ACTIVITY 20.1

U.S. Quarterly Real GDP (1979–2013)

(in billions of chained 2009 dollars)

Year & Quarter	Real GDP	Year & Quarter	Real GDP	Year & Quarter	Real GDP	Year & Quarter	Real GDP
1979 Q1	6,426.1	1988 Q1	8,330.4	1997 Q1	10,809.1	2006 Q1	14,546.4
1979 Q2	6,433.9	1988 Q2	8,440.5	1997 Q2	10,972.2	2006 Q2	14,591.6
1979 Q3	6,480.1	1988 Q3	8,489.2	1997 Q3	11,112.0	2006 Q3	14,604.4
1979 Q4	6,496.8	1988 Q4	8,601.6	1997 Q4	11,198.2	2006 Q4	14,718.4
1980 Q1	6,517.9	1989 Q1	8,688.4	1998 Q1	11,309.0	2007 Q1	14,728.1
1980 Q2	6,385.7	1989 Q2	8,756.7	1998 Q2	11,418.7	2007 Q2	14,841.5
1980 Q3	6,376.0	1989 Q3	8,822.1	1998 Q3	11,568.1	2007 Q3	14,941.5
1980 Q4	6,494.1	1989 Q4	8,840.7	1998 Q4	11,757.9	2007 Q4	14,996.1
1981 Q1	6,628.6	1990 Q1	8,937.5	1999 Q1	11,867.8	2008 Q1	14,895.4
1981 Q2	6,580.2	1990 Q2	8,972.1	1999 Q2	11,967.7	2008 Q2	14,969.2
1981 Q3	6,655.7	1990 Q3	8,974.3	1999 Q3	12,120.1	2008 Q3	14,895.1
1981 Q4	6,578.0	1990 Q4	8,897.8	1999 Q4	12,329.8	2008 Q4	14,574.6
1982 Q1	6,468.0	1991 Q1	8,856.1	2000 Q1	12,365.2	2009 Q1	14,372.1
1982 Q2	6,503.3	1991 Q2	8,924.9	2000 Q2	12,598.7	2009 Q2	14,356.9
1982 Q3	6,479.8	1991 Q3	8,967.7	2000 Q3	12,614.8	2009 Q3	14,402.5
1982 Q4	6,486.2	1991 Q4	9,006.8	2000 Q4	12,682.0	2009 Q4	14,540.2
1983 Q1	6,571.1	1992 Q1	9,113.2	2001 Q1	12,645.7	2010 Q1	14,597.7
1983 Q2	6,721.1	1992 Q2	9,213.7	2001 Q2	12,712.8	2010 Q2	14,738.0
1983 Q3	6,852.7	1992 Q3	9,303.3	2001 Q3	12,674.1	2010 Q3	14,839.3
1983 Q4	6,994.0	1992 Q4	9,396.5	2001 Q4	12,705.2	2010 Q4	14,942.4
1984 Q1	7,132.9	1993 Q1	9,414.0	2002 Q1	12,824.6	2011 Q1	14,894.0
1984 Q2	7,258.2	1993 Q2	9,469.9	2002 Q2	12,894.7	2011 Q2	15,011.3
1984 Q3	7,329.6	1993 Q3	9,516.1	2002 Q3	12,956.7	2011 Q3	15,062.1
1984 Q4	7,388.1	1993 Q4	9,643.1	2002 Q4	12,962.9	2011 Q4	15,242.1
1985 Q1	7,461.5	1994 Q1	9,737.6	2003 Q1	13,028.6	2012 Q1	15,381.6
1985 Q2	7,529.9	1994 Q2	9,870.7	2003 Q2	13,151.8	2012 Q2	15,427.7
1985 Q3	7,647.0	1994 Q3	9,928.9	2003 Q3	13,374.0	2012 Q3	15,534.0
1985 Q4	7,704.4	1994 Q4	10,041.6	2003 Q4	13,525.7	2012 Q4	15,539.6
1986 Q1	7,775.8	1995 Q1	10,075.9	2004 Q1	13,606.6	2013 Q1	15,583.9
1986 Q2	7,811.5	1995 Q2	10,111.1	2004 Q2	13,710.7	2013 Q2	15,679.7
1986 Q3	7,890.1	1995 Q3	10,197.7	2004 Q3	13,831.0	2013 Q3	15,839.9
1986 Q4	7,931.0	1995 Q4	10,270.1	2004 Q4	13,947.7	2013 Q4	15,942.3
1987 Q1	7,986.4	1996 Q1	10,337.4	2005 Q1	14,100.2	2014 Q1	15,946.6
1987 Q2	8,076.1	1996 Q2	10,517.9	2005 Q2	14,177.2		
1987 Q3	8,149.4	1996 Q3	10,615.2	2005 Q3	14,292.9		
1987 Q4	8,283.8	1996 Q4	10,727.4	2005 Q4	14,372.0		

Source: Bureau of Economic Analysis, bea.gov.

ACTIVITY 20.2

U.S. Annual Economic Indicators (1979–2012)

Year	% Change in Real GDP	Unemployment Rate (%)	% Change in Prices (CPI Index)
1979	3.2	5.9	11.3
1980	–0.2	7.2	13.5
1981	2.6	7.6	10.3
1982	–1.9	9.7	6.2
1983	4.6	9.6	3.2
1984	7.3	7.5	4.3
1985	4.2	7.2	3.6
1986	3.5	7.0	1.9
1987	3.5	6.2	3.6
1988	4.2	5.5	4.1
1989	3.7	5.3	4.8
1990	1.9	5.6	5.4
1991	–0.1	6.9	4.2
1992	3.6	7.5	3.0
1993	2.7	6.9	3.0
1994	4.0	6.1	2.6
1995	2.7	5.6	2.8
1996	3.8	5.4	3.0
1997	4.5	4.9	2.3
1998	4.4	4.5	1.6
1999	4.8	4.2	2.2
2000	4.1	4.0	3.4
2001	1.0	4.7	2.8
2002	1.8	5.8	1.6
2003	2.8	6.0	2.3
2004	3.8	5.5	2.7
2005	3.4	5.1	3.4
2006	2.7	4.6	3.2
2007	1.8	4.6	2.8
2008	–0.3	5.8	3.8
2009	–2.8	9.3	–0.4
2010	2.5	9.6	1.6
2011	1.8	8.9	3.2
2012	2.8	8.1	2.1

Sources: Percent change in real GDP from bea.gov. Annual unemployment rate is the mean of the 12 monthly unemployment rates for the year as given by bls.gov. Percent change in CPI (all items, base period 1982–1984) from bls.gov.

ACTIVITY 20.3

Components of Total Spending

Total Spending = C + I + G + (X – M) where:

- C = Consumption spending by households on consumer goods and services
- I = Investment spending by businesses on capital goods and services
- G = Government spending by all levels of government for government-provided goods and services
- X – M = Net export spending, which is spending by individuals and organizations outside the country on goods and services exported from it minus spending by individuals and organizations within the country on imports of goods and services from other countries; in other words,
  Net Exports = Exports (X) – Imports (M)

ACTIVITY 20.4

Factors That Affect Total Spending in the Short Run

C = Consumption

- Desired rate of saving
- Level of tax rates
- Amount of wealth (value of assets owned such as houses, stocks, etc.)
- Level of consumer confidence in the economy

I = Investment

- Borrowing costs, including the level of interest rates
- Expectations about future consumer spending
- Tax incentives or disincentives to invest

G = Government

- National security concerns (defense)
- Need for infrastructure improvements (highways, sewers, communications, etc.)
- Demand for public services (education, police and fire protection, courts, etc.)

X – M = Net Exports

- Growth of income and wealth of foreign buyers
- Prices in foreign nations relative to domestic prices
- Exchange rates

ACTIVITY 20.5

Factors That Affect Incentive to Produce in the Short Run

- Availability/quantity of resources (human, capital, and natural)
- Productivity of resources (output per unit of resource)
- Level of direct taxes on business (i.e., corporate income tax and sales taxes on inputs purchased)
- Level of government regulations on production (i.e., health, safety, and environmental requirements)
- Prices of imported resources
- Level of minimum wage
- Amount of new innovations and inventions

ACTIVITY 20.6

What Happens If This Event Occurs?

Suppose that the event shown on your card has just occurred in the United States. Complete the following by circling the best choice.

1. Which of the following does this event affect most directly?

   Total Spending or **Incentive to Produce**

2. What would likely happen to the factor you circled in Question 1?

   Increase or **Decrease**

3. What is the expected short-run impact of this event on total output (real GDP) in the economy?

   Rises or **Falls**

4. What is the expected short-run impact of this event on the unemployment rate of the economy?

   Rises or **Falls**

5. What is the expected short-run impact of this event on the price level in the economy?

   Rises or **Falls**

ACTIVITY 20.7

Deck 1 Event Cards

1 The federal government lowers income tax rates on households.	**5** Consumer confidence falls as households become more pessimistic about their jobs.
2 A positive outlook on future consumer spending leads businesses to build new factories.	**6** The federal government decreases expenditures on defense.
3 Both the prices of stocks and houses rise.	**7** Interest rates are raised through actions by the Federal Reserve.
4 Prices in Europe rise relatively faster than those in the United States.	**8** Slowdowns in the growth rates of China and India lead to lower U.S. exports.

ACTIVITY 20.7 (continued)

9 The use of new technologies leads to increases in labor productivity.	**13** The government increases the federal minimum wage.
10 The federal government lowers the corporate income tax rate.	**14** The government imposes more stringent workplace regulations to better protect workers from injury.
11 Large reserves of oil are found in North Dakota.	**15** The prices of imported rare earth minerals rise.
12 A new invention creates numerous profitable opportunities to produce new products.	**16** A hurricane destroys several large oil refineries in the Gulf Coast.

ACTIVITY 20.8

Deck 2 Event Cards

1 (1979) The Organization of Petroleum Exporting Countries (OPEC) cuts its production, which raises the price of oil imported into the United States.	**5** (2000–2001) Businesses dramatically cut back on expenditures for new computer systems after the threat passes of Y2K (fear that computers would not recognize Year 2000). This was followed by terrorist attacks on the World Trade Center towers on September 11, 2001.
2 (1981–1982) The Federal Reserve slows the growth of the money supply to fight inflation, which raises interest rates dramatically.	**6** (2003–2005) The federal government sends military forces into Iraq in March 2003, beginning a multiyear peace-keeping effort. It also lowers income tax rates retroactive to January 2003.
3 (1990–1991) The Gulf War leads to disruptions in oil supplies, which raise the price of oil imported into the United States.	**7** (2008–2009) Households lose trillions in wealth as home prices and stock prices fall significantly.
4 (1996–1999) The application of computer technologies to production processes greatly increases the productivity of labor.	

ACTIVITY 20.9

What Happens If . . . Deck 1 Suggested Answers (Slides 20.6 and 20.7)

For Events 1–4:
Total spending increases, real GDP rises, unemployment rate falls, price level rises

1. The federal government lowers income tax rates on households.
2. A positive outlook on future consumer spending leads businesses to build new factories.
3. Both the prices of stocks and houses rise.
4. Prices in Europe rise relatively faster than those in the United States.

For Events 5–8:
Total spending decreases, real GDP falls, unemployment rate rises, price level falls

5. Consumer confidence falls as households become more pessimistic about their jobs.
6. The federal government decreases expenditures on defense.
7. Interest rates are raised through actions by the Federal Reserve.
8. Slowdowns in the growth rates of China and India lead to lower U.S. exports.

For Events 9–12:
Incentive to produce increases, real GDP rises, unemployment rate falls, price level falls

9. The use of new technologies leads to increases in labor productivity.
10. The federal government lowers the corporate income tax rate.
11. Large reserves of oil are found in North Dakota.
12. A new invention creates numerous profitable opportunities to produce new products.

For Events 13–16:
Incentive to produce decreases, real GDP falls, unemployment rate rises, price level rises

13. The government increases the federal minimum wage.
14. The government imposes more stringent workplace regulations to better protect workers from injury.
15. The prices of imported rare earth minerals rise.
16. A hurricane destroys several large oil refineries in the Gulf Coast.

ACTIVITY 20.10

What Happens If . . . Deck 2 Suggested Answers (Slides 20.8 and 20.9)

1. (1979) The Organization of Petroleum Exporting Countries (OPEC) cuts its production, which raises the price of oil imported into the United States.

   Incentive to produce decreases, real GDP falls, unemployment rises, price level rises

2. (1981–1982) The Federal Reserve slows the growth of the money supply to fight inflation, which raises interest rates dramatically.

   Total spending decreases, real GDP falls, unemployment rate rises, price level falls

3. (1990–1991) The Gulf War leads to disruptions in oil supplies, which raise the price of oil imported into the United States.

   Incentive to produce decreases, real GDP falls, unemployment rate rises, price level rises

4. (1996–1999) The application of computer technologies to production processes greatly increases the productivity of labor.

   Incentive to produce increases, real GDP rises, unemployment rate falls, price level falls

5. (2000–2001) Businesses dramatically cut back on expenditures for new computer systems after the threat passes of Y2K (fear that computers would not recognize Year 2000). This was followed by terrorist attacks on the World Trade Center towers on September 11, 2001.

   Total spending decreases, real GDP falls, unemployment rate rises, price level falls

6. (2003–2005) The federal government sends military forces into Iraq in March 2003, beginning a multiyear peace-keeping effort. It also lowers income tax rates retroactive to January 2003.

   Total spending increases, real GDP rises, unemployment rate falls, price level rises

7. (2008–2009) Households lose trillions in wealth as home prices and stock prices fall significantly.

   Total spending decreases, real GDP falls, unemployment rate rises, price level falls