Business Cycles

Introduction and Description

The study and control of business cycles are the heart of macroeconomics. The discipline of macroeconomics started as business cycle theory. The business cycle is a problem because of the by-products of output fluctuations: unemployment and inflation. Fluctuations in output and employment created major economic problems during the Great Depression and after World War II. Fluctuations in the economy before World War II led to the Employment Act of 1946; and the business cycles in the post-war period led to discussions of the trade-offs between the goals of economic growth, price stability and unemployment, and to passage of the Humphrey-Hawkins Act.

Objectives

1. Define and describe the phases of the business cycle.
2. Define *recession*.
3. Recognize the trade-offs between goals.

Time Required

Two class periods or 90 minutes

Materials

1. Activities 17 and 18
2. Visual 2.7

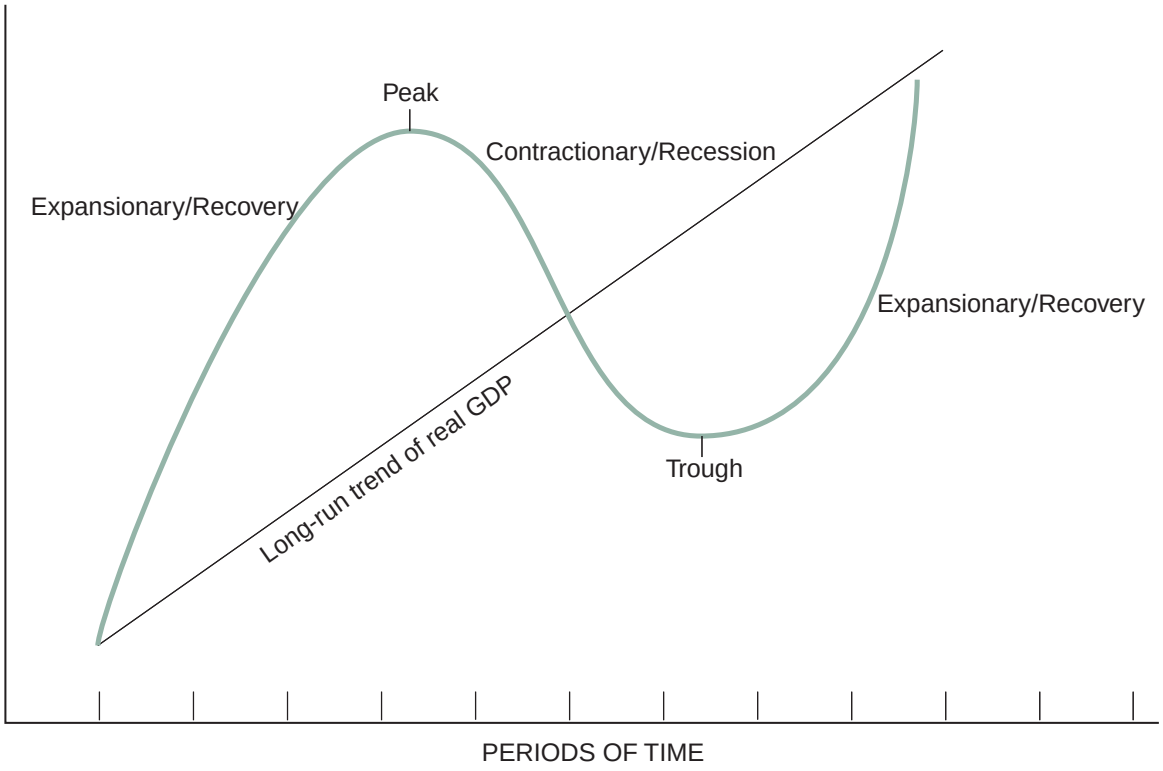
Procedure

1. Start by asking the students, "What causes output to rise and fall?" and "What causes unemployment to rise and fall?"
2. Explain that the business cycle describes economic fluctuations: the rising and falling of output in relation to potential output. Potential output is the level of output that the economy can sustain given the capital stock, technology and full employment.
3. Use Visual 2.7 to discuss the phases of the business cycle. *Recession* is defined as two consecutive quarters (six months) of negative growth in real GDP. The point at which output starts to decline is called the *peak* of the cycle, or the beginning of the recession. The point at which output starts to increase is called the *trough*, or the end of the recession. As the economy moves forward, the period between the trough and the next peak is called the *recovery period* or *expansion*.
4. Business cycles are defined in terms of output; however, other variables follow the movement of output. Investment and consumption both rise and fall with movements in real GDP. Inflation typically declines during recessions and increases as the economy approaches the peak. The unemployment rate rises sharply in recessions.

   Interesting phenomena occur with the unemployment rate over a business cycle. Initially, the unemployment rate rises. If the recession lasts a long time, the unemployment rate remains at a high level or might actually decline as discouraged workers leave the ranks of the unemployed. As the recovery begins, the unemployment rate may remain very steady at a high level. As the economy recovers and people find jobs, other people enter the labor market looking for work and thus the unemployment rate remains steady.
5. Emphasize these points about business cycles:
   - There is no consistent length of time for each phase.
   - Business cycles are unpredictable. After the fact, economists can identify some of the causes of business cycles but are notoriously poor at predicting the actual downturn.
   - Some variables are *countercyclical:* move in the opposite direction from real GDP. Some variables are *procyclical*: move in the same direction as real GDP.
6. Have the students complete Activity 17 and review the answers with the students.
7. Have the students complete Activity 18, and review the answers with the students.

The Business Cycle

Figure 17.1
The Business Cycle



The curved line on Figure 17.1 shows a sample business cycle for an economy. The straight line represents the long-run trend of real GDP.

The business cycle can conveniently be divided into four phases:

1. Expansionary or recovery phase. Real output in the economy is increasing and the unemployment rate is declining. As the economic expansion continues, inflation may begin to accelerate.
2. Peak. Real output, GDP, is at its highest point of the business cycle.
3. Contractionary or recession phase. Real output in the economy is decreasing, and the unemployment rate is rising. As the contraction continues, inflationary pressures subside. If the recession continues long enough, prices may actually start to fall, a situation known as deflation.
4. Trough. The lowest point of real GDP reached during the business cycle is known as the trough. If the trough is particularly deep, it may be called a depression. A depression is an economic situation where the level of output falls to especially low levels and unemployment climbs to very high levels relative to the historical average. There is no precise decline in out-

put at which a serious recession becomes a depression. However, most business cycles do not end in a depression. The most recent depression the United States experienced was during the 1930s.

1. Figure 17.2 contains information for the U.S. economy from 1980 through 2001. For each quarter, first identify whether the economy was in an expansionary (E) or a contractionary (C) phase. Go back and pick out the quarters that correspond with a business cycle peak, and mark them with a P. Then find the quarters that correspond with a trough, and mark them with a T. Some of the answers have been provided for you.

Using your answers from Question 1, answer the following questions.

2. How many business cycles did the U.S. economy have between 1980 and 2001? *2*

3. In how many quarters was output expanding? *76*

4. In how many quarters was output contracting? *10*

5. Which expansion looks best to you? Explain. *The period from 1992 through 2001 had low unemployment and inflation rates.*

6. Which contraction looks worst to you? Explain. *1980. Both unemployment and inflation rates were very high.*

7. During quarters in which real GDP fell, what happened to the unemployment rate compared with the previous quarter? Why? *The unemployment rate was higher. As real GDP fell, the unemployment rate increased; because of rising inventories, workers were laid off.*

8. Look at the unemployment rate in quarters corresponding to a business cycle peak. Why do you think there was still some unemployment in these quarters? *There is unemployment even at full employment because of frictional and structural unemployment.*

9. Look at the unemployment rate in quarters corresponding to recoveries. Why do you think the unemployment rate remained high? *Unemployment remains high for two reasons: (1) frictional and structural employment and (2) with an expanding economy, more people move into the labor force looking for work.*

10. Based on the years 1980 to 2001, how does the rate of inflation correspond with the business cycle? *The inflation rate decreases during contractions but fluctuates during recoveries.*

Figure 17.2

The U.S. Economy from 1980

Year	Real GDP in 1996 Dollars (billions)	% Change From Previous Quarter	Civilian Unemployment Rate	Inflation Rate (CPI)	Phase of Business Cycle
1980q1	4,958.9	0.33	6.30	3.91	*E*
1980q2	4,857.8	–2.04	7.32	3.67	*C*
1980q3	4,850.3	–0.15	7.68	1.83	*C, T*
1980q4	4,936.6	1.78	7.40	2.64	*E*
1981q1	5,032.5	1.94	7.43	2.65	*E*
1981q2	4,997.3	–0.70	7.40	2.32	*C*
1981q3	5,056.8	1.19	7.42	2.82	*E, P*
1981q4	4,997.1	–1.18	8.24	1.44	*C*
1982q1	4,914.3	–1.66	8.84	0.82	*C*
1982q2	4,935.5	0.43	9.43	1.52	*E*
1982q3	4,912.1	–0.47	9.94	1.88	*C*
1982q4	4,915.6	0.07	10.68	0.24	*E, T*
1983q1	4,972.4	1.16	10.39	–0.07	*E*
1983q2	5,089.8	2.36	10.10	1.26	*E*
1983q3	5,180.4	1.78	9.36	1.18	*E*
1983q4	5,286.8	2.05	8.54	0.90	*E*
1984q1	5,402.3	2.18	7.87	1.12	E
1984q2	5,493.8	1.69	7.48	1.08	E
1984q3	5,541.3	0.86	7.45	1.10	E
1984q4	5,583.1	0.75	7.28	0.73	E
1985q1	5,629.7	0.83	7.28	0.63	E
1985q2	5,673.8	0.78	7.29	1.23	E
1985q3	5,758.6	1.49	7.21	0.71	E
1985q4	5,806.0	0.82	7.05	0.89	E
1986q1	5,858.9	0.91	7.02	0.21	E
1986q2	5,883.3	0.42	7.18	–0.21	E
1986q3	5,937.9	0.93	6.99	0.73	E
1986q4	5,969.5	0.53	6.83	0.55	E
1987q1	6,013.3	0.73	6.62	1.12	E

Figure 17.2 (continued)

Year	Real GDP in 1996 Dollars (billions)	% Change From Previous Quarter	Civilian Unemployment Rate	Inflation Rate (CPI)	Phase of Business Cycle
1987q2	6,077.2	1.06	6.28	1.31	E
1987q3	6,128.1	0.84	6.01	1.15	E
1987q4	6,234.4	1.73	5.87	0.84	E
1988q1	6,275.9	0.67	5.73	0.61	E
1988q2	6,349.8	1.18	5.49	1.26	E
1988q3	6,382.3	0.51	5.49	1.33	E
1988q4	6,465.2	1.30	5.35	1.04	*E*
1989q1	6,543.8	1.22	5.22	1.11	*E*
1989q2	6,579.4	0.54	5.24	1.64	*E*
1989q3	6,610.6	0.47	5.28	0.81	*E*
1989q4	6,633.5	0.35	5.37	0.96	*E*
1990q1	6,716.3	1.25	5.30	1.72	*E*
1990q2	6,731.7	0.23	5.34	1.02	*E, P*
1990q3	6,719.4	–0.18	5.69	1.73	*C*
1990q4	6,664.2	–0.82	6.11	1.62	*C*
1991q1	6,631.4	–0.49	6.57	0.82	*C, T*
1991q2	6,668.5	0.56	6.82	0.59	*E*
1991q3	6,684.9	0.25	6.85	0.79	*E*
1991q4	6,720.9	0.54	7.10	0.76	E
1992q1	6,783.3	0.93	7.38	0.70	E
1992q2	6,846.8	0.94	7.60	0.82	E
1992q3	6,899.7	0.77	7.63	0.79	E
1992q4	6,990.6	1.32	7.41	0.71	E
1993q1	6,988.7	–0.03	7.15	0.85	C
1993q2	7,031.2	0.61	7.07	0.77	E
1993q3	7,062.0	0.44	6.80	0.39	E
1993q4	7,168.7	1.51	6.62	0.69	E
1994q1	7,229.4	0.85	6.56	0.64	E
1994q2	7,330.2	1.39	6.17	0.64	E
1994q3	7,370.2	0.55	6.00	0.88	E

Figure 17.2 (continued)

Year	Real GDP in 1996 Dollars (billions)	% Change From Previous Quarter	Civilian Unemployment Rate	Inflation Rate (CPI)	Phase of Business Cycle
1994q4	7,461.1	1.23	5.62	0.47	E
1995q1	7,488.7	0.37	5.48	0.82	E
1995q2	7,503.3	0.19	5.68	0.88	E
1995q3	7,561.4	0.77	5.66	0.44	E
1995q4	7,621.9	0.80	5.57	0.48	E
1996q1	7,676.4	0.72	5.55	0.91	E
1996q2	7,802.9	1.65	5.47	0.99	E
1996q3	7,841.9	0.50	5.26	0.53	E
1996q4	7,931.3	1.14	5.31	0.72	E
1997q1	8,016.4	1.07	5.23	0.67	E
1997q2	8,131.9	1.44	4.98	0.40	E
1997q3	8,216.6	1.04	4.86	0.40	E
1997q4	8,272.9	0.69	4.68	0.39	E
1998q1	8,396.3	1.49	4.64	0.27	E
1998q2	8,442.9	0.56	4.42	0.54	E
1998q3	8,528.5	1.01	4.53	0.39	E
1998q4	8,667.9	1.63	4.43	0.35	E
1999q1	8,733.5	0.76	4.26	0.39	E
1999q2	8,771.2	0.43	4.26	0.97	E
1999q3	8,871.5	1.14	4.25	0.62	E
1999q4	9,049.9	2.01	4.10	0.62	E
2000q1	9,102.5	0.58	4.02	0.99	E
2000q2	9,229.4	1.39	4.00	1.06	E
2000q3	9,260.1	0.33	4.06	0.80	E
2000q4	9,303.9	0.47	3.97	0.54	E
2001q1	9,334.5	0.33	4.19	0.96	E
2001q2	9,341.7	0.08	4.47	1.04	E

Test Your Understanding of Macroeconomic Indicators

Answer the questions and briefly explain your answers.

1. The unemployment rate and employment both go up. Ellen says that it is not possible for both to rise at the same time. Is Ellen correct or incorrect? Why? *Ellen is incorrect. If more people enter the labor force and most of them do not find jobs, both employment and unemployment rates will rise.*

2. True, false or uncertain, and explain why? "Gross domestic product measures the amount of wealth in the economy." *False. GDP measures a stream of production or income in a particular year or time period. Wealth includes the current value of goods and services produced in past years.*

3. True, false or uncertain, and explain why? "A decrease in gross domestic product must reduce a person's standard of living." *False. GDP measures the production of the nation. Even during recessions, many people's real incomes rise.*

4. True, false or uncertain, and explain why? "If nominal GDP increases by 5 percent and the price level increases by 7 percent, real GDP has decreased." *True. Real GDP would fall by about 2 percent because the inflation rate is higher than the rate of growth in nominal GDP.*

5. True, false or uncertain, and explain why? "In preparing an index of prices, it is important that all commodities entering the index be given equal weight." *False. Commodities should enter the index with the weight that represents the proportion the item represents in people's actual pattern of consumption or use. Different groups have different consumption patterns. An index cannot capture everyone's cost of living.*

6. True, false or uncertain, and explain why? "*Frictional* and *structural* unemployment are two words for the same thing." *False. Structural unemployment occurs because people do not have the skills necessary for the jobs available. Frictional unemployment occurs when people are between jobs. They will find employment, but it will take time to match them with job vacancies.*

7. Why does unanticipated inflation help borrowers and hurt lenders? *Borrowers pay back a fixed number of dollars, but these dollars are worth less. This means that the purchasing power of the dollars that lenders receive is lower than the purchasing power of the dollars in the original loan. If the loan has a variable interest rate and inflation causes nominal interest rates to rise, the lender will not be hurt as badly because the lender can raise the interest rate on the loan.*

8. True, false or uncertain, and explain why? "Inflation always increases when unemployment decreases." *False. Although this is sometimes the case, look at the data in Activity 17 to illustrate that this is not always true. During 1983q2 to 1987q1, the unemployment rate was decreasing and inflation was highly variable.*

9. True, false or uncertain, and explain why? "If the economy is at full employment, the unemployment rate is zero." *False. At full employment, we have frictional and structural unemployment. Frictional unemployment occurs when people are between jobs; structural unemployment occurs when people do not have the skills for the jobs that are available.*

10. True, false, or uncertain, and explain why. "Seasonal unemployment is a continual worry because some people are out of work on a regular basis." *Uncertain. For the seasonally unemployed person it can be a worry. However, stimulating the economy may not change the situation. Seasonal workers are people who work only during particular seasons of the year such as Christmas time or harvest time.*