a **pandemic**. Between January and March, the word "pandemic" appeared in 82 percent of the reports on country economic conditions published by the Economist Intelligence Unit.<sup>1</sup> This article describes the impact of the pandemic on U.S. consumer behavior in the initial months of the pandemic. Measuring the full impact of the COVID-19 pandemic on the U.S. economy is still a work in progress.<sup>2</sup>

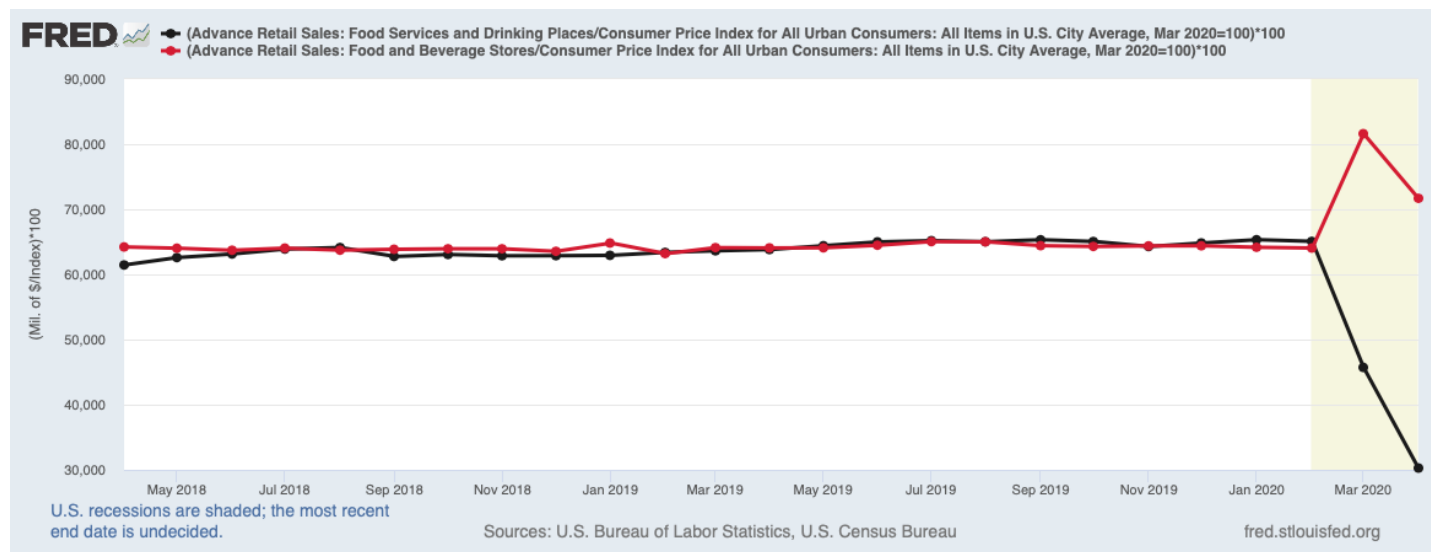
### Changes in Retail Sales

Between May 2018 and February 2020, retail sales at bars and restaurants were almost equal to retail sales at food and beverage stores, as shown in Figure 1. The figures shown are adjusted for changes in the **cost of living** over time. This is done by dividing the sales figures by the **consumer price index (CPI)** and multiplying by 100.<sup>3</sup> The CPI measures the average change over time in the prices of a typical basket of goods and **services** for an urban consumer. The CPI measures price changes from the perspective of buyers.

When mandated social distancing started to help slow the spread of the virus, spending habits changed. As Figure 1 shows, households changed where they bought food and beverages. Starting in March, consumer demand switched—almost dollar for dollar—from restaurants and bars to food and beverage stores. Many consumers chose "staying in" as a **substitute** for "eating out." By April, after the economy entered a **recession**, retail sales decreased both at bars and restaurants and at grocery stores. Because incomes decrease and unemployment rises during recessions, consumers cut back on their spending.

Retail sales at other types of stores dropped as well, reflecting similar consumer choices. Between February and April, sales of clothing and clothing accessories decreased by 86 percent and sales of motor vehicles and parts decreased by 35 percent.<sup>4</sup> Clothing is considered a **nondurable good**

Figure 1  
Retail Sales of Food and Beverages



SOURCE: U.S. Bureau of Labor Statistics and U.S. Census Bureau via FRED®, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/graph/?g=xW8m>, accessed November 19, 2020.

because consumers do not tend to keep their clothes for many years. In contrast, motor vehicles are considered **durable goods** because consumers do tend to keep them for many years. Yet the largest decline in consumer spending was for services, not durable or nondurable goods.

Services are actions that satisfy people's wants. When we purchase a service, we pay for someone else's labor. Haircuts, college tuition, and hotel stays are services that satisfy our wants for fashion, education, and hospitality, respectively. In 2019, purchases of services amounted to 64 percent of all the spending by consumers. Between February and April 2020, spending on services decreased by 20 percent. Although that spending picked up after April, by July it was still below its pre-recession level.<sup>5</sup>

### Reduced Demand for Travel and Hotel Services

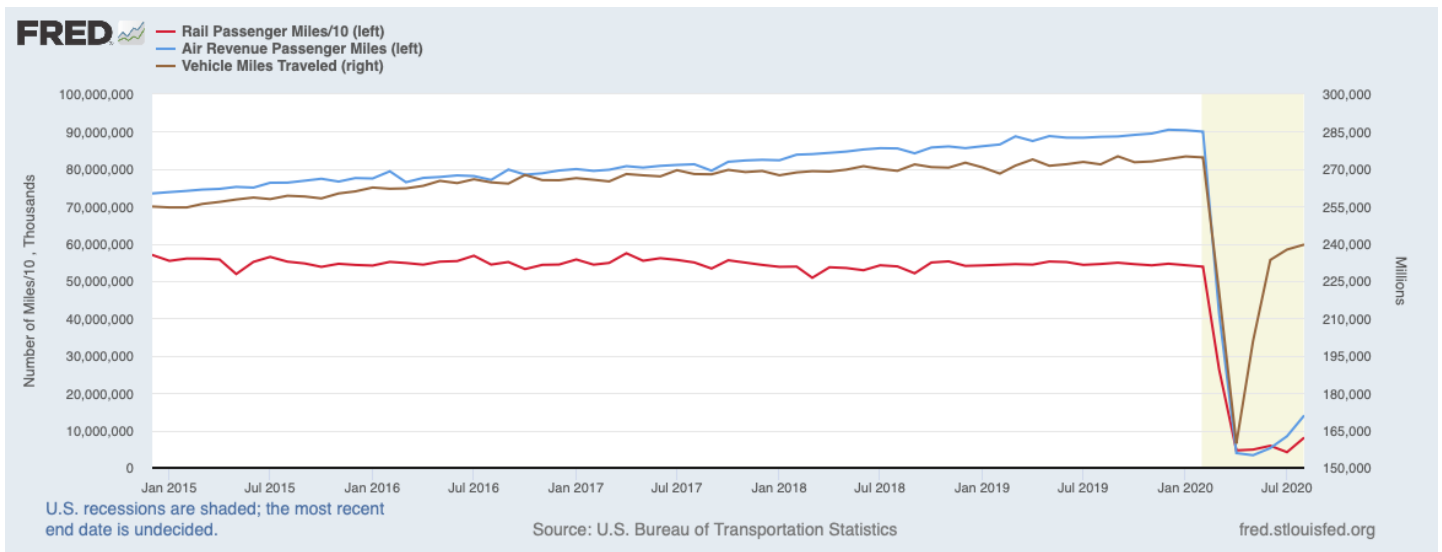
With the suspension of professional sports and the closure of cultural and recreational venues during the onset of the pandemic, many consumers scrapped personal travel plans. Teleconferencing substituted for business travel to accommodate social distancing. Figure 2 shows that between February and May, rail and air travel declined 96 percent and 91 percent, respectively. During that same time, road travel declined 27 percent. The rebound in road travel since April might reflect the substitution

of travel by train or plane with travel by car—to permit social distancing.

Hotel stays are common **complements** to medium- and long-distance travel.<sup>6</sup> Thus, the reduction in travel decreased demand for hospitality services. Fewer customers and less income forced businesses to reduce their number of employees.<sup>7</sup> Comparison of the number of people employed in the leisure and hospitality industry in May 2019 and May 2020 shows how drastically the pandemic decreased employment in that industry. The declines ranged from 18 percent in Oklahoma to 62 percent in New York.<sup>8</sup>

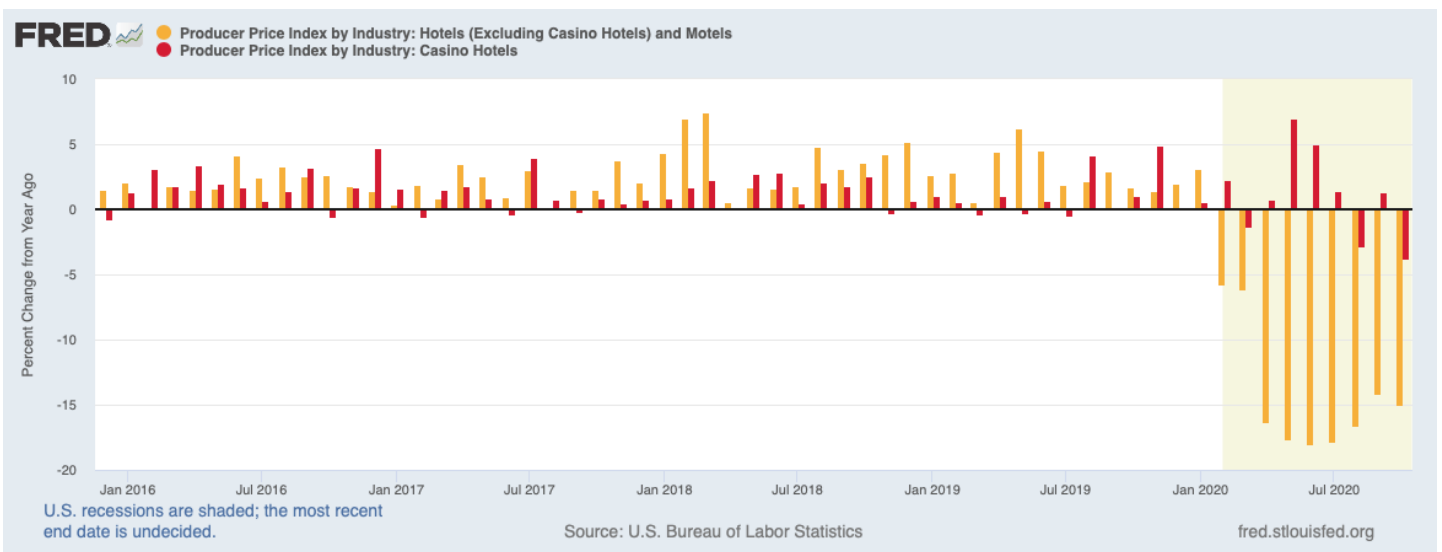
Finally, the reduction in the demand for hotels resulted in double-digit drops in the **producer price index** (PPI) for hotels and motels. The PPI measures the change over time in the prices received by producers of goods and services; that is, it shows the change in prices from the perspective of sellers. Figure 3 shows that the prices received by hotels and motels (excluding casino hotels) between April and October 2020 decreased no less than 14 percent from the prices in the same months the previous year.<sup>9</sup> Similarly, fewer customers at restaurants resulted in a large drop in the global price of fish, as the hospitality industry is a large consumer of them.<sup>10</sup>

Figure 2  
**Rail Passenger Miles, Air Revenue Passenger Miles, and Vehicle Miles Traveled**



SOURCE: U.S. Bureau of Transportation Statistics via FRED®, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/graph/?g=xVVt>, accessed November 19, 2020.

Figure 3  
**Changes in Producer Prices in the Leisure and Hospitality Industry**



SOURCE: U.S. Bureau of Labor Statistics via FRED®, Federal Reserve Bank of St. Louis; <https://fred.stlouisfed.org/graph/?g=xVVe>, accessed November 19, 2020.

## Conclusion

The onset of the COVID-19 pandemic changed consumer spending habits. People substituted meals purchased at restaurants with meals cooked at home. As the economy entered a recession, the demand for both types of goods and services decreased. Also, people traveled less and the demand for hotel services decreased. As a result, both employment and prices declined in the leisure and hospitality industry. ■

## Notes

<sup>1</sup> For a description of the index that analyzes the use of the word “pandemic,” see this FRED Blog post: <https://fredblog.stlouisfed.org/2020/06/frequency-analysis-of-the-word-pandemic-the-talk-of-the-global-village/>.

<sup>2</sup> To learn about the Federal Reserve’s response to the pandemic, see the following essay: Ihrig, Jane; Weinbach, Gretchen and Wolla, Scott. “COVID-19’s Effects on the Economy and the Fed’s Response.” Federal Reserve Bank of St. Louis *Page One Economics*®, September 2020; <https://www.stlouisfed.org/education/page-one-economics-classroom-edition/covid-19s-effects-economy-feds-response>.

<sup>3</sup> For a description of food-related retail sales, see this FRED® Blog post: <https://fredblog.stlouisfed.org/2020/04/eating-out-or-staying-in-fred-says-bon-apptit/>.

<sup>4</sup> For a comparison of non-food retail sale figures before and after the onset of the pandemic, see this FRED Blog post: <https://fredblog.stlouisfed.org/2020/06/changes-in-retail-sales-not-by-bread-alone/>.

<sup>5</sup> For more about consumer spending, see this FRED Blog post: <https://fredblog.stlouisfed.org/2020/08/consumption-of-goods-and-services-during-the-covid-19-recession/>.

<sup>6</sup> See the data from the American Travel Survey cited in the following paper: Butters, R. Andrew and Hubbard, Thomas N. “Industry Structure, Segmentation, and Competition in the U.S. Hotel Industry.” NBER Working Paper 26579, National Bureau of Economic Research, December 2019; <http://www.nber.org/papers/w26579.pdf>.

<sup>7</sup> For a comparison of the pandemic-induced change in employment to that from the AT&T union workers’ strike of August 1983, see this FRED Blog post: <https://fredblog.stlouisfed.org/2020/05/the-largest-changes-in-payroll-employment/>.

<sup>8</sup> For more about how closing restaurants and hotels spills over to total employment, see this FRED Blog post: <https://fredblog.stlouisfed.org/2020/07/the-impact-of-social-distancing-on-leisure-and-hospitality/>.

<sup>9</sup> Seller prices dropped for stand-alone hotels but increased for casino hotels for most of that time. See this FRED Blog post for more details: <https://fredblog.stlouisfed.org/2020/09/what-are-the-odds-prices-differ-between-hotels-and-casino-hotels/>.

<sup>10</sup> For more about food prices, see this FRED Blog post: <https://fredblog.stlouisfed.org/2020/08/supply-and-demand-shocks-to-food-prices-fred-data-a-la-carte/>.

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Name \_\_\_\_\_ Period \_\_\_\_\_

Federal Reserve Bank of St. Louis *Page One Economics*®:  
**“Consumer Spending and the COVID-19 Pandemic”**

**After reading the article, complete the following:**

1. The consumer price index (CPI) measures the change in the price
  - a. paid by buyers for goods and services.
  - b. of nondurable goods.
  - c. received by sellers of goods and services.
  - d. of services.
  
2. Food and beverages are examples of
  - a. services.
  - b. nondurable goods.
  - c. durable goods.
  - d. physical capital
  
3. Microwave ovens and refrigerators are examples of
  - a. services.
  - b. nondurable goods.
  - c. durable goods.
  - d. physical capital.
  
4. Manicures and pedicures are examples of
  - a. services.
  - b. nondurable goods.
  - c. durable goods.
  - d. physical capital.
  
5. All of the following are substitutes except
  - a. teleconferencing and business meetings.
  - b. traveling by automobile and traveling by train.
  - c. meals purchased at restaurants and meals cooked at home.
  - d. clothing and motor vehicles.

6. Which of the following are complements?
  - a. Teleconferencing and business meetings
  - b. Motor vehicles and home appliances
  - c. Travel and hotel stays
  - d. Meals purchased at restaurants and meals cooked at home
  
7. The producer price index (PPI) measures the change in the prices
  - a. paid by buyers for goods and services.
  - b. of nondurable goods.
  - c. received by sellers of goods and services.
  - d. of services.