

Macroeconomics 8th edition Blanchard Test Bank

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Macroeconomics, 8e (Blanchard)
Chapter 2: A Tour of the Book

2.1 Aggregate Output

1) Fill in the blank for the following: GDP is the value of all _____ produced in a given period.

- A) final and intermediate goods and services produced by the private sector only
- B) final goods and services
- C) final and intermediate goods and services, plus raw materials
- D) all of these
- E) none of these

Answer: B

Diff: 1

2) When using the income approach to measure GDP, the largest share of GDP generally consists of

- A) interest income.
- B) labor income.
- C) indirect taxes.
- D) profits.
- E) capital income.

Answer: B

Diff: 1

3) For this question, assume that 1980 is the base year. Given macroeconomic conditions in the United States over the past three decades, we know that

- A) nominal GDP is always smaller than real GDP since 1980.
- B) real GDP and nominal GDP would be equal for the entire period.
- C) real GDP is larger than nominal GDP from 2002 to 2008.
- D) real GDP and nominal GDP were equal in 1980.
- E) none of these

Answer: D

Diff: 2

4) Suppose nominal GDP increased in a given year. Based on this information, we know with certainty that

- A) real output has increased.
- B) the price level (GDP deflator) has increased.
- C) real output and the price level (GDP deflator) have both increased.
- D) either real output or the price level (GDP deflator) have increased.
- E) real output has increased and the price level has decreased.

Answer: D

Diff: 2

5) Use the following information to answer this question. If nominal GDP rises from \$100 trillion to \$120 trillion, while the GDP deflator rises from 2.0 to 2.2, the *percentage* change in real GDP is approximately equal to

- A) -10%.
- B) 10%.
- C) 20%.
- D) 9.1%.
- E) 0%.

Answer: D

Diff: 2

6) Hedonic pricing is

- A) the way that luxury goods are priced in a market economy.
- B) the tendency for the inflation rate to rise by greater and greater amounts.
- C) the tendency for nominal GDP to rise when the price level rises.
- D) the process of translating nominal GDP into real GDP.
- E) the process of pricing individual characteristics of a good or service.

Answer: E

Diff: 1

7) In a given year, suppose a company spends \$100 million on intermediate goods and \$200 million on wages, with no other expenses. Also assume that its total sales are \$800 million. The value added by this company equals

- A) \$200 million.
- B) \$300 million.
- C) \$500 million.
- D) \$700 million.
- E) \$800 million.

Answer: D

Diff: 2

8) A firm's value added equals

- A) its revenue minus all of its costs.
- B) its revenue minus its wages.
- C) its revenue minus its wages and profit.
- D) its revenue minus its cost of intermediate goods.
- E) none of these

Answer: D

Diff: 2

9) Deflation generally occurs when which of the following occurs?

- A) the consumer price index is greater than the GDP deflator
- B) the consumer price index decreases
- C) the rate of inflation falls, for example, from 4% to 2%
- D) nominal GDP does not change

Answer: B

Diff: 1

10) During the mid-1980s, we observed a significant reduction in oil prices. In the United States, we would expect that this reduction in oil prices would cause

- A) a larger reduction in the CPI compared to the GDP deflator.
- B) an equal reduction in the CPI and GDP deflator.
- C) a larger reduction in the GDP deflator compared to the CPI.
- D) no change in the CPI and a reduction in the GDP deflator.

Answer: A

Diff: 2

11) Suppose nominal GDP in 2009 does not change (compared its previous level in 2008). Given this information, we know with certainty that

- A) real GDP increased during 2009.
- B) the GDP deflator increased during 2009.
- C) both the GDP deflator and real GDP fell during 2009.
- D) more information is needed to answer this question.

Answer: D

Diff: 2

12) During the late 1990s, Japan experienced reductions in the GDP deflator. Given this information, we know with certainty that

- A) real GDP fell during these periods.
- B) real GDP did not change during these periods.
- C) the overall price level in Japan decreased during these periods.
- D) both real GDP and the overall price level decreased during these periods.

Answer: C

Diff: 2

13) Hedonic pricing is used to

- A) convert nominal values to real values.
- B) calculate the difference between nominal GDP and real GDP.
- C) measure the rate of change in real GDP.
- D) obtain chain-weight indexes.
- E) none of these

Answer: E

Diff: 1

14) GDP in current dollars is equivalent to which of the following?

- A) real GDP
- B) GDP in terms of goods
- C) GDP in 2000 dollars
- D) GDP in constant dollars
- E) none of these

Answer: E

Diff: 1

15) Which of the following does *not* represent real GDP?

- A) GDP in current dollars
- B) GDP in terms of goods
- C) GDP in base year dollars
- D) GDP in constant dollars

Answer: A

Diff: 1

16) Which of the following represents real GDP?

- A) GDP in constant dollars
- B) GDP in terms of goods
- C) GDP in base year dollars
- D) all of these

Answer: A

Diff: 1

17) According to convention, a recession is referred to if an economy goes through

- A) at least two consecutive quarters of negative growth.
- B) at least three consecutive quarters of negative growth.
- C) at least four quarters of negative growth.
- D) at least two consecutive months of negative growth.

Answer: A

Diff: 1

18) Based on the notation presented in Chapter 2, which of the following expressions represents real GDP?

- A) Y_t
- B) $P_t Y_t$
- C) Y_t / P_t
- D) $\$Y_t / P_t$

Answer: A

Diff: 1

19) Measures of aggregate output have been published on a regular basis in the United States since

- A) 1947.
- B) 1933.
- C) 1917.
- D) 1946.

Answer: A

Diff: 1

20) Which of the following about capital income is *not* correct?

- A) It refers to a firm's revenue.
- B) It is also called profit income.
- C) It goes to the firms.
- D) It accounts for less than 35% of income in advanced countries.

Answer: A

Diff: 1

21) Explain the three ways GDP can be measured.

Answer: GDP can be measured three ways. First, GDP represents the market value of the final goods and services produced in the economy during a given period. This would be obtained by adding C, I, G, and NX. Second, GDP is the sum of the value added by firms. The value added for a firm equals the value of the production (at that stage of the production process) minus the value of the intermediate goods (excluding labor services). The final value of aggregate output can be calculated by either summing the value of all final goods and services OR by summing the value added of all goods and services at each stage of production. And finally, GDP is also the sum of all incomes earned in a given period.

Diff: 1

22) First, define nominal GDP and real GDP. Second, is it possible for nominal GDP in a year to be less than real GDP in the same year? Explain.

Answer: Nominal GDP represents the value of goods and services produced using current prices. Real GDP measures the value of the same goods and services using some base year prices. It is possible for nominal GDP to be less than real GDP in a given year. Given the definitions of the two variables, this will occur if prices in that year are simply less than prices in the base year. If, for example, the base year is 2002, it will generally be the case that nominal GDP will be less than real GDP for those years prior to 2002 given that prices have generally risen in all years.

Diff: 2

23) Explain whether it is possible for nominal GDP to increase and real GDP to decrease in the same period.

Answer: Nominal GDP can rise because either the price level is rising or the real quantity of goods and services produced has increased. Nominal GDP can increase while real GDP falls if the increase in the aggregate price level is larger (in a proportionate sense) than the drop in real economic activity.

Diff: 2

2.2 The Unemployment Rate

1) Suppose you are provided with the following data for your country for a particular month: 200 million people are working, 20 million are not working but are looking for work, and 40 million are not working and have given up looking for work. The official unemployment rate for that month is

- A) 7.7%.
- B) 9.1%.
- C) 10%.
- D) 23%.
- E) 30%.

Answer: B

Diff: 1

2) In the United States, someone is classified as unemployed if he or she

- A) does not have a job.
- B) does not have a job, or else has a job but is looking for a different one while continuing to work.
- C) does not have a job, has recently looked for work, and is collecting unemployment insurance.
- D) does not have a job, and is collecting unemployment insurance.
- E) none of these

Answer: E

Diff: 1

3) An individual is said to be a discouraged worker if he or she

- A) is working, but prefers not to work.
- B) is working part time, but would prefer a full time job.
- C) is working in jobs she/he is not suited for.
- D) wants to work, and is actively searching for a job.
- E) wants to work, but has given up searching for a job.

Answer: E

Diff: 1

4) Which of the following tends to occur when the unemployment rate increases?

- A) a reduction in the labor force participation rate
- B) a reduction in the number of discouraged workers
- C) an increase in the number of employed workers
- D) all of these
- E) none of these

Answer: A

Diff: 1

5) Labor income's share in an advanced country is likely to be

- A) 70%.
- B) 45%.
- C) 29%.
- D) 10%.
- E) none of these

Answer: A

Diff: 2

6) The labor force in the United States is defined as

- A) the total number of individuals who are employed.
- B) the sum of the total number of individuals who are employed and the officially unemployed.
- C) the sum of the total number of individuals who are employed, the officially unemployed, and discouraged workers.
- D) the total number of individuals who are 16 years old and older, but not retired.
- E) none of these

Answer: B

Diff: 1

Use the information provided below to answer the following question(s).

Suppose a country using the United States' system of calculating official unemployment statistics has 100 million people, of whom 50 million are working age. Of these 50 million, 20 million have jobs. Of the remainder: 10 million are actively searching for jobs; 10 million would like jobs but are *not* searching; and 10 million do *not* want jobs at all.

7) Refer to the information above. The labor force is

- A) 20 million.
- B) 40 million.
- C) 60 million.
- D) 80 million.
- E) 100 million.

Answer: C

Diff: 2

8) Refer to the information above. The labor force participation rate is

- A) .2.
- B) .3.
- C) .4.
- D) .6.
- E) .8.

Answer: D

Diff: 2

9) Refer to the information above. The official unemployment rate is

- A) .1.
- B) .2.
- C) .33.
- D) .4.
- E) .66.

Answer: C

Diff: 2

10) Macroeconomists are concerned about changes in the unemployment rate because changes in the unemployment rate provide information about

- A) the state of the economy.
- B) the welfare of those who are unemployed.
- C) none of these
- D) the state of the economy and the welfare of those who are unemployed.

Answer: D

Diff: 1

11) Explain the difference between the unemployment rate and the participation rate.

Answer: The unemployment rate is the percentage of the labor force (those employed and unemployed) that is unemployed. The participation rate is the percentage of the working age population that is in the labor force.

Diff: 2

12) Explain how the existence of discouraged workers alters the extent to which the official unemployment provides an accurate measure of the use of labor resources.

Answer: Discouraged workers are those individuals who have decided to stop searching for employment because they have become "discouraged" about employment opportunities. At some point, these individuals will no longer be considered as part of the labor force. The existence of discouraged workers will cause the official unemployment rate to provide an under-estimate of the underutilization of labor.

Diff: 2

13) Briefly explain why the reported official unemployment rate in Spain in 1994 may have provided an over-estimate of unemployment in Spain.

Answer: The relatively high unemployment rate in Spain is partly the result of a relatively large underground economy. The underground economy is that part of the economy which is not measured in official statistics. After taking into account those individuals who are "employed" in the underground economy, the unemployment rate in Spain would have been lower (but still relatively high).

Diff: 2

14) What are the social and economic implications of unemployment? Explain.

Answer: Economic implications: signal of economic activity and measure of the utilization of labor. Social implications: the emotional and psychological suffering that occurs as a result of being unemployed.

Diff: 2

15) Explain why economists care about unemployment.

Answer: First, they care about unemployment because of its direct effect on the welfare of the unemployed. Unemployment is often associated with financial and psychological suffering. Second, they care about unemployment because it provides a signal that the economy may not be using some of its resources efficiently.

Diff: 2

2.3 The Inflation Rate

1) The GDP deflator provides a measure of which of the following?

- A) the ratio of GDP to the size of the population
- B) the ratio of GDP to the number of workers employed
- C) the ratio of nominal GDP to real GDP
- D) the price of a typical consumer's basket of goods
- E) real GDP divided by the aggregate price level

Answer: C

Diff: 1

2) Which of the following calculations will yield the correct measure of real GDP?

- A) divide nominal GDP by the consumer price index
- B) divide the GDP deflator by the consumer price index
- C) multiply nominal GDP by the consumer price index
- D) multiply nominal GDP by the GDP deflator
- E) none of these

Answer: E

Diff: 2

3) The prices for which of the following goods are included in *both* the GDP deflator *and* the consumer price index?

- A) goods bought by households
- B) goods bought by firms
- C) good bought by governments
- D) goods bought by foreign households (i.e., exports)
- E) all of these

Answer: A

Diff: 2

4) Suppose we switch the base year from 2000 to 2008. This change in the base year will cause

- A) nominal GDP in every year to increase.
- B) nominal GDP in every year to decrease.
- C) both nominal and real GDP in every year to decrease.
- D) real GDP in every year to decrease.
- E) none of these

Answer: E

Diff: 2

5) Pure inflation occurs when

- A) nominal wages rise faster than all prices.
- B) all prices rise faster than nominal wages.
- C) all prices and nominal wages rise by the same percentage.
- D) the GDP deflator and Consumer Price Index rise by the same percentage.
- E) none of these

Answer: C

Diff: 2

6) One of the reasons macroeconomists have concerns about inflation is that inflation causes

- A) real GDP to rise.
- B) nominal GDP to fall.
- C) wages to rise as fast as prices.
- D) real GDP to exceed nominal GDP.
- E) none of these

Answer: E

Diff: 1

7) Which of the following prices will be used when calculating the rate of growth of real GDP between the year's 2005 and 2006 using the chain method?

- A) prices in the base year (2002)
- B) prices in 2005
- C) prices in 2006
- D) the average of prices in 2005 and 2006
- E) prices in 2005, 2006, and in 2002 (the base year)

Answer: D

Diff: 2

8) Which of the following factors is *not* believed to affect output in the long run?

- A) technology
- B) monetary policy
- C) the size of the labor force
- D) the capital stock

Answer: B

Diff: 1

9) Prices for which of the following are included in the GDP deflator, but not included in the Consumer Price Index?

- A) firms' purchases of new equipment
- B) intermediate goods and services
- C) consumption of goods
- D) consumption of services

Answer: A

Diff: 1

10) Based on the notation presented in Chapter 2, which of the following expressions represents nominal GDP?

- A) Y_t
- B) $P_t Y_t$
- C) Y_t/P_t
- D) $\$Y_t/P_t$

Answer: B

Diff: 1

11) Will the CPI and GDP deflator always move together? Explain.

Answer: No they will not. Some of the goods included in the GDP deflator (some investment goods) are not included in the CPI. Some of the goods included in the CPI (foreign goods) are not included in the GDP deflator.

Diff: 2

12) Explain how inflation can lead to distortions.

Answer: First, not all prices and wages adjust automatically when inflation occurs. Second, variations in relative prices (which occur when there is not pure inflation) can lead to uncertainty. Inflation can also lead to distortions if the tax system is not adjusted when inflation occurs (e.g. nominal income tax brackets).

Diff: 2

13) Explain why economists care about inflation.

Answer: Inflation will cause relative prices to change. It will also cause changes in the distribution of income. Inflation will lead to other distortions such as tax distortions and uncertainty.

Diff: 2

2.4 Output, Unemployment, and the Inflation Rate: Okun's Law and the Phillips Curve

1) The Okun's law shows the relationship between

- A) inflation and unemployment rate.
- B) output growth and unemployment.
- C) inflation and output growth.
- D) output growth and money supply.

Answer: B

Diff: 2

2) The Phillips curve describes the relationship between

- A) output growth and unemployment.
- B) inflation and output growth.
- C) output growth and money supply.
- D) inflation and unemployment .

Answer: D

Diff: 2

3) Which of the following about the Phillips curve is *not* correct?

- A) It shows the relation between GDP growth and unemployment.
- B) It has been redefined as a relation between the change in the rate of inflation and the unemployment rate.
- C) It was first explored by A. W. Phillips.
- D) The curve is downward sloping.

Answer: A

Diff: 1

4) Explain Okun's Law.

Answer: It shows the relationship between GDP growth and unemployment rate. If output growth is high, unemployment will decrease.

Diff: 1

5) Explain the Phillips curve.

Answer: It shows the negative relationship between inflation rate and unemployment rate. After 1970s, it was redefined as the relationship between the change in the rate of inflation and the unemployment rate.

Diff: 1

6) Explain why the Phillips curve on average is downward sloping.

Answer: When unemployment becomes very low, the economy is likely to overheat and this will lead to upward pressure on inflation.

Diff: 2

7) Can an economy maintain high output growth, low unemployment, and low inflation at the same time? Explain.

Answer: It would be very hard to achieve the three objectives at the same time. High output growth leads to low unemployment, which is likely to put pressure on inflation.

Diff: 2

2.5 The Short Run, the Medium Run, and the Long Run

1) Changes in GDP in the short run are caused primarily by

- A) demand factors.
- B) supply factors.
- C) technology.
- D) capital accumulation.
- E) all of these

Answer: A

Diff: 2

2) Changes in GDP in the medium run are determined primarily by

- A) demand factors.
- B) supply factors.
- C) monetary policy.
- D) all of these

Answer: B

Diff: 2

3) Changes in GDP in the long run are determined primarily by

- A) monetary policy.
- B) fiscal policy.
- C) demand.
- D) all of these
- E) none of these

Answer: E

Diff: 2

4) Explain what factors cause changes in output in: (1) the short run; (2) medium run; and (3) long run.

Answer: In the short run, demand factors primarily cause changes in output. In the medium run, factors such as the technology, amount of capital, and the skill and size of the labor force (supply factors) affect output. And in the long run, the education system, saving rate, and role of government affect economic activity.

Diff: 2

CHAPTER 2. A TOUR OF THE BOOK

I. MOTIVATING QUESTIONS

1. How do economists define output, the unemployment rate, and the inflation rate, and why do economists care about these variables?

Output and the unemployment rate are defined in the usual fashion; output as the GDP and the unemployment rate as the percentage of the labor force not working. The text defines the inflation rate in two ways: the percentage change in the GDP deflator and the percentage change in the CPI. The link between output and the standard of living is implicit in the chapter. Economists care about the unemployment rate because the unemployed suffer, particularly if they remain unemployed for long periods of time, and because the unemployment rate provides an indicator of whether the economy is growing too fast or too slowly (concepts that will be defined precisely later in the book). Inflation has three main effects: it redistributes real income away from those who receive fixed nominal income, it distorts relative prices to the extent that some nominal variables do not adjust, and it creates uncertainty about relative price levels.

2. What factors affect output in the short run, the medium run, and long run?

This chapter introduces the basic framework of the book in terms of time. In the short run (a time frame of a few years), output is determined primarily by demand. In the medium run (a time frame of a decade or so), output is determined by the level of technology and the size of capital stock, both of which are more or less fixed. In the long run (a time frame of a half century or more), output is determined by technological progress and capital accumulation.

II. WHY THE ANSWERS MATTER

Students need a formal definition of the basic macroeconomic variables before they can analyze them. The discussion in this chapter provides enough information for students to begin looking at macroeconomic data. Moreover, some discussion of why economists care about these variables, particularly inflation, is useful to orient students.

III. KEY TOOLS, CONCEPTS, AND ASSUMPTIONS

1. Tools and Concepts

- i. Chapter 2 introduces **index numbers**.
- ii. The chapter defines formally the basic macroeconomic concepts of **nominal** and **real gross domestic product (GDP)**, **GDP growth**, the **GDP deflator**, the **unemployment rate**, the **consumer price index (CPI)**, and the **inflation rate**, as well as associated concepts such as **valued added**, **intermediate inputs**, the **labor force**, and the **participation rate**. All of these concepts are defined in the usual manner.
- iii. The chapter distinguishes the **short run**, the **medium run**, and the **long run** in the manner described above in Part I. The distinction establishes the basic theoretical framework for the book.

IV. SUMMARY OF THE MATERIAL

1. Aggregate Output

The text considers a closed economy until Chapter 17, so output is equated with gross domestic product (GDP). Output has three equivalent definitions: (1) the value of final goods and services produced during

a given period, (2) the sum of value added during a given period, and (3) the sum of labor and capital income and indirect taxes.

Using the first definition, nominal GDP is output valued at current prices. Real GDP is output valued at constant prices. If the economy produced only one good—say, SUVs—and this good were unchanged over time, one could measure real GDP by simply counting the number of SUVs produced each year. Alternatively, one could multiply the number of SUVs by some constant price—say, the price in some base year. Thus, in the base year, real and nominal GDP would be the same. In practice, the construction of real GDP involves two complications. First, since the economy produces many goods, one must decide how to weight the value of the output of each good to produce aggregate real GDP. The text notes that the United States has adopted a technique—chain weighting—that allows the relative price of goods to change over time. The appendix to Chapter 2 discusses the construction of GDP and chained indexes in more detail. Second, the quality of similar goods changes over time. Economists who construct GDP try to account for quality change in goods through hedonic pricing, an econometric technique that estimates the market value of a good's characteristics—speed, durability, and so on.

The growth rate of real (nominal) GDP is the rate of change of real (nominal) GDP. Periods of positive GDP growth are called expansions; periods of negative growth, recessions.

2. The Unemployment Rate

An unemployed person is someone who does not have a job, but is looking for one. The labor force is the sum of those who have jobs—the employed—and the unemployed. The unemployment rate is the ratio of unemployed persons to the labor force. Those persons of working age who do not have a job and are not looking for one are classified as out of the labor force. The participation rate is the ratio of the labor force to the size of the working age population.

Economists care about unemployment for two reasons. First, the unemployed suffer. Exactly how much depends on a number of factors, including the generosity of unemployment benefits and the duration of unemployment. In the United States, the average duration of unemployment is relatively low, but some groups (e.g., ethnic minorities, the young, and the less skilled) tend to be more susceptible to unemployment and to remain unemployed much longer than average. Second, the unemployment rate helps policymakers assess how well the economy is utilizing its resources. A high rate of unemployment rate means that labor resources are idle. A low rate of unemployment can also be a problem, if the economy develops labor shortages. A more precise discussion of what constitutes an unemployment rate that is too high or too low is offered later in the book.

3. The Inflation Rate

The inflation rate is the growth rate of the aggregate price level. Since there are many goods produced and consumed in an economy, constructing the aggregate price level is not trivial. Macroeconomists use two primary measures of the aggregate price level. The first, the GDP deflator, is the ratio of nominal to real GDP. Since nominal and real GDP differ only because prices in any given year differ from the base year, the GDP deflator provides some measure of the average price level in the economy, relative to the base year. By construction, the GDP deflator equals one in the base year. Since the choice of base year is arbitrary, the level of the GDP deflator is meaningless. The rate of change of the GDP deflator, however, is meaningful; it is one measure of inflation.

Measures with arbitrary levels but well-defined rates of change are called index numbers. The GDP deflator is an index number.

An alternative measure of the price level is the Consumer Price Index (CPI)—another index number. In the United States, this measure is based on price surveys across U.S. cities. The prices of various goods are weighted according to average consumer expenditure shares in the United States. The construction of the CPI and the construction of real GDP involve similar problems. One can also measure inflation as the rate of change in the CPI.

The relationship between inflation measured from the GDP deflator and inflation measured from the CPI is very close, but not perfect. The differences arise because the two price indexes apply to different baskets of goods. GDP measures production of final goods, so inflation calculated from the GDP deflator provides a measure of the percentage change in the aggregate price of final goods produced in an economy. The CPI, on the other hand, measures the price of a representative basket of private consumption, so inflation calculated from the CPI provides a measure of the percentage change in the price of the domestic consumption basket. Domestic consumption includes goods imported from abroad, and domestic production includes final goods used for purposes other than domestic consumption.

Economists care about inflation because it can distort relative prices, produce uncertainty about relative prices, and redistribute income. Inflation distorts relative prices because some nominal variables do not adjust immediately to the rise in the aggregate price level. Inflation redistributes income because some transactions involve fixed nominal payments. For example, some retirees receive fixed nominal incomes (although the text notes that U.S. Social Security payments rise with the CPI).

Inflation may be costly, but there are also economic problems associated with deflation (negative inflation). For example, some of the costs of inflation would also apply to deflation. Moreover, deflation limits the ability of monetary policy to affect output. Consideration of the costs of inflation and the costs of deflation seems to suggest that there is an optimal rate of inflation. Most economists favor a stable inflation rate somewhere between 1 and 4%.

4. Output, Unemployment, and the Inflation Rate: Okun's Law and the Phillips Curve

There are two relationships that connect the three main dimensions of economic activity. The relationship between unemployment and output is described by Okun's law. American economist Arthur Okun found that when output increases unemployment falls and vice versa. Intuitively this relationship makes sense because higher output in general requires employing more workers. Figure 2-5 highlights this relationship.

The second relationship was identified by economist A.W. Phillips and is shown graphically as the Phillips curve (see Figure 2-6). Phillips discovered that inflation tends to increase as unemployment falls. This finding also seems intuitive given that as economic activity increases, and most people are working, the remaining potential workers must be paid higher wages to get them off the couch. In addition, firms will begin sniping employees from other firms by paying higher wages. The net result is an increase in inflation while unemployment falls.

5. The Short Run, the Medium Run, and the Long Run

Macroeconomists view the economy in terms of three time frames. In the short run—a few years or so—demand for goods and services determines output. In the medium run—a decade or so—the level of technology and the size of the capital stock determine output. Since these variables change slowly, it is a useful simplification to assume that they are fixed in the medium run. Finally, in the long run, technological progress and capital accumulation are the primary determinants of output growth. Changes in a nation's education system, the quality of government, or savings rate are examples of long run factors that affect economic output.

6. A Tour Of The Book

The remainder of the book can be divided into three sections: “Core” material (Chapters 3-13), extensions to the Core, and concluding chapters on macroeconomic policy and the state of macroeconomic thinking. The Core is organized around the three time frames. It discusses how output is determined in the short run in chapters 3 to 6. Chapters 7 to 9 develop the supply side and look at how output is determined in the medium run. Chapters 10 to 12 focus on the long run and looks at output growth. After the Core, there are two extensions: expectations (Chapters 14-16), and the open economy (Chapters 17-20). In chapters 21 to 23 the content goes back to monetary and fiscal policy issues. The final chapter (Chapter 24) focuses on the history of thought in macroeconomics.

The book is constructed so that the extensions can be addressed in any order after the Core. Indeed, most of the material in the extension chapters can be discussed without covering the growth section of the Core. In addition, much of the material in the policy chapters can be discussed immediately after the Core, without any of the extensions. Thus, there are a number of options for constructing a course around the text.

V. PEDAGOGY

1. Points of Clarification

The use of subscripts to index time will be new for many students. A few minutes of clarification may be worthwhile at the outset.

2. Alternative Sequencing

The chapter does not discuss national income accounting in any detail. Instead the relevant accounting identities are presented in the main text as they become relevant for the development of the analytical model. For example, Chapter 3 presents the expenditure side of the accounts in the course of explaining the composition of aggregate demand. A complete treatment of the real GDP and chain-type indexes is also presented in Appendix 1. Instructors may prefer to introduce the material from Appendix 1 immediately after Section 1 of this chapter.

3. Enlivening the Lecture

It is difficult to add much life to the definitions chapter of macroeconomics. One way to reduce the number of definitions is to focus only on output at this point. The unemployment and inflation definitions could be postponed until Chapter 7, which introduces the labor market and aggregate supply. A benefit of this approach is a more rapid advance to the Keynesian cross in Chapter 3. A cost is the need to say something about the aggregate price level in the *LM* curve in Chapter 6.

VI. EXTENSIONS

1. GDP as a Measure of Welfare

The chapter discusses briefly why economists care about inflation and unemployment, but does not do the same for GDP. It is probably obvious that economists use GDP as a gross measure of aggregate welfare, but instructors may wish to point out that there are (at least) three limitations on GDP as a welfare measure.

- i. Measured GDP values goods and services at market prices, since these reflect the relative values placed on them by consumers. However, some valuable things are not sold on markets, and their values thus have to be imputed, a process that undoubtedly introduces some errors. Two important services that do not have a market price are government services and owner-occupied housing.

ii. Some goods and services not traded in markets are omitted altogether from the GDP calculation. For example, the value of leisure and the value of services performed in the household are not included in GDP. From a broader perspective, one might also cite civil liberties and other political “goods” as nonmarket goods produced by a nation, but not included in GDP.

iii. GDP does not account for the fact that some of a nation’s wealth is depleted in the process of producing it. NDP corrects this to some extent by subtracting the value of depreciated physical capital, but depletion of natural and environmental resources is still omitted. The Department of Commerce and others have experimented with adjustments to GDP to account for resource and environmental depletion, but there is no consensus among economists about the proper methodology.

2. Stocks and Flows: Wealth and GDP

The text does not introduce the concepts of stocks and flows until Chapter 4 (Financial Markets). Instructors could introduce these concepts in this chapter by distinguishing national wealth (a stock) from GDP (a flow). A natural definition of national wealth is the value of the nation’s land (including natural resources), physical and human capital, and claims on foreigners at a given point in time.

VII. APPENDIX

The Construction of Real GDP and Chain-Type Indexes

The chapter discusses real GDP and also mentions the real GDP in chained dollars. This appendix shows you how to construct the real GDP and then how to construct a rate of change in the real GDP. It also extends the computations and shows how to link or chain the level of real GDP to a base year which is currently 2012. In the base year 2012 the nominal and real GDP are equal. Today any mention of the real GDP refers to 2012 dollars. This practice provides economists with a measure of real economic output by removing the influence of inflation.