

PURPOSE

This is the third chapter that addresses the efficiency and stability issues in our economy, and it focuses on macroeconomic policy. I think this is a chapter that instructors have to be careful with. We want our students to have a working understanding of the topic, but we also probably want to avoid the complexities of the Keynesian cross, the workings of the banking system, the math of the multiplier, and so on. We need to keep the economics straightforward in order to use it to emphasize the issues. On the other hand, I often find this chapter enlightening for students. Whereas the concepts of demand and supply open up the world of markets for them, aggregate demand and aggregate supply open up the world of macroeconomic policy. Nevertheless, they seem to be difficult concepts for students to grasp and we need to work at it.

LEARNING OBJECTIVES

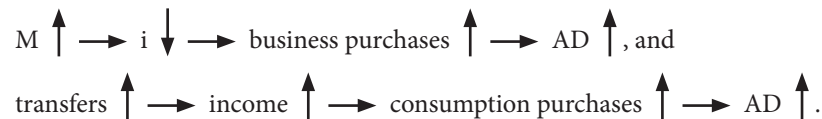
The learning objectives for this chapter are:

1. to acquaint students with the graph of aggregate demand and aggregate supply.
 2. to help students understand the concept of gross domestic product, its measurement, and its limitations.
 3. to acquaint students with the difference between real and nominal GDP.
 4. to help students understand what sectors are represented by aggregate demand, as well as the factors that would shift the aggregate demand and aggregate supply curves.
 5. to relate the concepts of unemployment and inflation, as well as the types of inflation discussed in Chapter 14, to the aggregate demand and aggregate supply graphs.
 6. to assist students in understanding the basic workings of fiscal, monetary, and supply-side policy, as well as recent policy that pulled our country out of the Great Recession of 2008/2009.
 7. to help students understand the economic liberal and conservative philosophies about policy.
-

LECTURE SUGGESTIONS

- Students have heard of the terms *fiscal policy*, *monetary policy*, and *supply-side policy*; but they (like most of the public) do not understand these policies or their effects. Tell them that this chapter will help them to understand news reports.
- I've found that a list of symbols, passed out in class at the beginning of this chapter, helps students a lot. Since you'll likely be using symbols as you graph the macroeconomy on the board, it is helpful for students to have a reference sheet so they do not get lost in the symbols. I include gross domestic product (GDP), full employment gross domestic product (GDP_F), aggregate demand (AD), aggregate supply (AS), the money supply (M), and the interest rate (i), along with their definitions. I have deliberately avoided the use of $GDP = C + I + G$, since it seems more useful to frame the discussion with students in terms of "what are the groups of people that *purchase* GDP?".

- Students must be reminded that we are talking about *purchases* when we consider aggregate demand so that, for example, they do not confuse government *spending* on national defense with the *production* (supply) of national defense. I try to use the phrase “purchases of” rather than “spending on” when I talk about AD. I also make a point of only shifting one curve per graph so that students are reminded of the difference between a shift in AD vs. AS.
- It’s also important to remind students at every opportunity that investment spending refers to things like business purchases of factories and machines, or they’ll confuse it with financial investment. This is another reason why I’ve avoided the symbol “I” for business purchases.
- It needs to be pointed out to students that there is no necessary relationship between government spending and taxes. For example, they may want to assume that an increase in government spending automatically means there is an increase in taxes to finance it.
- It is important to emphasize that monetary policy affects the aggregate demand curve, and not the aggregate supply curve. Students sometimes want to show the effect of expansionary monetary policy as a forward shift in aggregate supply (perhaps because they link money *supply* and aggregate *supply* in their minds).
- I find that it’s helpful whenever drawing the aggregate demand curve on the board to remind students that the groups that purchase GDP are consumers, businesses, government, and foreigners (though you may wish to simplify by ignoring foreigners). I do this so students keep these sectors in mind at every opportunity. This helps them when they attempt to think through fiscal and monetary policy.
- I also find it useful to use arrows when summarizing consecutive events on the board. For example, I will write that:



This helps students to keep the processes straight and simple.

- You may need to remind students several times that GDP and employment *move together* in the AD and AS graphs.
- You may also need to remind students many times that an increase in aggregate supply is a *forward* shift in the aggregate supply curve. Remind them to think in terms of the GDP axis.
- I have been surprised to realize that, despite my instructions to shift the AD or AS curve first, and then read the change in P and GDP from the graph, some students still try to guess at the changes and *then* shift the curve accordingly. This results in as many wrong answers as right answers. Therefore, I reinforce regularly the need to shift the curve of the group most directly and immediately affected by the change first (i.e., purchasers or producers), and then read the changes in P and GDP from the graph.
- I draw the aggregate supply curve upward sloping in this class. This is probably a matter of preference, but I think it enables students to think of the intermediate situation when a rise in aggregate demand will cause both an increase in GDP and the average price level, and that a decline in aggregate demand will do the opposite, at least in the short-run. A more realistic version of the slope of the AS curve is addressed in Appendix 15–1.
- Also, I’ve learned not to discuss the reasons for the downward slope of the aggregate demand curve as I go through the chapter material. Students are not entirely savvy about the difference between a shift in a curve and a movement along a curve at this level of economic understanding. They tend to confuse the international trade effect and the interest rate effect, for example, as reasons for the downward slope instead of as sources of shifts in the aggregate demand curve. For this reason, the slope of the aggregate demand curve is discussed in the Appendix 15–1 so you can decide whether or not to cover this material.
- Also note that I’ve deliberately simplified this chapter by ignoring the effect of the multiplier in the macroeconomic examples. Instructors can add this to the discussion in a nontechnical manner if they wish. It is addressed in the Notes section of the chapter.

- Finally, I like students to understand the economic explanation as well as the philosophical viewpoint behind the various types of macro policy. The Viewpoint section is intended to help students understand this so that they can form their own opinions about what is best for our economy and our citizens.

ADDITIONAL DISCUSSION AND ACTION QUESTIONS

You may find these questions useful in preparing lectures.

1. Draw a simple graph of aggregate demand and aggregate supply. Ask students what would be the effect of an increase in consumer purchases of goods and services due to rising wages throughout the economy. Emphasize that we are focusing on incomes and their effect on consumer purchases. Now ask the students what would be the effect of an increase in government purchases of public prisons and the services of prison guards. Finally, ask students what would be the effect of an increase in investment purchases by businesses. Will the impact on AD be the same in all of these examples? Will the impact on GDP be the same? Will the composition of GDP be the same?
2. Will the effects of expansionary fiscal policy and expansionary monetary policy be the same on (1) aggregate demand, (2) GDP, and (3) the composition of GDP? How would economic liberals and conservatives feel about these policies?
3. How could expansionary fiscal policy be used to improve the lives of the poor? Does an expansion of GDP always improve the lives of the poor? How about the effects of an expansion of GDP due to supply-side policy?
4. Can you discern Donald Trump's view toward macroeconomic policy? The Bob Woodward book reports that Trump only thinks in terms of making money for the country, even though this doesn't rest on economic theory. He wants to print more money as an easy way to get more money. Also, his public statements reveal that he doesn't understand the relationship between the executive sector and the Federal Reserve, of the working of the Fed itself. In fact, he is quoted as saying that the Fed has "gone loco" and has "gone crazy" as it has risen interest rates in 2017 and 2018 to stem off inflation.

SOME ANSWERS AND COMMENTS ON THE TEXT DISCUSSION AND ANSWER QUESTIONS

1. One reason behind the argument that the government should attach a value to homemaking services and include it in GDP statistics is that our society seems to value production that does have a value attached. How many homemakers, when asked what they do, say, "I'm just a homemaker"? How many farm wives who do the milking, the gardening, the canning, and the care of the livestock are referred to as "just housewives" rather than farmers? I've even heard women in developing countries—where cooking means growing, harvesting, processing, and cooking the food; where housekeeping means building, repairing, painting, and cleaning the house; and where childcare means providing medicine, education, healthcare, and clothing for the children—say that they don't have a job and do not feel valued unless they earn a monetary income.
Another problem with not counting the value of homemaking services is that comparisons become distorted. For example, in the 1950s, many homemakers cared for their homes and families by themselves, without paying for additional help. In more recent decades, many women work outside their homes and pay for child care services, laundry services, housekeeping services, and so on. The very same homemaking services might have been done, but were not tabulated as part of GDP in the earlier time period.
2. While there are problems with the use of GDP as a measure of economic activity, there are even more serious problems with the use of GDP as a measure of standards of living. International comparisons discussed in Chapter 10 on World Poverty make this even more evident.
3. I think it's good for students to know the macroeconomic ramifications of the various government policies. For example, we normally don't think that a nation will go to war just to improve its macroeconomy, yet the stock market couldn't have been more optimistic during the first Gulf War and our economy certainly recovered from recession with the 2003 Iraqi invasion.

4. Student activity.
5. Student activity.
6. Economic liberals prefer fiscal policy that increases government purchases and income transfers (though economic conservatives generally approve of increases in defense spending). Conservatives prefer fiscal expansion through reduced taxes. Conservatives often favor policy that reduces interest rates. These are all generalities; of course the real world is more complex.
7. Student answers will vary, but should focus on policies and their effects.
8. Student activity.

(Appendix 15–2)

1. This one is a harder one. Tell students you don't believe it was successful in the early 1980s, and you'll be branded a liberal! (For some reason, conservative students sometimes have an unexplainable "nostalgia" for this U.S. president who was in office during their infancy, if during their life at all.) Point out the various ways to look at the effects of the policy, and students will welcome your impartiality. For example, there may be some types of supply-side policies that work better than others (some policies, such as antitrust enforcement and affirmative action, could even be considered by economic liberals to be examples of supply-side policies). Chapter 6 (U.S. Poverty) explains how many people can be left out of the prosperity of a growing economy.

SUGGESTED TEST QUESTIONS

Multiple-Choice Questions

1. Which of the following is true about gross domestic product?
 - a. It includes output at all stages of production (that is, intermediate goods as well as final goods).
 - b. It is expressed in terms of physical quantities, not values.
 - c. **It includes services as well as goods.**
 - d. All of the above
2. When referring to GDP over time, we want to use:
 - a. **real GDP.**
 - b. nominal GDP.
 - c. GDP calculated using actual (current) prices.
 - d. None of the above
3. Gross national product (GNP) differs from gross domestic product (GDP) in that GNP:
 - a. **refers to production by the economy.**
 - b. refers to production *in* the economy.
 - c. refers to production of goods only.
 - d. refers to production of services only.
4. Underground activity:
 - a. includes illegal activity.
 - b. includes activity not reported in order to evade taxes.
 - c. is sizable for many countries.
 - d. **All of the above**
5. Consumer purchases of GDP include consumer purchases of:
 - a. durable goods.
 - b. nondurable goods.
 - c. services.
 - d. **All of the above**

6. Business purchases of GDP include:
 - a. purchases of stocks.
 - b. purchases of bonds.
 - c. purchases of factories.**
 - d. All of the above

7. Which of the following is *not* correct? Government purchases of goods and services include:
 - a. government purchases of food for nutrition programs.
 - b. government purchases of police protection for citizens.
 - c. government income transfers to low-income individuals.**
 - d. government purchases of the teaching services of public school teachers.

8. Demand-pull inflation is caused by:
 - a. anything that increases aggregate demand.**
 - b. anything that increases costs of production.
 - c. market power that increases profits.
 - d. anything that pulls down aggregate demand.

9. Which of the following is a tool of expansionary fiscal policy?
 - a. increased taxes
 - b. reduced transfers
 - c. reduced regulations
 - d. increased government purchases of goods and services**

10. Monetary policy is under the direct control of:
 - a. the President.
 - b. Congress.
 - c. the Federal Reserve.**
 - d. the major city mayors.

11. Which of the following can be a tool of (expansionary) supply-side policy?
 - a. increased taxes
 - b. increased transfers
 - c. increased regulations
 - d. None of the above**

12. Which of the following *is not* associated with trickle-down philosophy?
 - a. economic growth and prosperity
 - b. benefits to all
 - c. special concern for the poor through government programs for them**
 - d. conservative economics

13. Which of the following is included in GDP?
 - a. homemakers' services
 - b. volunteer activities
 - c. services such as healthcare and education**
 - d. productive work that you do for yourself without being paid

14. Which of the following represents the largest share of aggregate demand?
 - a. consumer purchases**
 - b. business purchases
 - c. government purchases
 - d. foreigner purchases

15. Examples of income transfers include:
- food stamps.
 - housing assistance for the poor.
 - Social Security cash benefits.**
 - All of the above
16. Which of the following is *not* an example of expansionary fiscal policy?
- reduction in taxes
 - increase in government purchases
 - increase in money supply**
 - increase in government income transfers
17. Which of the following is a tool of (expansionary) supply-side policy?
- reduction in tax rates**
 - increase in government regulations
 - increase in government transfers
 - All of the above
18. Business purchases include:
- purchases of machinery.
 - purchases of factories.
 - “purchases” of inventories.
 - All of the above**
19. The effects of stagflation include:
- recession.
 - inflation.
 - unemployment.
 - All of the above**
20. Expansionary monetary policy involves:
- an increase in the money supply.
 - a reduction in interest rates.
 - an increase in business and consumer purchases.
 - All of the above**
21. In general, which of the following policies would conservatives be *least* likely to support?
- reduced taxes to increase private purchasing power
 - government purchases for social programs**
 - government defense spending
 - lowered interest rates to increase private spending
22. Which country listed in the table in the text has the highest level of GDP in the world?
- The U.S.**
 - China
 - Japan
 - Germany

(Appendix 15–1)

23. Which of the following could cause an increase (forward shift) in aggregate supply?
- lower costs of production
 - good weather
 - improved technology
 - All of the above**

23. Which of the following can change the degree of the slope of the aggregate demand curve?
- changes in international trade
 - changes in wealth
 - changes in interest rates
 - All of the above**
24. An increase in aggregate demand within the vertical range of the aggregate supply curve will result in:
- an increase in the average price level**
 - an increase in GDP
 - an increase in both the average price level and GDP
 - None of the above

True-and-False Questions

- The letter “P” on the vertical axis of the graph of aggregate demand and aggregate supply refers to the average price level in the economy. **(T)**
- Gross domestic product is defined as the market value of all final goods and services produced in the economy over a particular time period. **(T)**
- Aggregate supply shows the quantity of total output supplied (produced), assuming that the average price level in the economy is constant. **(F)**
- If we are interested in the value of GDP during the current year only, then we are interested in real GDP. **(F)**
- Underground activities refer to activities such as homemakers’ services, which do not create incomes. **(F)**
- The composition of GDP refers to the types of goods and services that GDP consists of. **(T)**
- Durable goods are those goods that last longer than one year. **(T)**
- Business purchases of GDP include the purchases of stocks, bonds, and treasury bills. **(F)**
- Fiscal policy includes government purchases of goods and services, government taxes, and Federal Reserve decisions about the money supply in the economy. **(F)**
- Supply-side policy can include deregulation and cuts in tax rates. **(T)**
- My current purchase of a 10-year-old house is part of current GDP. **(F)**
- The price the consumer pays for a gallon of gasoline, including any sales and excise taxes, is called the market price of gasoline. **(T)**
- Production by a U.S. citizen in a foreign country is part of U.S. GDP. **(F)**
- Production by a U.S. citizen in a foreign country is part of U.S. GNP. **(T)**
- Two different types of fiscal policy may result in identical levels of GDP but a different composition of GDP. **(T)**
- Expansionary monetary policy results in increased interest rates. **(F)**
- Changes in government income transfers may be considered as fiscal or supply-side policy. **(T)**
- Homemakers’ unpaid services are not considered as part of GDP. **(T)**
- Nominal GDP is calculated with “constant prices.” **(F)**
- Increased costs of production throughout the economy will cause an increase in aggregate supply. **(F)**
- Policy that shifts AD generally causes a trade-off between unemployment and inflation. **(T)**
- Policy that shifts AS generally causes a trade-off between unemployment and inflation. **(F)**
- President Barack Obama has generally favored an economically liberal agenda of increased government spending to meet the needs of a recovering economy and the regulation of the financial sector. **(T)**

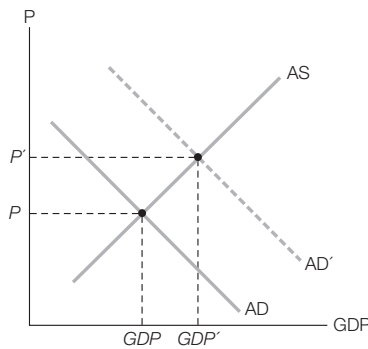
(Appendix 15-1)

24. The aggregate demand curve is downward sloping because higher average price levels directly reduce our purchasing power by making goods and services more expensive. **(F)**
25. One of the reasons for the downward sloping aggregate demand curve is that a higher average price level is associated with higher interest rates, thereby reducing purchases. **(T)**
26. An increase in aggregate demand along the Keynesian (flat) portion of aggregate supply results in increased GDP and a higher average price level. **(F)**
27. The slope of the aggregate demand curve is influenced by the average price level. **(T)**
28. The vertical range of the aggregate supply curve corresponds to the Great Depression. **(F)**
29. The usual upward slope of aggregate supply is associated with a tradeoff between unemployment and inflation. **(T)**

Short-Answer Questions

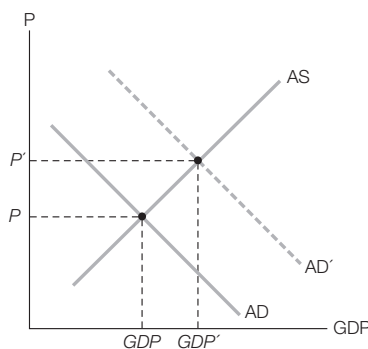
(Answers are shown in the following graphs in order to distinguish between AD and AS shifts.)

1. Draw the shift that will occur if there is an increase in government income transfers, which increase the incomes of many consumers. What will be the effect on GDP and employment? (**increase**) What will be the effect on the average price level? (**increase**)

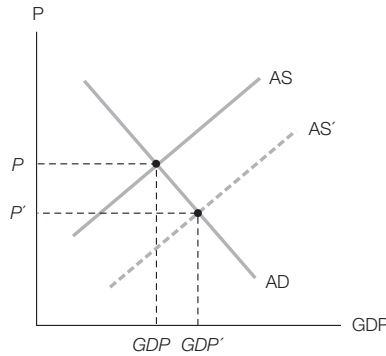


(Note that on questions of this nature, instructors must be extremely careful to distinguish between changes in taxes and transfers as fiscal policy tools vs. supply-side policy tools. Questions need to be phrased with reference to the effect of a change in transfers and taxes on income versus work incentives.)

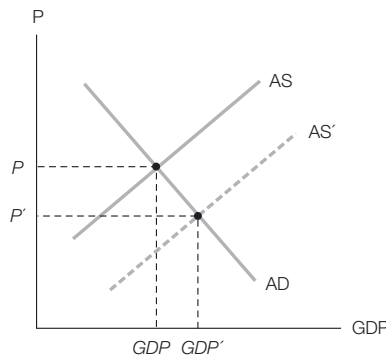
2. Draw the shift that will occur if there is an increase in government purchases of public libraries. What will be the effect on GDP and employment? (**increase**) What will be the effect on the average price level? (**increase**)



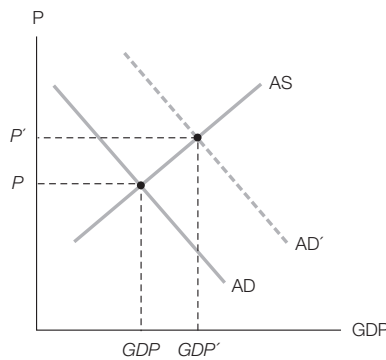
3. Draw the shift that will occur if the government reduces regulations requiring consumer safety for automobiles and other manufactured goods, thereby lowering the costs of production. What will be the effect on GDP and employment? (**increase**) What will be the effect on the average price level? (**decrease**)



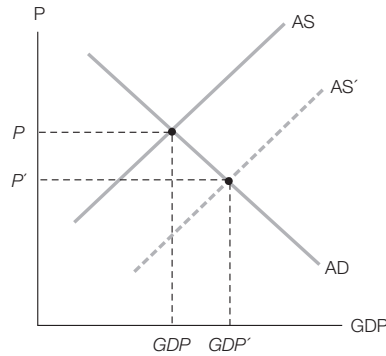
4. Draw the shift that will occur if there is a reduction in tax rates that successfully increases work incentives and work effort by the labor force. What will be the effect on GDP and employment? (**increase**) What will be the effect on the average price level? (**decrease**)



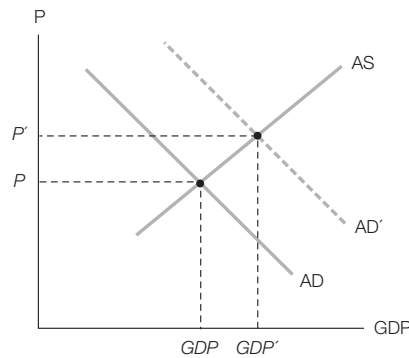
5. Draw the shift that will occur if there is a reduction in taxes that serves to increase the after-tax income of consumers. What will be the effect on GDP and employment? (**increase**) What will be the effect on the average price level? (**increase**)



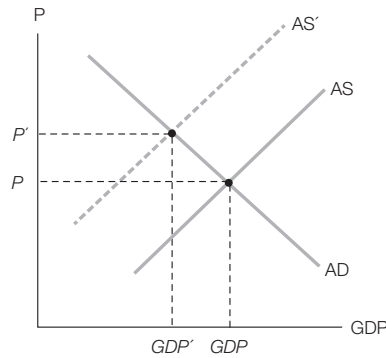
6. Draw the shift that will occur if the government reduces transfers, which we will assume results in greater work incentives and work effort by the labor force. What will be the effect on GDP and employment? (**increase**)
 What will be the effect on the average price level? (**decrease**)



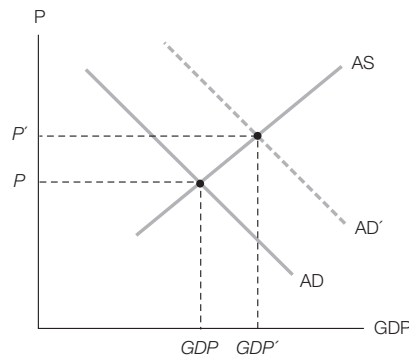
7. Draw the shift that will occur if the Federal Reserve increases the money supply, thereby lowering interest rates. What will be the effect on GDP and employment? (**increase**) What will be the effect on the average price level? (**increase**)



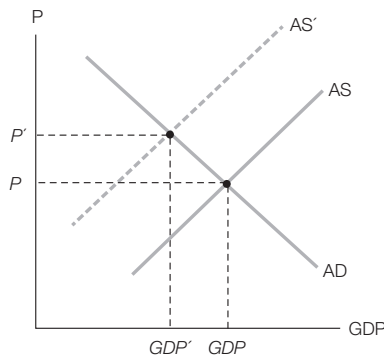
8. Draw the shift that will represent each of the following types of inflation.
 a. Cost-push inflation.



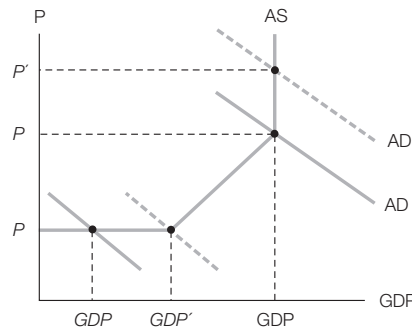
b. Demand-pull inflation



c. Profit-push inflation



9. (Appendix 15-1) Using the more complex graph of aggregate supply below, show the effect of an increase in AD in the horizontal portion of AS. What is the effect of this on GDP? (**increase**) What is the effect on the average price level? (**no change**) Show the effect of an increase in AD in the vertical portion of AS. What is the effect of this on GDP? (**no change**) What is the effect on the average price level? (**increase**)



Critical Thinking Question

Economists and policymakers often give great importance to GDP as an indicator of economic prosperity and stress the importance of maximizing GDP in the current time period and increasing it over time. Do you think this strategy is entirely appropriate, or are there other factors and strategies that are equally important? Are there ways that economic growth can actually be harmful to our well-being? What types of policies would you advocate?

Describe Trump's economic policy, including his taking credit for the expansion that began under Obama. What have been the effects of his policies on GDP and its growth

INTERNET RESOURCES

<http://www.fedstats.gov>

(This site provides links to statistics and to statistical agencies.)

<http://www.census.gov>

(The Census Bureau provides information on GDP and prices, as well as a multitude of other information.)

<http://www.bls.gov>

(The Bureau of Labor Statistics provides information on employment and unemployment.)

<http://www.whitehouse.gov>

(It is sometimes fun to have your students search this website to find recent speeches of the president.)