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# Teaching About Today's Economic Numbers

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By early 2023, in the aftermath of the active COVID-19 pandemic, the U.S. economy had a mismatched set of economic indicators. The economy had surprisingly strong areas like the labor market, along with troublesome weak spots such as stubborn inflation. Recession indicators briefly flashed "caution" in 2022 but then stabilized. This article provides an overview of basic economic indicators that highlight this puzzling situation. These indicators include Gross Domestic Product (GDP), the unemployment rate, interest rates, and inflation. Graphs of these statistics will provide a macroeconomic road map of what has been going on in the economy. This article also features a "Then and Now" teaching activity comparing and contrasting the stagflation of 40 years ago with the current economy.

**The Economy in 2022: An Overview**

In 2022, inflation reached its highest level in four

Photo by Anthony Behar/Sipa USA (Sipa via AP Images)


**A woman walks past cartons of eggs for sale at a supermarket, New York, NY, January 16, 2023. Egg prices have risen 59.9% over the past year, not following the month to month consumer price index fluctuations.**


**Figure 1. Quarterly Percentage Change in Real GDP, 2007 to Present**
Source: U.S. Bureau of Economic Analysis and Board of Governors of the Federal Reserve System, retrieved from FRED®, Federal Reserve Bank of St. Louis; **https://fred.stlouisfed.org/series/GDPC1#0**

decades, topping out below the historically high rates recorded from 1977 to 1982. Unemployment remained surprisingly manageable and comparatively low. Most individuals who wanted to work landed jobs while those who didn't found alternative ways to sustain themselves, including retirement.

Throughout 2022 the U.S. economy proved resilient, even as international developments threatened economic stability. Events in Russia, Ukraine, and China fed recession worries. Yet American businesses and households buckled down and navigated reasonably well. Corporate profits' share of GDP ended strong despite continuing challenges with supply chains and energy problems.

The year saw a troublesome surge in energy prices and yet the U.S. economy did not experience high unemployment or the stagnation of output with inflation of prices known as "stagflation." It is not entirely clear why the U.S. economy has been so resilient, but part of the resiliency can be explained by the monetary policy of the Federal Reserve.

## The Economic Statistics

### *Gross Domestic Product*

The most widely used measure of total economic output is real GDP. Real GDP measures the total of all final goods and services produced within the United States over a time period, adjusted for inflation. Only final goods and services are tallied to avoid double-counting. (You would not want to count a car and then also add the car's audio system since the overall price already reflects the value of all of its components.) Ownership does not matter in GDP, only location. Foreign-owned companies operating in the United States are part of U.S. GDP. For example, the Toyota Camrys manufactured in Kentucky are included in U.S. GDP even though the plant is Japanese-owned.

The percentage change in real GDP is a widely followed economic statistic and is reported every calendar quarter. In fact, a common working definition of a recession is declining real GDP for two quarters in a row. Under this informal definition, the U.S. economy entered a recession in the first two quarters of 2022 (see Figure 1), but it then snapped back to positive growth in the third quarter. Was it then a recession at all? If so, it was short and mild. Given the very strong labor market and other positive signals that followed, the widely accepted arbiter of American recessions, the National Bureau of Economic Research (NBER), has not determined that this short slowdown should be categorized as a recession.

Figure 1's plot of the percentage change in growth of real GDP by quarter shows that the U.S. economy has been in an expansion most of the time since 2007. The shaded area on the left side of the chart shows the recession induced by the financial crisis in 2008 and 2009. Toward the


**Figure 2. Unemployment rate in the United States, 2007 to Present**
Source: U.S. Bureau of Labor Statistics and Board of Governors of the Federal Reserve System, retrieved from FRED®, Federal Reserve Bank of St. Louis; **https://fred.stlouisfed.org/series/UNRATE**

right side of the chart, the bars show the short but dramatic recession in 2020 from COVID-19's effects, followed by a quick and strong recovery. After the dramatic snap-back of GDP growth in the third quarter of 2020, the U.S. economy grew robustly through 2021 as pandemic restrictions were relaxed and the pent-up demand of American consumers showed up in the GDP.

Recession fears grew when 2022 began with two quarters of negative growth. Some slowdown had been expected as the economy moved to a more normal footing and consumers resumed typical spending habits. But when GDP growth resumed, recession fears eased—even as inflation, higher interest rates and Russia's war on Ukraine took their toll on economic optimism.

### *Unemployment*

Weak GDP growth led to concern about jobs. Amid this concern, 2022's strong labor market was a surprise. To judge the state of labor markets, economists closely watch the unemployment rate. Of course, unemployment is closely related to GDP. If less output is being produced in a given period, fewer workers are needed to produce it. That relationship underlies Figure 2, which shows the U.S. unemployment rate from 2007 to today.

The country experienced higher unemployment from the 2008-09 financial crisis. Following that difficult time, Figure 2 reveals a slow and steady decline in the unemployment rate as the economy experienced growth right up to the onset of COVID-19. That unprecedented event is reflected in the graph, as the unemployment rate soared to nearly 15 percent, only to steadily return to the historically low level of 3.5 percent as the year came to a close. The snap-back of the labor market was so dramatic that worker shortages are now a significant concern.

In 2022, the U.S. economy created 4.5 million jobs, adding more than 400,000 jobs per month, on average. This job creation machine, along with a shortage of workers following the pandemic, has led to an unprecedented situation, shown in Figure 3. The figure shows the ratio of unemployed workers to job openings. Back in 2009 as the recession came to an end, there were more than six people unemployed for each job opening. That ratio steadily declined for the next ten years. Starting in May of 2021 and continuing until today, the ratio of unemployed persons to job openings has fallen below 1.0. That ratio means today there are more job openings (the denominator of this calculation) than unemployed workers (the numerator)!

This unique situation has led to wage gains now enjoyed by many workers, in particular those in service-oriented jobs, where demand for workers is highest relative to supply. These wage gains are closely connected with our next statistic, the

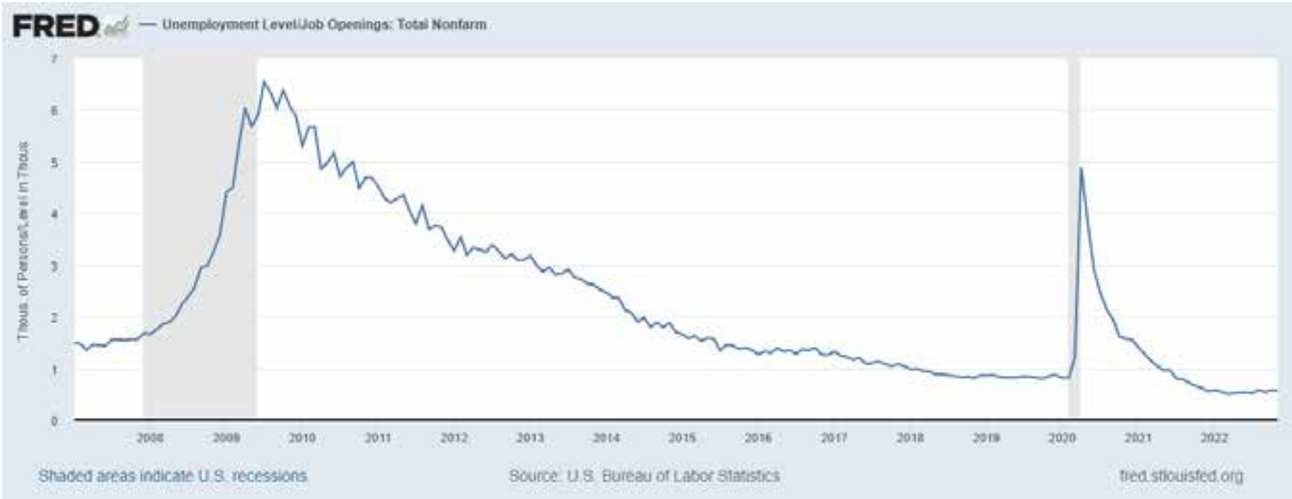


**Figure 3. Unemployment level divided by job openings, 2007 to present**
Source: U.S. Bureau of Labor Statistics and Board of Governors of the Federal Reserve System, retrieved from FRED®, Federal Reserve Bank of St. Louis; **https://fred.stlouisfed.org/series/UNEMPLOY**

inflation rate, demonstrating the general point that macroeconomic variables are closely connected.

***Prices and Inflation***
The consumer price index (CPI) measures the level of price inflation based upon a basket of goods and services the typical American family consumes each month. Policymakers also monitor and track a related measure known as the "core CPI," which removes food and energy from the index. Historically, food and energy have volatile prices that make any given month's CPI show wide swings. The argument is that the core CPI's smoother path gives a better indication of where inflation is headed.

***continued on page 80***

## Then and Now: Is the Stagflation of the 1970s Back?

Here is a teaching idea that allows students to see what they might be able to learn by comparing the post-pandemic economy of today with the economy of the 1970s.

Distribute the handout on the next two pages to the students. Ask the Questions for Discussion that follow. Use the Then and Now infographic to provide students with a quick review of this lesson. The answers to the questions are:

1. *The economy of the 1970s was referred to as "stagflation" because of stagnant output together with inflation of the price level. Americans faced an unprecedented combination of high unemployment, high inflation, and sluggish economic growth. It was the stagnant 70s.*

2. *As in the 1970s, the economy today has the highest inflation rate that has been seen in decades. The economy is also experiencing sluggish economic growth.*

3. *Policymakers did not invoke wage and price controls as in the 1970s. After some hesitation, the Federal Reserve began an aggressive policy of increasing interest rates. The Fed in the 1970s had failed to take such aggressive action. Finally, today's labor market continues to be healthy, with a relatively low rate of unemployment, in contrast with the 1970s' labor market.*

HANDOUT

## Then and Now: Is the Stagflation of the 1970s Back?

The economic scene is loaded with uncertainty. Inflation is the highest in decades. War has contributed to supply shocks, affecting energy prices. Economic growth is sluggish. The stock markets have taken a nosedive. The Federal Reserve is raising the interest rate it controls to slow the economy to fight inflation. This action by the Fed is driving up interest rates for home mortgages. The red-hot housing market is beginning to cool. Recession looms.

Sounds a lot like the economic scene in early 2023, right? It is also a good description of what the economy was like in the 1970s, a half-century ago. Is the United States reliving the stagnant economy of the 1970s? Let's examine how today's economy compares with the economy of the 1970s.

### The Stagnant 1970s

The economy of the 1970s was widely regarded as a period of economic hardship and pessimism. Until the 1970s, economists had generally believed that increasing levels of inflation are associated with low unemployment rates and a growing economy. The events of the 1970s challenged this view.

Inflation soared in the 1970s and early 1980s. Inflation was caused in part by an external supply shock—a 1973 oil embargo imposed by the Organization of Petroleum Exporting Countries (OPEC) in retaliation for U.S. support of Israel in the 1973 Arab-Israeli War. OPEC's action reduced the supply of oil in the U.S. and caused prices to soar. Overnight, long lines appeared at gas stations. The oil supply shock contributed to a recession that drove up the unemployment rate.

By 1979, the unemployment rate was approaching 8 percent. Federal spending increased during the 1970s. Increased spending added still more demand and threatened to overheat the economy. The Consumer Price Index—the most commonly used measure of inflation—increased 11 percent in 1974 and more than 10 percent in 1980.

The 1950s and 1960s had been marked by a growing economy and increasing prosperity. By contrast, GDP grew at a slower rate in the 1970s. In two years (1974 and 1975) GDP actually declined.

Memories of the Great Depression made many economists in the 1970s leery of using monetary or fiscal policy to contain inflation. They believed an increase in unemployment would be unacceptable, whether it came from the Federal Reserve increasing interest rates or Congress and the president cutting spending. But now Americans faced an unprecedented period of high unemployment, high inflation, and sluggish economic growth. This "stagflation" was an unfamiliar combination, since inflation typically came as a side effect of boom times, as in the years right after World War II. It left many economists scratching their heads.

President Richard Nixon shocked many economists when, in 1971, he reached into the World War II playbook and imposed wage and price controls. For the first 90 days, his order froze wages and prices throughout the nation. The policy had some initial success fighting inflation, but adverse side effects soon appeared. By 1973, it was apparent that the price control system was a disaster. Shortages of consumer goods began to show up. Ranchers stopped shipping cattle to market. Farmers drowned their chickens, because it became unprofitable to raise and sell them. Consumers emptied grocery shelves. The system was abolished in 1974 and was followed by still more inflation, which continued unabated under Presidents Gerald Ford and Jimmy Carter.

In August 1979, President Carter appointed Paul Volcker as chair of the Federal Reserve Board. Influenced by the Nobel Prize-winning economist Milton Friedman, Volcker changed course. The Federal Reserve began an aggressive policy of raising interest rates. Loans and credit of all kinds then became expensive. As a result, people cut back on buying cars and homes. A steep recession was induced. But inflation was then defeated and it remained defeated for the following decades.

### Stagflation and Today's Economy

There are some noticeable similarities between the economy today and the one in the 1970s. Much as in the 1970s, the economy experienced a large uptick in government spending. The spending of early 2021 was not aimed at fighting a war on poverty, but instead at counteracting the forced closings of the COVID-19 pandemic. Around $6 trillion was pumped into American households. Consumers were flush with income at the same time that many goods and services were not available due to pandemic-induced restrictions on businesses. A decades-high increase in inflation loomed.

Economists were slow to pick up on the problem, both inside and outside of the government. Fed officials thought the first surge in inflation was transitory. A handful of outside economists saw the problem as more enduring, including Jason Furman, a Harvard economist who had served in the Obama administration. Furman argued that the increase in consumer income raised demand much above what the economy could supply.

As in the 1970s, external shocks have played a role in today's inflation. The first shock was the pandemic lockdowns that badly damaged supply chains nationally and internationally. Semiconductors, for example, were in short supply largely because of lockdowns in China. The second shock was war. Russia's invasion of Ukraine echoed the oil shocks of 1973 and 1979-80 and further choked supply chains. Shipments of grain and fertilizer fell, pushing up food prices. Making matters worse, Putin's attack on Ukraine induced a full-blown energy crisis in Europe.

**Important Differences between the 1970s and Today**

There are many differences between today's economy and that of the 1970s. Here are three:

First, there was never any serious consideration of imposing wage and price controls like those of President Nixon. Nationwide wage and price controls appear to have been placed in history's trash bin.

Second, the labor market remains healthy. The unemployment rate remains below four percent. That means Americans have jobs, even if their real wages are declining because of inflation. Employment in manufacturing, financial services, and other industries recovered from the pandemic-induced recession.

Third, in the current situation, the Fed began its response sooner than in the 1970s, though by its own admission the Fed would have acted sooner if its forecasting had been better. In March of 2022, the Fed discontinued the bond buying program it had implemented at the start of the pandemic in 2020. It had been buying $120 billion in bonds and securities each month in order to make sure that banks had plenty of cash to lend to businesses and households to avoid an economic collapse. That part of the policy worked, but it also set the stage for higher inflation.

Jerome Powell, the chair of the Federal Reserve Board, has made it clear that he plans to lead the Fed in interest rate increases as long as it takes to restore price stability. In this respect, Powell is more like his 1980s predecessor Paul Volcker than his 1970s counterpart Arthur Burns. Burns, who chaired the Federal Reserve Board in the 1970s, failed to increase interest rates sufficiently to reduce the extremely high inflation of the period.

The Fed's current policy of higher interest rates will eventually slow the economy and unemployment will begin to tick up. Higher interest rates influence how willing business owners are to borrow money to expand their enterprises. Similarly, higher interest rates discourage consumers from buying big-ticket items such as homes and cars. We are already seeing a decline in prices for new homes.

So far, GDP growth has remained sluggish as the economy has narrowly avoided a full-blown recession. Many economists, however, expect a recession sometime in 2023. That is what keeps Jerome Powell awake at night. Can he increase rates just enough to bring about price stability without inducing a recession?

**Questions for Discussion**

1. Why was the economy of the 1970s referred to as a period of stagflation?
2. In what ways is the economy of today similar to the stagflation of the 1970s?
3. In what ways is the economy of today different from the stagflation of the 1970s?

## THEN AND NOW

Use differences in the rates of growth in the economy, unemployment, and inflation to explain why stagflation wasn't an explicit part of 2022

**1970s GDP Growth**
Four quarterly declines in rates of growth in real GDP marked an official recession

**Now GDP Growth**
Two quarterly declines in rates of growth in real GDP, but no declared recession

**1970s Inflation**
The rate of inflation exceeded 10 percent two years in a row

**Now Inflation**
The rate of inflation topped out below 10 percent

**1970s Unemployment**
Unemployment rose above 10 percent

**Now Unemployment**
Unemployment remained under 5 percent

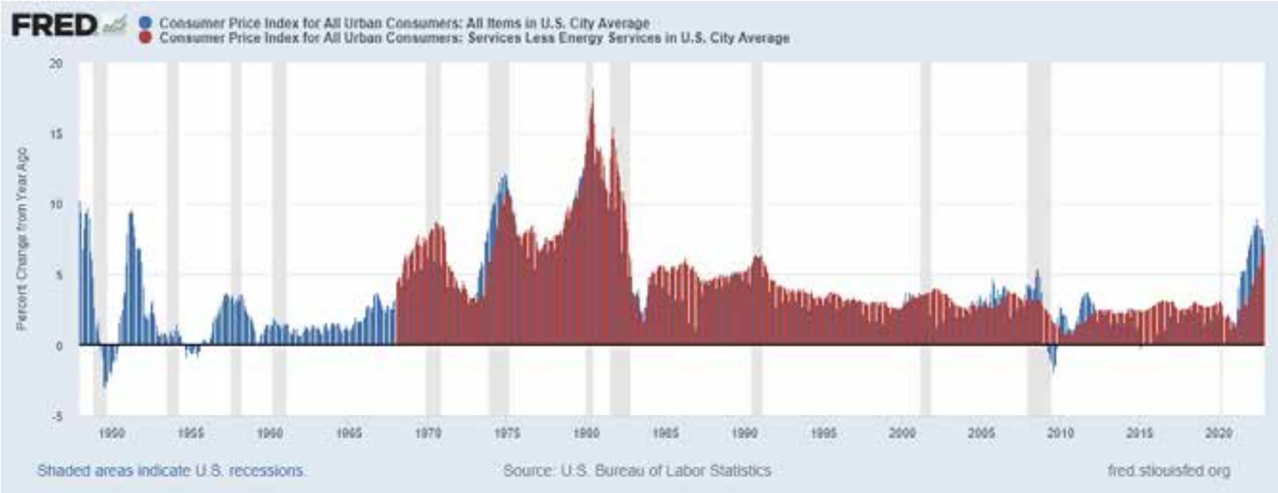


**Figure 4: Monthly percentage change in CPI and core CPI, 1948 to present**
Source: U.S. Bureau of Labor Statistics and Board of Governors of the Federal Reserve System, retrieved from FRED®, Federal Reserve Bank of St. Louis; **https://fred.stlouisfed.org/series/CPIAUCSL#0.**

## TODAY'S ECONOMIC NUMBERS *from page 77*

Figure 4 shows the U.S. CPI and core CPI from 1948 to today. Each series is measured as a monthly change in the prices from the prior year. The 1970s and early 1980s were the classic illustration of stagflation, a time of spiraling inflation in the U.S. along with high unemployment. (See the Handout, "Is the Stagflation of the 1970s Back?")

As Figure 4 demonstrates, there was a long period of modest inflation following the early 1980s. Consequently, for decades the rate of inflation rarely made news headlines. This all changed in late 2020 when price levels began to climb more sharply. Around this time some economists did sound alarm bells about building price pressures, but the dominant view, particularly within the Federal Reserve System, was that this general inflation was "transitory." Fed officials predicted that inflationary pressures would pass quickly. The reasoning was that the very fast reopening of the economy would relieve everyone from pandemic restrictions. Snarls associated with artificially high demand and disrupted supply chains would work themselves out. As the data show, and the Fed now acknowledges, inflation was not transitory, and it is now the top concern facing the U.S. economy and much of the world.

Price inflation was particularly high in several areas in 2022. There were, however, some signs that the pace of these price pressures had started to slow as the year came to an end. Fuel oil has increased more than 68 percent from a year ago, airline fares more than 42 percent, and meats, fish, and eggs almost 16 percent. These and other high price increases have led the Federal Reserve to act.

### *Interest Rates*

In response to higher inflation, the nation's central bank has aggressively, but belatedly, raised interest rates. Late in 2021 the Fed was still treating inflation as transitory and it continued to resist rate increases. However, the Fed sharply changed direction in March of 2022. The Fed has raised a key interest rate, the Federal Funds Rate, during seven consecutive meetings. This rate went from a range of 0.25-0.50 percent all the way up to 4.25–4.50 percent at the end of 2022 (see Figure 5). A similar, but even more pronounced, tightening of interest rates was employed to finally vanquish the high inflation of the 1970s and early 1980s.

The Fed raises interest rates to dampen the demand for goods and services and thereby bring down inflation. Typically, the first sector hit by higher interest rates is the housing market. Figure 6 demonstrates how the Fed's aggressive increases in the Federal Funds Rate send mortgage rates soaring. This central bank policy rate also affects auto loans and consumer spending through credit card debt. As the housing market has cooled, so has demand for many other products used in home construction and remodeling like plumbing, electrical fixtures, and flooring.


**Figure 5: Effective Federal Funds Rate, 1970 to present**
Source: Board of Governors of the Federal Reserve System, retrieved from FRED®, Federal Reserve Bank of St. Louis; **https://fred.stlouisfed.org/series/DFF**

It is reasonable to ask whether the ultra-low interest rates that occurred following the housing crisis and "Great Recession" of 2007–2009, and returned during the peak of the Covid-19 monetary policy, are a relic of the past. That is, should citizens expect the Federal Reserve to cut their policy rate to near zero in the future, causing other rates, like 30-year fixed rate mortgages to fall to historically low levels? While it is impossible to predict future economic events and Federal Reserve responses to such events, it is fair to say that rates that are so low are viewed by the central bank as reserved for emergencies. Fed policy makers themselves are uncomfortable driving rates this low as it leaves them little room to maneuver should the economy deteriorate further, while also presenting consumers and businesses with potentially damaging incentives to borrow and spend.

**Conclusion**

Exploring the abundance of macroeconomic data at our fingertips can help students better grasp how the economy works. Students need context to understand the economic challenges we have faced since the end of the COVID-19 pandemic. The U.S. economy has experienced historically high levels of inflation this past year due to a confluence of economic shocks and policies. And while GDP growth was uneven in 2022, including two quarters in a row of declining real GDP, the U.S. job market remains strong. In fact, labor shortages continue to be the biggest issue facing employers, yielding strong wage growth while adding to inflation pressures.

This year promises to be another volatile year


**Figure 6: Selected interest rates, 2000 to present**
Source: Board of Governors of the Federal Reserve System, retrieved from FRED®, Federal Reserve Bank of St. Louis; **https://fred.stlouisfed.org/series/DFF#**

in the U.S. and international economies. As the Fed continues to raise interest rates in an effort to combat inflation, all eyes will be on GDP and jobs, as the central bank attempts to preside over a "soft landing"—alleviating inflation without causing a recession. Monthly or even daily, the chances of a soft landing change—taking a big leap upward in January with a favorable jobs report and complicating the hope that inflation would subside without higher interest rates. These rates affect consumers through home, car, and credit card debts, businesses as they consider borrowing and expanding, and the federal government as payments on the national debt become an increasing share of government spending.

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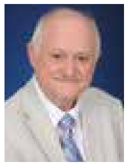

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