8-1 Why is economic growth important? Why could the difference between a 2.5 percent and a 3.0 percent annual growth rate make a great difference over several decades?

Economic growth means a higher standard of living, provided population does not grow even faster. And if it does, then economic growth is even more important to maintain the current standard of living. Economic growth allows the lessening of poverty even without an outright redistribution of wealth.

If population is growing at 2.5 percent a year—and it is in some of the poorest nations—then a 2.5 percent growth rate of real GDP means no change in living standards. A 3.0 percent growth rate means a gradual rise in living standards. For a wealthy nation, such as the United States, with a GDP in the neighborhood of $10 trillion, the 0.5 percentage point difference between 2.5 and 3.0 percent amounts to $50 billion a year, or more than $150 per person per year.

8-2 (Key Question) Suppose an economy’s real GDP is $30,000 in year 1 and $31,200 in year 2. What is the growth rate of its real GDP? Assume that population was 100 in year 1 and 102 in year 2. What is the growth rate of GDP per capita?

Growth rate of real GDP = 4 percent (= ($31,200 - $30,000)/$30,000). GDP per capita in year 1 = $300 (= $30,000/100). GDP per capita in year 2 = $305.88 (= $31,200/102). Growth rate of GDP per capita is 1.96 percent = ($305.88 - $300)/300).


The growth record of the United States is seen in Table 8-1, which shows that per capita GDP (in 1992 constant dollars) has grown from $6,484 in 1929 to $25,635 in 1995. The rate of growth of real GDP per capita in the 1950-2000 period was just under 2 percent; the growth rate of real GDP during the same period was 3.1 percent. It is evident that real GDP grows more rapidly than real GDP per capita because the population is growing at the same time that GDP is growing. Since GDP per capita is GDP/population, this will show a smaller rate of growth than GDP if the denominator, population, is expanding.

Looking at Global Perspective 8-1, we can see that the average annual growth rates of real GDP have been more rapid in Japan, averaging more than 6 percent in the 1950-2000 period. But, in 1990s the U.S. surged ahead of Japan from 1992 until the present.

The real GDP and per capita real GDP figures may understate economic well-being to the extent they do not fully take into account improvements in product quality; and they take no account at all of the very considerable increase in leisure since 1929. On the other hand, the measures of growth also leave out increases in pollution and the possible increase in stress caused by growth, and also do not measure the extent of inequality in distribution. If inequality is great, many may have less GDP per capita than shown.

8-4 (Key Question) What are the four phases of the business cycle? How long do business cycles last? How do seasonal variations and secular trends complicate measurement of the business cycle? Why does the business cycle affect output and employment in capital goods and consumer durable goods industries more severely than in industries producing non-durables?

The four phases of a typical business cycle, starting at the bottom, are trough, recovery, peak, and recession. As seen in Figure 8-1, the length of a complete cycle varies from about 2 to 3 years to as long as 15 years.
There is a pre-Christmas spurt in production and sales and a January slackening. This normal seasonal variation does not signal boom or recession. From decade to decade, the long-term trend (the secular trend) of the U.S. economy has been upward. A period of no GDP growth thus does not mean all is normal, but that the economy is operating below its trend growth of output. Because capital goods and durable goods last, purchases can be postponed. This may happen when a recession is forecast. Capital and durable goods industries therefore suffer large output declines during recessions. In contrast, consumers cannot long postpone the buying of nondurables such as food; therefore recessions only slightly reduce non-durable output. Also, capital and durable goods expenditures tend to be “lumpy.” Usually, a large expenditure is needed to purchase them, and this shrinks to zero after purchase is made.

8-5 What factors make it difficult to determine the unemployment rate? Why is it difficult to distinguish between frictional, structural, and cyclical unemployment? Why is unemployment an economic problem? What are the consequences of a GDP gap? What are the noneconomic effects of unemployment?

Measuring the unemployment rate means first determining who is eligible and available to work. The total U.S. population is divided into three groups. One group is made up of people under 16 years of age and people who are institutionalized. The second group, labeled “not in the labor force” are adults who are potential workers but for some reason—age, in school, or homemakers are not seeking work. The third group is the labor force, those who are employed and those who are unemployed but actively seeking work.

It is not easy to distinguish between these three types and since the unavoidable minimum of frictional and structural unemployment is itself changing, it is difficult to determine the full-employment unemployment rate. For example, a person who quits a job in search of a better one would normally be considered frictionally unemployed. But suppose the former job then disappears completely because the firm is in a declining industry and can no longer make money. Our still jobless worker could now be considered structurally unemployed. And then suppose the economy slips into a severe recession so that our worker cannot find any job and has become cyclically unemployed. To complicate things further, the unavoidable minimums of frictional and structural unemployment have increased in the past thirty years as the labor force structure has changed. In other words, there is no automatic label on the type of unemployment when someone is counted as unemployed.

Unemployment is an economic problem because of the concept of opportunity cost. Quite apart from any idea of consideration for others, unemployment is a total economic waste: A unit of labor resource that could be engaged in production is sitting idle.

The “GDP gap” is the difference between what the economy could produce its potential GDP and what it is producing its actual GDP. The consequence is that what is not produced – the amount represented by the gap—is lost forever. Moreover, to the extent that this lost production represents capital goods, the potential production for the future is impaired. Future economic growth will be less.

The noneconomic effects of unemployment include the sense of failure created in parents and in their children, the feeling of being useless to society, of no longer belonging.

8-6 (Key Question) Use the following data to calculate (a) the size of the labor force and (b) the official unemployment rate: total population, 500; population under 16 years of age or institutionalized, 120; not in labor force, 150; unemployed, 23; part-time workers looking for full-time jobs, 10.

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\text{Labor force} = 500 - (120 + 150) = 230; \quad \text{official unemployment rate} = \frac{23}{230} \times 100 = 10\%
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8-7 Since the U.S. has an unemployment compensation program which provides income for those out of work, why should we worry about unemployment?
The unemployment compensation program merely gives the unemployed enough funds for basic needs. Furthermore, many of the unemployed do not qualify for unemployment benefits. The programs apply only to those workers who were covered by the insurance, and this may be as few as one-third of those without jobs. Most of the unemployed get no sense of self-worth or accomplishment out of drawing this compensation. Moreover, from the economic point of view, unemployment is a total waste of resources; when the unemployed go back to work, nothing is forgone except undesired leisure. Finally, unemployment could be inflationary and costly to taxpayers: The unemployed are producing nothing—their supply is zero – but the compensation helps keep demand in the economy high.