

## Chapter 1 Project

#### **Welcome to Economics!**

#### **Purpose**

After finishing your first chapter of economics, you have learned about scarcity and choice and the division of labor. Now, let's explore how these things relate to your everyday life.

The purpose of this exercise is to help you understand both how scarcity affects all of your choices and how the division of labor allows us all to consume more (and thus reduces scarcity, to some extent).

#### **Directions**

This exercise has two parts. In the first, you will keep a journal of choices that you make in a typical day. In the second, you will examine how your choices might be more difficult if we were not able to divide labor and specialize.

### Part 1 - Journaling Choices

For a single day, beginning with the moment you wake up in the morning, write down each choice that you have to make. For each choice, identify what some of the other alternatives might be.

For example, when you eat lunch, you are choosing (1) to use your time to consume lunch rather than doing something else, (2) choosing to spend money on lunch (usually) rather than on some other thing, and (3) choosing among the many foods that you could consume.

At the end of the day, examine your choices. Were they "good" choices, in the sense that if you had to do them again, you would make the same choice? If you did not make the best choices, what kept you from choosing a better alternative?

Summarize your choices in the following chart and in a concise essay.

In the coming chapters, you will learn more about scarcity and choice and how your choices affect not only you but society.

	Part 1	
	Choices You Make	Alternative Choices
Choices		
	Good Choices	Bad Choices & Why Did Not Choose a Better Alternative
Examine		
Summarize		

Chapter 1 Project

### Part 2 - Dividing Labor

Go back to your journal and consider one of the meals that you chose to consume. Unless this food came out of your own garden or farm, you purchased this meal or its ingredients. Think about if you had to produce this food from start to finish.

For each component of the food, explain how that part is produced. How many separate parts are involved in your meal? What would happen if you had to produce each of these ingredients yourself? How much time would that take you, and what else would you have to give up?

For example, consider a tuna sandwich. This usually consists of bread, tuna, mayonnaise, and salt, at minimum. To produce this sandwich, you would first need bread. Bread is made from flour, yeast, and other ingredients, so first you would have to grow some wheat. Then you would have to grind the wheat into flour. If you were lucky, you might have a yeast culture saved to help the bread rise. Sugar helps yeast rise, too, so you would need to raise some sugar beets, or possibly keep bees for honey. Then you would have to fish for the tuna, and you would also need some eggs and oil for the mayonnaise, so you would need to have some chickens and an olive tree. Finally, you need salt for all of these things, so you would need to mine the salt (or, if you are near the sea, you can use sea water to obtain salt).

Make a chart of all the parts of your chosen food(s) and estimate how long it would take you to produce this. Write a short description of the process and how this would impact the other things that you typically do. How would your life be different if we were not able to specialize and then exchange goods?

In coming chapters, we will explore the gains from specialization and the benefits of being able to buy and sell goods in markets.

		Part 2	
	Parts of the Meal	Time to Produce	Process to Produce
One Meal			
How wou	ld producing everything yours	self impact the other things tha	at you typically do?
How would	your life be different if we wer	re not able to specialize and th	nen exchange goods?
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## Checklist

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- ☐ List each choice you make.
- ☐ Identify alternative choices.
- ☐ Examine your choices.
- ☐ Summarize your choices.

### Part 2

- ☐ Choose one meal and explain how each component is produced.
- ☐ Make a chart with time estimates of production.
- ☐ Describe the process.

Chapter 2 Project

## Chapter 2 Project

## **Choice in a World of Scarcity**

#### **Purpose**

After finishing this chapter, you have learned more about how scarcity constrains choices for both societies and individuals.

The purpose of this exercise is to help you understand budgets, opportunity costs, comparative advantage, and production possibilities in your own life.

#### **Directions**

This exercise has two parts. In the first, you will consider budget choices. In the second, you will consider yourself as a producer of goods and your production possibilities.

#### Part 1 - Budget and Costs

Consider a week in your life (you could also choose to do this exercise for a day or a month, whichever seems most clear in terms of budgeting).

1. First, write down how much money you usually have to spend in a week. This is your *income*. For many students, who may not work while in school, that income is fixed by grants, loans, and/or parents/guardians. If you work while in school, your weekly budget may vary based on the number of hours that you work (and of course, you may not receive your paycheck until later), but to keep things simple, just choose an average amount of income that you receive in a normal work week.

Weekly Income	

2. Then, consider what you usually choose to buy in a given week. Of course, there are many, many things that you might possibly buy, but again, to keep things simple, choose three major categories, like your favorite foods, entertainment choices, and things you need, like gasoline (if you have a car). What is the average price of each of these goods?

Good or Service	Average Price

3. Now, think about your budget constraint. Since we are choosing between more than two goods, we cannot graph a budget constraint as you did in the chapter. But you can still find the endpoints of your constraint, the maximum amount of each good that you could buy if you spent all of your income on that good.

Good or Service	Maximum Possible Amount

**4.** You can also calculate the relative price of each good in terms of other goods. For example, if Good A costs \$10, Good B costs \$5, and Good C costs \$1, for every Good A you buy, you could have purchased 2 units (10/5) of Good B or 10 units (10/1) of Good C. Find these relative prices for all of the combinations of goods that you have.

Good or Service	Price Relative to First Good	Price Relative to Second Good	Price Relative to Third Good

5. Then, consider the amount of each good that you typically consume in a week. In a short answer, explain how the relative prices of each good and your budget help to determine your choice. If your budget doubled, how would that be likely to change your choices?

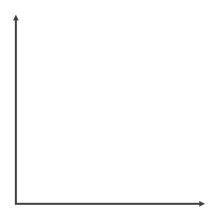
In the coming chapters, you will learn about how your tastes and preferences, as well as the prices of goods and income, determine your best choices.

# Part 2 - Production Possibilities, Comparative Advantage, and Opportunity Costs

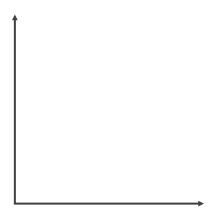
In the first part, you considered income to be fixed. However, you can think of yourself as a producer of "goods," such as income, studying/grades, and recreation.

You have twenty-four hours a day, or 168 hours in a week, that you can spend on whatever you choose to do. Those choices determine your output of goods. We're going to assume that there are only two things that you can do with your time. Studying/attending class produces grades. Leisure (which could include such things as sleeping and hanging out with friends) produces happiness.

1. Draw a graph. Label the horizontal axis "Grades" and the vertical axis "Happiness." (Of course, great grades are likely to bring you happiness, too, but we are not going to consider that factor.) What do you think that the shape of your production possibilities frontier (*PPF*) is for these two goods? Are there diminishing returns in the production of these two goods? (*Hint*: for most people, there are diminishing returns.) How does your graph show you the opportunity cost of grades, and how does that opportunity cost change as you study more and more?



2. Now, suppose that you have a friend who is much better or much worse at studying than you are. Assume that your friend is just as good at producing happiness as you are. Draw possible *PPF*s for each of you on the following graph. How is the opportunity cost of grades different for each of you for a given amount of happiness production?



- 3. Now, explain (a) why your *PPF*s have the shapes that they have, (b) what you can say about opportunity cost and comparative advantage between you and your friend, and (c) what combination of happiness and grade production you might choose.
- **4.** Finally, suppose that you have an increase in productive efficiency that makes you better at producing happiness but not at producing grades. Carefully explain how this might affect your *PPF*, the opportunity cost of grades, and your production choice.

**BONUS:** Sometimes we "waste" time, which in this case means that we spend time that produces neither happiness nor better grades. If you waste time, where is your choice relative to the *PPF*?

### Checklist

#### Part 1

Reflect on a normal week in your life.
Determine your income within that week.
Identify your spending within that week.

#### ☐ Calculate your budget constraint and spending options.

#### Part 2

	Graph and	answer	questions	pertaining	to produ	action p	ossibilities.
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	l Comp	lete the	bonus	question
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## Chapter 3 Project

## **Demand and Supply**

#### **Purpose**

This chapter taught you about demand, supply, market equilibrium, and social surplus.

The purpose of this exercise is to help you relate demand, supply, and market equilibrium to your own life.

#### **Directions**

This exercise has two parts. In the first, you will construct your demand curve for a good and consider your own choices and consumer surplus at different prices. In the second, you will consider how and why your demand for goods might change and how that would impact consumer surplus.

#### Part 1 - The Demand for Concert Tickets

Suppose that your favorite band or singer plays local shows once a week for the next year.

1.	Consider the lowest ticket price that would make you decide not to go to any shows. For example, if the price
	is \$200, you would not attend a single show. This is the vertical intercept of your demand for concert tickets (0,
	your maximum price).

The (lowest) price that would make me unwilling to buy *any* concert tickets is \$ . .

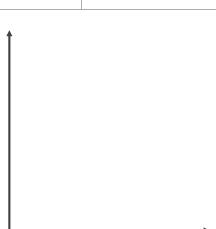
2.	Now, consider how many shows you would go to if tickets were free. The maximum number is 52 (the number
	of weeks in the year). If you chose that, your horizontal intercept would be (52, 0), but you would likely not
	choose to go every week.

The greatest number of shows that I would attend if they were free is \_\_\_\_\_.

You have now found two points on your demand curve.

3. Think about the other points on your demand curve and write your demand schedule. For example, if you were not willing to buy any tickets at \$200, you might buy 1 ticket at \$190, 2 tickets at \$150, etc. Write all the points that you have found in a demand schedule, and then graph your demand curve.

Price	Quantity Demanded

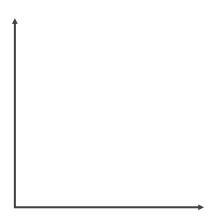


Chapter 3 Project

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4.	Now, choose a price around the middle of your demand curve and suppose that this is the price of tickets. How many tickets would you buy at this price? Calculate the consumer surplus that you would receive on each of the tickets that you buy at that price, and then add them up to find your total consumer surplus. (For example, if you are willing to pay \$150 for a ticket, but the ticket price is \$50, you receive consumer surplus of \$100. Find this for each price and quantity up to the price that you choose.)
5.	Then, suppose that the price drops to the next lowest price on your demand curve. Recalculate consumer surplus for each ticket. How has your total consumer surplus changed?
6.	Finally, with reference to your demand schedule and demand curve, explain the relationship between price and quantity demanded. Then, explain what consumer surplus is and how it changes as the price of tickets changes. What does consumer surplus mean to you? In what sense are you better off when consumer surplus increases?
Part 2	In the next part, you will relate changes in demand to consumer surplus.  2 - Demand Shifts and Consumer Surplus
	part of the exercise, you will be using the demand curve that you created in Part 1.
1.	For each of the following cases, determine whether your demand will increase, decrease, or stay the same and briefly explain why. Then, state what will happen to your consumer surplus.
	a. Your income increases, and tickets are a normal good.
	<b>b.</b> You get tired of the band and are less interested in hearing them play.
	c. The price of tickets falls.
	d. The price of tickets for another band that you like a lot falls.

e. You expect that next year, tickets will be cheaper than they are this year.

2. Now consider only 1(a). Show the shift of the demand curve, and show graphically what will happen to your consumer surplus. (You do not need to calculate this mathematically.)



- 3. Before demand changed, how much consumer surplus did you receive on the last ticket that you bought? How much consumer surplus did you receive on the last ticket after demand changed? What happened to consumer surplus on the first ticket that you bought before and after demand changed?
- **4.** Finally, carefully explain the two reasons why consumer surplus increases when your demand for a good changes.

## **Checklist**

#### Part 1

- $\square$  Identify the maximum price you would pay to go to a concert.
- ☐ Identify the maximum number of shows you would attend.
- ☐ Create/plot your demand curve.
- ☐ Calculate your consumer surplus.

#### Part 2

- ☐ Consider different scenarios of demand and supply.
- ☐ Explain how/why your consumer surplus changed.

Chapter 4 Project

## Chapter 4 Project

#### **Labor and Financial Markets**

#### **Purpose**

This chapter taught you about demand and supply in labor and financial markets. All people interact with both markets, usually as suppliers of labor in labor markets and as both *suppliers* (savers) and *demanders* (borrowers) of funds in financial markets.

The purpose of this exercise is to help you relate labor and financial markets to your own life.

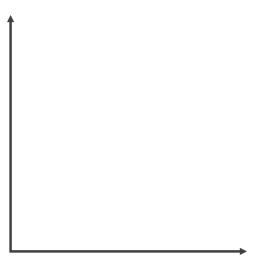
#### **Directions**

This exercise has two parts. In the first, you will construct your own supply curve for labor under changing circumstances. In the second, you will consider your current and future role in financial markets.

### Part 1 - Your Supply of Labor

- 1. Consider the following table, which shows possible wages in the left column and hours of work *per week* in the right column.
  - **a.** For each of the wages given, fill in the chart to show how many hours *you* would currently be willing to work at each wage. (To make this exercise work, you need to choose some number of hours greater than zero for every wage above \$0.)
  - **b.** Then, graph the individual labor supply curve that you have created on the graph on the right. Be sure to label each axis!

Wage	Hours of Work Supplied
\$45	
\$40	
\$35	
\$30	
\$25	
\$20	
\$15	
\$10	
\$5	
\$0	

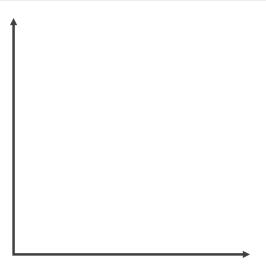


2. Now, suppose that the wage is \$10. How many hours of labor would you be willing to supply at this wage?

**3.** There are 100 people exactly like you in the labor market (including you). Fill out the table and graph the **total** supply of labor.

Wage	Hours of Work Supplied
\$45	
\$40	
\$35	
\$30	
\$25	
\$20	
\$15	
\$10	
\$5	
\$0	

Project



**4.** How many hours of labor will the total market supply at a wage of \$10 per hour? How much money will you earn per week? How much will the total labor supply earn per week?

5. Now, suppose that the government passes a law setting a minimum wage of \$15. How many hours of labor would you be willing to supply at this wage? How many hours will the total market supply?

- **6.** As wages rise, the quantity demanded of labor will fall. Suppose that at the \$15 minimum wage, firms demand only half of the labor that is supplied at that wage.
  - **a.** If you still have a job, how much will you earn?
  - **b.** Since half of all workers will lose their jobs, what will be the total earnings in the labor market now?
  - **c.** Explain the effect of a minimum wage on (1) workers who still have jobs, (2) workers who are laid off, and (3) the total earnings of all workers.

## Part 2 - Exploring Financial Markets

Most college students take out some student loans.

1.	In financial markets, are students the demanders or suppliers of financial capital?
2.	If interest rates rise, are students likely to take out more or fewer student loans?
3.	If the return on a college degree falls, are students likely to take out more or fewer student loans?
4.	Briefly explain the difference between (2) and (3) above in terms of what has happened in financial markets.
5.	Most young people are borrowers in financial markets because their earnings are relatively low as compared to their future earnings, and they need things like cars and education and houses that they have not had time to save up for. As you get older and your income rises, your income may exceed your spending. Then, you will have savings. At that point in your life, will you be a demander or supplier of financial capital?
6.	If interest rates fall, what will happen to the amount of financial capital that you borrow or save?
7.	During the global financial crisis, the Federal Reserve decreased interest rates to close to zero. One reason why the Fed did this was to encourage firms to borrow funds to expand and to hire more workers. However, this also had an effect on savers.
	Briefly explain how the Fed's actions would affect you if you were a borrower and if you were a saver. Why do you think that the Fed was willing to take this action?

Chapter 4 Project

## Checklist

☐ Explain effects of the Federal Reserve's actions.

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Part	1
	Consider hours of labor based on wage.
	Construct your individual supply curve.
	Construct total market supply curve.
	Examine changes in labor supply from changes in minimum wage.
	Explain effects of minimum wage.
Part	2
	Identify the role of students in financial markets.
	Consider decisions based on change in financial markets.

## Chapter 5 Project

## **Elasticity**

#### **Purpose**

In this chapter, you learned about elasticity and how to calculate the measures of the various types of elasticity. The most important elasticity is the price elasticity of demand, which measures the responsiveness of quantity demanded to changes in price. Generally, demand is more elastic if there are many substitutes available, the good is more of a luxury than a necessity, the good accounts for a large part of a consumer's budget, and the time period involved is longer.

The purpose of this exercise is to illustrate how consumption decisions are affected by the determinants of elasticity, to practice calculating elasticity, and to understand how total spending on a good or service is affected by its elasticity.

#### **Directions**

This exercise has two parts. In the first part, you will fill in a table and calculate the price elasticity of demand for several goods. In the second part, you will evaluate your decisions and categorize the demand for each good as elastic or inelastic.

#### Part 1 - Complete the Table

Assume that you spend a total of \$400 per month on the quantities of the goods and services in the following table. Now, suppose that the price of each good and service increases by 50%, but your budget hasn't changed. You still have only \$400 to spend on these products.

- 1. Complete the table by entering the quantity you would buy after the price increase in the "New Quantity" column. You don't have to spend the entire \$400, but you cannot spend more than \$400 after the price increase.
- 2. Calculate the amount you would spend on the good or service after the price increase in the "New Spending" column. Determine the percentage change in the quantity you consume after the price increase in the "% ΔQ" column.
- 3. Then, calculate your price elasticity of demand for each good in the "Elasticity" column. Calculate elasticity as the simple |(% change in quantity)/(% change in price)|.

## Part 2 - Evaluate and Classify

1. Based on your calculations, classify the price elasticity for each good as elastic or inelastic.

Good	Elastic/Inelastic	Good	Elastic/Inelastic
Apples		Fast food	
Aspirin		Gasoline	
Beer		Laundry detergent	
Print books		Microwave popcorn	
Bottled water		Restaurant meals	
Chicken		Soda	
Coffee		Uber rides	

2.	Explain how the factors that determine elasticity (i.e., availability of substitutes, necessity vs. luxury, and
	percentage of budget) influenced your response to the 50% increase in price for each of the goods and services

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3.	Explain the rel	lationshin	between total	spending on a good	l and a	a price increase	e when dema	nd 181

- a. elastic
- b. inelastic

## Checklist

#### Part 1

- ☐ Input new quantities in the table for each product after the prices increase.
- ☐ Calculate % change in quantity for each product.
- ☐ Calculate price elasticity for each product.

#### Part 2

- ☐ Classify price elasticity for each product.
- ☐ Explain factors of elasticity.
- Describe effects of a price increase on total spending for elastic/inelastic goods.

# Chapter 6 Project

### **Consumer Choices**

#### **Purpose**

At the beginning of the course, we learned that economics is the study of how individuals, businesses, and governments all face the problem of scarcity. Because resources are scarce, these members of the economy must make choices about how to use resources. In this chapter, we focus on how individuals as consumers make choices about how to use their scarce incomes to purchase goods and services.

The purpose of this exercise is to help you understand how rational consumers allocate their scarce incomes to choose which goods and services to purchase based on income, prices of goods and services, and preferences.

#### Directions

Suppose that the building where all of your classes are held is very far away from the nearest restaurant or school cafeteria. The building has vending machines, so on the two days of the week when you are in class almost all day, you eat at the vending machines. You've budgeted \$10 per day for food from the machines. Your favorite vending machine purchases are Cokes, bottled water, pretzels, peanut butter crackers (PNBC), and M&Ms. Suppose that initially, Cokes cost \$1.50; bottled water, \$1.25; pretzels, \$0.50; peanut butter crackers, \$1.00; and M&Ms, \$0.75.

### Part 1 - Calculate Marginal Utility

In the following table, estimate the marginal utility of various amounts of each of the drinks and snacks. Then, calculate the marginal utility per dollar for each. Use the marginal utility per dollar to decide how much of each snack to buy.

Coke	MU	MU/\$	Water	MU	MU/\$	Pretzel	MU	MU/\$	PNBC	MU	MU/\$	M&M	MU	MU/\$
1			1			1			1			1		
2			2			2			2			2		
3			3			3			3			3		
4			4			4			4			4		
5			5			5			5			5		

Now, suppose that the price of Cokes increases to \$2. Recalculate the marginal utility per dollar for Cokes.

Coke	MU	MU/\$	Water	MU	MU/\$	Pretzel	MU	MU/\$	PNBC	MU	MU/\$	M&M	MU	MU/\$
1			1			1			1			1		
2			2			2			2			2		
3			3			3			3			3		
4			4			4			4			4		
5			5			5			5			5		

Has the price increase changed your allocation of your \$10 vending machine budget? Has the quantity of Cokes that you would purchase changed? If so, how?

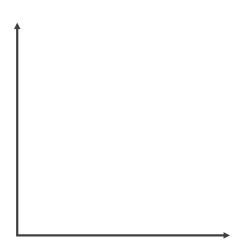
Now, suppose that the price of Cokes decreases to \$1. Recalculate the marginal utility per dollar for Cokes.

Coke	MU	MU/\$	Water	MU	MU/\$	Pretzel	MU	MU/\$	PNBC	MU	MU/\$	M&M	MU	MU/\$
1			1			1			1			1		
2			2			2			2			2		
3			3			3			3			3		
4			4			4			4			4		
5			5			5			5			5		

Has the price increase changed your allocation of your \$10 vending machine budget? Has the quantity of Cokes that you would purchase changed? If so, how?

### Part 2 - Plot the Demand Curve

Based on your previous answers, plot your demand curve for Cokes.



Chapter 6 Project Project

## Checklist

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Estimate the marginal utility and marginal utility per dollar of the drink and snack options you have.
Complete the same task, assuming the price of Coke has risen to \$2.

☐ Reflect on the changes made.

☐ Complete the same task, assuming the price of Coke has decreased by \$1.

### Part 2

☐ Plot the demand curve on the graph.

## Chapter 7 Project

## **Production, Costs, and Industry Structure**

#### **Purpose**

In this chapter, you learned the sources of the costs of producing a product. Costs depend on the amount of resources needed to produce the product, shown by the production function, and the costs of those resources, shown by the cost function. You also learned to identify all costs of production, both explicit and implicit, and use them to make an economic decision.

The purpose of this exercise is to help show you how a firm would look at the inputs of its production and cost functions to make an economic decision.

#### **Directions**

This exercise has two parts. In the first, you will begin with a production function for a grocery delivery service and link it to its cost function. In the second part, you will identify the explicit and implicit costs of production and find the accounting and economic profit in order to make an economic decision.

#### Part 1 - Production Function to Cost Function

Suppose Ben is starting a grocery delivery company, which takes grocery orders from customers, goes to the grocery store, buys the groceries, and delivers them to the customers' homes. Employees will receive orders from customers on a cell phone, for which he pays \$5 per day for service. To make deliveries to customers, he will rent a delivery van which seats 2 people for \$75 per day. He plans on hiring between 1 and 6 employees to take the orders, do the grocery shopping, and make the deliveries. He will pay each worker \$100 in wages per day. The following is the business' production function.

Labor	Output	Marginal Product	Variable Cost	Total Cost	Average Variable Cost	Average Total Cost	Marginal Cost
0	0						
1	4						
2	9						
3	13						
4	16						
5	18						
6	19						

1. Find the marginal product of labor and enter it into the third column of the table. Where is the point of diminishing returns? Explain the conditions that would lead to diminishing returns for this business.

2. Identify the fixed and variable costs.

Chapter 7 Project

- 3. Complete the table by finding variable cost, total cost, marginal cost, average variable cost, and marginal cost for each level of output.
- 4. Explain how marginal cost influences average variable and average total cost.
- 5. If Ben charges \$24 per delivery, will he earn a profit? How can you tell?

### Part 2 - Finding Economic and Accounting Profit

Suppose Penny, the owner of Penny's Pie Factory, sells 1,000 pies per month for \$20 per pie. She pays \$1,600 in wages each month to each of her 2 part-time employees. Butter, flour, sugar, eggs, fruits, chocolate, and other pie ingredients cost her \$4,000 per month. Her utilities and taxes average \$600 per month. She owns the kitchen, the mixers, and ovens that the Pie Factory uses, but she could rent them to someone else for \$1,000 per month if she wasn't using the kitchen and equipment for herself. A large bakery has offered her \$90,000 per year (\$7,500 per month) if she will close her factory and come manage their pie department.

- 1. What are Penny's monthly explicit costs?
- 2. What are Penny's monthly implicit costs?
- 3. Calculate Penny's monthly total revenue.
- 4. Calculate Penny's accounting profit per month.
- 5. Calculate Penny's economic profit per month.
- 6. Suppose that Penny's next best alternative was to close the pie shop and go back to college to finish her chemical engineering degree, and chemical engineers have a starting salary of \$80,000 per year with potential to grow to \$120,000 with 10 years of experience. How would this affect Penny's calculations?

## Checklist

#### Part 1

Find the marginal product for each unit of labor.
Identify the point of diminishing marginal returns.
Find all cost values in the table.

#### Part 2

Find the econ-	omic pro	fit.

☐ Find the accounting profit.

## Chapter 8 Project

## **Perfect Competition**

### Purpose

In this chapter, you learned the characteristics of perfect competition and the advantages of productive and allocative efficiencies that occur in the long run in a perfectly competitive industry. You also determined how perfectly competitive firms make short-run decisions that will maximize profits, minimize losses, or close the business down.

The purpose of this exercise is first, to determine if businesses that you encounter on a daily basis are perfectly competitive, and second, to understand how perfectly competitive business and industries make short-run and long-run decisions.

#### **Directions**

This exercise has two parts. In the first part, you will examine products that you buy often and determine if they come from a perfectly competitive industry. In the second part, you will make short-run and long-run production decisions for a perfectly competitive business.

### Part 1 - Identifying Perfect Competition

1. List ten goods or services that you buy frequently. Are these products from a perfectly competitive industry? Based on the characteristics of perfect competition, why or why not?

### Part 2 - Short-Run and Long-Run Production Decisions

Suppose that the following table represents the industry demand and supply for all-day rafting trips down a river in a large state park. Assume that there are 100 firms in this perfectly competitive industry, each with identical costs.

Price	Quantity Demanded	Quantity Supplied Beginning	Quantity Supplied Ending
\$350	200	600	
\$300	300	500	
\$250	400	400	
\$200	500	300	

1. What is the equilibrium price and quantity in the rafting industry?

Each of the 100 firms in the industry has fixed costs of \$100 a day for equipment, including rafts, helmets, and life jackets. Their variable costs are for the wages of a guide that is needed in each raft and snacks for the rafters. Assume that the following table represents each firm's costs.

Output (trips/day)	Variable Cost	Total Cost	Average Variable Cost	Average Total Cost	Marginal Cost
0	\$0	\$100			
1	\$200	\$300	\$200	\$300	\$200
2	\$360	\$460	\$180	\$230	\$160
3	\$500	\$600	\$167	\$200	\$140
4	\$750	\$850	\$188	\$213	\$250
5	\$1,050	\$1,150	\$210	\$230	\$300
6	\$1,400	\$1,500	\$233	\$250	\$350

- 2. Given the market price determined at equilibrium in the industry, explain why each firm in the industry will take four trips per day at a price of \$250. How much will each firm profit or lose at this output?
- **3.** What is the long-run equilibrium price for this industry?
- **4.** Explain the process through which the industry and each firm in the industry will reach the long-run equilibrium price.
- **5.** Estimate a reasonable short-run supply curve for the industry to complete the last column of the previous industry demand and supply table.

## Checklist

#### Part 1

- List ten goods or services.
- Decide if the goods or services are from a perfectly competitive industry.

#### Part 2

- ☐ Calculate equilibrium in an industry.
- ☐ Calculate profit/loss at equilibrium.
- ☐ Determine the long-run equilibrium price.
- ☐ Estimate the short-run supply curve.

## Chapter 9 Project

## Monopoly

#### **Purpose**

In this chapter, you've learned the characteristics of monopolies and about barriers that protect monopoly profits by preventing entry of other firms into monopoly markets. You've also learned how monopoly is inefficient compared to perfect competition.

The purposes of this exercise are to determine if markets that you encounter on a regular basis are monopolies and to identify barriers to entry in those monopoly-based markets to compare monopoly outcomes with those of perfect competition.

#### **Directions**

This exercise has two parts. In the first part, you'll determine whether some familiar goods and services are monopolies and identify their barriers to entry. In the second part, you will contrast the equilibrium price and quantity for a monopoly with that of perfect competition.

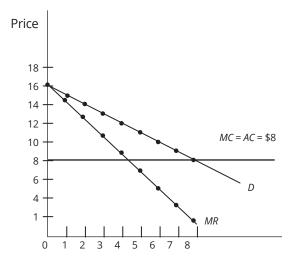
### Part 1 - Monopolies and Barriers to Entry

In the following table, indicate whether each good or service is likely produced in a monopoly market and whether or not you think this market is a monopoly. If it is, identify the barrier(s) to entry. Then, list some other goods or services that you frequently purchase and provide the prompted information.

Good or Service	Monopoly?	Barrier(s) to Entry
Electricity		
Campus bookstore		
Required textbook		
Facebook		
Cell phones		
Brand-name drug		

### Part 2 - Comparing Monopoly and Perfect Competition

Assume that the following graph represents the demand, marginal revenue, average total cost, and marginal cost for a small business that has been granted a monopoly to provide lunches for visitors to a state park. Additionally, assume that the average and marginal cost of each lunch is \$8.



Answer the following questions:

- 1. To maximize profit, the monopoly will produce \_\_\_\_\_ lunches and charge \$ \_\_\_\_ per lunch.
- 2. How did you determine the monopoly's equilibrium price and quantity?
- 3. If the firm loses its monopoly and many other firms are allowed to enter the market so that the market becomes perfectly competitive, the output will be \_\_\_\_ lunches, and the price will be \$\_\_\_\_ per lunch.
- **4.** Compared to perfect competition, the output for a monopoly will be \_\_\_\_\_ (less, more), and the monopoly price will be \_\_\_\_\_ (higher, lower) than the price in perfect competition.
- 5. Explain how you determined the perfectly competitive firm's price and output.
- **6.** Compare monopoly and perfect competition with respect to productive and allocative efficiency.

## Checklist

#### Part 1

Fill in the chart with regards to monopolies and barriers to entry.

#### Part 2

☐ Compare monopoly and perfect competition.

## **Chapter 10** Project

## **Monopolistic Competition and Oligopoly**

#### **Purpose**

In this chapter, you learned about imperfectly competitive markets, monopolistic competition, and oligopoly. Monopolistic competition is a market structure which combines elements of both perfect competition and monopoly. Like perfect competition, there are many buyers and sellers in the market. The products in a monopolistically competitive market, unlike those in perfect competition, are differentiated. Like monopoly firms, a firm in monopolistic competition has some control over the price of its product. Oligopoly markets have a few firms producing most of the output, and the firms in the industry are interdependent with respect to decisions concerning price and quantity of output produced.

The purposes of this exercise are to determine if you encounter monopolistically competitive markets and to determine how products are differentiated. You will also discover the interdependence of oligopoly firms.

#### **Directions**

This exercise has three parts. In the first, you will explain how products are differentiated in monopolistic competition. In the second, you will explain how a market in monopolistic competition reaches long-run equilibrium and compare the outcome with the outcome in perfect competition with respect to allocative and productive efficiency. In the third part, you will make price and output decisions that illustrate interdependence in oligopoly

### Part 1 - Differentiated Products in Monopolistic Competition

 Indicate how the following familiar products produced in monopolistic competition are differentiated. In the last four rows of the table, list some other products that you buy frequently in monopolistically competitive markets and explain how they are differentiated.

Product	How Differentiated
Fast food hamburgers	
Gas stations	
Bottled water	
Hotels	
Blue jeans	
Running shoes	

Chapter 10 Project

### Part 2 - Monopolistic Competition in the Long Run

Suppose that after you graduate, you open a barbecue restaurant in a large city nearby. There are six other barbecue restaurants in town, but you are convinced that you can be successful by differentiating your restaurant and by advertising.

- 1. What are some possible ways that you can differentiate your restaurant?
- 2. If you and the other six barbecue restaurants earn economic profits, what will happen in the long run?
- **3.** How does this long-run outcome differ from perfect competition and monopoly?

4. How could you use advertising to continue to earn economic profits in the long run?

## Part 3 - Interdependence in Oligopoly

Suppose that there are only two gas stations, Station X and Station Y, in a small town out in a desert. The nearest gas station is 150 miles away. Currently, each station is selling 2,500 gallons of gas per week and making a profit of \$12,500 each. The following matrix shows profits for each firm if either or both decide to increase sales to increase profit.

	Station X sells 2,500 gallons	Station X sells 3,500 gallons
Station Y sells	Profit for $X = $12,500$	Profit for $X = $14,000$
2,500 gallons	Profit for $Y = $12,500$	Profit for $Y = $10,000$
Station Y sells	Profit for $X = $10,000$	Profit for $X = $10,500$
3,500 gallons	Profit for $Y = $14,000$	Profit for $Y = $10,500$

- 1. What is the likely outcome in this market?
- 2. Compare the equilibrium price and output of oligopoly with that of perfect competition, monopoly, and monopolistic competition.

3. As a consumer, which market structure do you prefer? Why?

	Checklist Checklist
Part	1
	Identify products in monopolistically competitive markets.
	Differentiate products.
Part	2 Answer questions pertaining to monopolistic competition in the long run.
Part	3
	Determine outcome of oligopoly.
	Compare equilibrium in an oligopoly with equilibrium in other market structures.

Chapter 11 Project

# Chapter 11 Project

## **Monopoly and Antitrust Policy**

#### **Purpose**

In this chapter, you have learned that business growth, especially through mergers, is associated with both costs and benefits that affect consumers. Let's explore how these things relate to your everyday life.

The purpose of this exercise is to help you understand how consumers are affected by mergers, as well as the considerations of decision makers who must identify whether mergers are beneficial to society.

#### **Directions**

This exercise has two parts. In the first, you will consider a merger in an industry that produces a good important to your life. In the second, you will put yourself in the shoes of a decision maker who must approve or block the merger.

### Part 1 - How Mergers Affect Consumers

Mergers allow firms to experience growth and realize large-scale production. They also reduce competition. Economists are interested in whether the benefits associated with large-scale production and the resulting loss in competition outweigh the costs, especially in the everyday lives of consumers.

	Panafita Associated with Margar	Coots Associated with Margar
2. Referring to Chapter 11 and the theory of the firm, complete the following chart for your chosen indu your own everyday life. Please provide at least five benefits and five costs. You may list more if appli		
	Chosen industry from Table 2:	
	one U.S. industry that produces a good you consider to b industry below:	۶
1.	Refer to Table 2 in Lesson 11.1, which lists four U.S. ind	ustries and the largest five firms in each. First, choose

Benefits Associated with Merger of Five Largest Firms	Costs Associated with Merger of Five Largest Firms

3. After completing the chart, use its content to write a paragraph detailing whether you believe a merger in your chosen industry would make you better off as a consumer, worse off as a consumer, or have little to no impact on your life.

This requires you to think about this theoretical merger in the context of your own everyday life. The best analysis will be specific and demonstrate application to your own experiences as a consumer.

In Part 1, you concluded whether a merger of the five largest firms in your chosen industry would make you better off as a consumer, worse off as a consumer, or have little to no impact on your life. Policy makers and regulators often have similar considerations but in a more generalized way and for all consumers. This chapter outlined methods and numerical tools used by the FTC and the U.S. Department of Justice to approve or block mergers. When mergers are approved, the government often stipulates forms of regulation. This chapter also identified common forms of regulation used by the government when mergers are approved.

### Part 2 - Thinking Like the Decision Maker

- 1. Imagine you are asked to make a recommendation to the U.S. government regarding a merger in the industry you chose in Part 1. Write a business memo of professional quality that includes a recommendation on the following:
  - **a.** Which method/numerical tool from the chapter should be used to determine if the merger should be approved or blocked, with justification?
  - **b.** Should the merger be approved, which form of regulation (if any) from this chapter should be a stipulation of the merger, with justification?

To inform your recommendation, consider your analysis in Part 1 and the industry sources in Table 2 from Lesson 11.1. The best recommendations will be confidently stated, with justifications that support economic theory. There is not a single correct analysis; therefore, answers will vary.

	Checklist			
Part	Part 1			
	Choose an industry from Table 2.			
	List benefits and costs of the five largest firms in the industry.			
	Explain the impact of a merger in the industry.			
Part 2				
	Consider if a merger should be approved or blocked.			
	Write a business memo summarizing your recommendation.			

Chapter 12 Project

## **Chapter 12** Project

## **Environmental Protection and Negative Externalities**

#### **Purpose**

In this chapter, you learned about externalities that affect third parties that are not directly involved in the supply and demand for a good or service. Negative externalities impose costs on third parties, while positive externalities result in benefits to third parties. Negative externalities may be addressed by command-and-control regulations, market-oriented tools, or better-defined property rights. We also learned that there is a tradeoff between economic growth and protecting the environment.

The purpose of this exercise is to help you identify some familiar externalities and suggest how they may be addressed, as well as help illustrate the tradeoff between economic growth and environmental protection.

#### **Directions**

This exercise has two parts. In the first part, you will determine if a negative or positive externality occurs in a transaction. If a negative externality occurs, you will suggest a type of policy to deal with it. In the second part, you will demonstrate the tradeoff between economic growth and environmental protection.

#### Part 1 - Externalities

- 1. In the following table:
  - a. Indicate whether each situation is an externality.
  - **b.** If the situation is an externality, explain whether it is positive or negative.
  - c. For negative externalities, which of the three categories of solutions (command-and-control regulation, market-oriented tools, or better-defined property rights) would you suggest to address the negative externality?
  - **d.** In the last three rows of the table, list some negative externalities that you have encountered and suggest a policy solution.

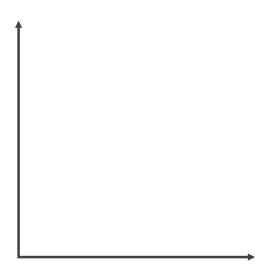
Situation	Externality? Positive or Negative?	Policy Solution
Your neighbor's dog barks all night.		
Everyone in your dorm gets a flu shot.		
You buy a new iPad at Best Buy.		
The pollution from the paper mill in your town causes many people to have asthma attacks.		
Many people text while they are driving.		

negative externality	
negative externality	
negative externality	

## Part 2 - The Tradeoff Between Economic Growth and Environmental Protection

Suppose that every summer you help your family with their lobster fishing business in a small town where the only industry is lobster fishing. Due to over fishing and climate change, the lobster population is quickly decreasing. The Environmental Protection Agency is considering using a quota (limiting the number of lobsters that can be caught each summer) or possibly prohibiting lobster fishing for several years.

1. Explain the tradeoff between environmental protection and economic growth that this situation presents and sketch a production possibilities graph to show it.



2. Can you think of another situation familiar to you that illustrates the tradeoff between economic growth and environmental protection?

Chapter 12 Project

## Checklist

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Г	Indicate/	classify	the.	externa	lities
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- ☐ Suggest solutions for negative externalities.
- ☐ Provide your own negative externalities and suggest possible solutions.

#### Part 2

- ☐ Explain tradeoff between environmental protection and economic growth.
- ☐ State another situation that illustrates the tradeoff.

## **Chapter 13** Project

#### Positive Externalities and Public Goods

#### **Purpose**

In this chapter, you have learned that the existence of positive externalities affects a firm's incentives regarding investments. Let's explore how these things relate to your everyday life.

The purpose of this exercise is to help you understand that market outcomes will be inefficient when positive externalities exist, unless an external force moves the market level of output closer to the socially desirable level.

#### **Directions**

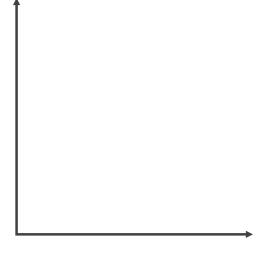
This exercise has two parts. In the first, you will consider the economics surrounding the positive externality associated with education. In the second, you will engage in an activity that will illustrate an example of how an external force may help move the market level of output for education to the socially desirable level.

### Part 1 - The Economics of Education as a Positive Externality

This chapter described public education as a good with both private and social returns. If there was not an externality present, students would only experience a private return, and the marginal benefits to the student would also fully capture marginal benefits to society. A positive externality, however, creates a gap between marginal benefits to the student and society, which leads to an inefficient level of output in the market for education.

- Follow the steps below to construct a supply and demand graph that illustrates the market inefficiency caused by a positive externality.
  - a. Draw an upward-sloping supply curve and label it MPC (marginal private costs).
     Assume there are not any social externalities associated with the supply of education.
  - b. On the same graph, draw a downward-sloping demand curve and label it MPB (marginal private benefit) to represent the benefits that students experience from education.
  - c. Still on the same graph, construct another downward-sloping demand curve that represents MSB (marginal social benefit) for the positive externality case. MSB and MPB should not be equal, the marginal social benefit should be greater because both students and society experience benefits from consumption.

d. Plot the points where the marginal social benefit and marginal private benefit curves intersect with the marginal private costs curve. What do each of the intersections represent? What does the difference between the two points illustrate?



2. Using your supply and demand graph, write a paragraph that describes whether competitive markets overproduce or underproduce goods that create positive external benefits. Use the chapter to identify at least three ways in which an efficient outcome can be achieved in the market for education.

Chapter 13 Project

# Part 2 - Achieving the Socially Desirable Level of Output

In Part 1, you identified at least three ways in which an external force, such as the government, can help move output to the socially desirable level in markets where externalities exist. In the case of education, economists believe that one reason why this inefficiency exists is that decision makers (students) have poor information or are uninformed about the benefits of education. Thus, one way to move market output to the socially desirable level is to find ways for students to receive that information.

1. As a decision maker in the market for education, first consider the benefits associated with your education. Importantly, focus on the benefits that would incentivize you to make education a priority in your life. Then, construct an 8.5 x 11 in. poster or flyer that educators could display in the hallways of a public high school to encourage students to stay enrolled in school and/or pursue a college degree. Your goal is to deliver information to students in an appealing way that moves the market closer to the socially optimally level in Part 1.

	Checklist
Part	1
	Construct a graph that demonstrates a positive externality.
	Compare marginal social benefit and marginal private benefit.
	Understand market inefficiency.
Part	2
	Reflect on your own benefits from education.
	Construct a poster/flyer about the benefits of education.

# Chapter 14 Project

## **Labor Markets and Income**

## **Purpose**

In this chapter, you have learned how the supply and demand of labor determine the wage rate and how the wage determines how many workers a firm will hire in different market structures. You also learned that there are many labor markets, one for each type of work, skill level, and location, all of which operate similarly.

The first purpose of this exercise is to illustrate how firms in competitive and imperfectly competitive product markets determine how many people to hire. The second purpose is to research conditions in a market for a specific type of labor.

#### **Directions**

This exercise has two parts. In the first, you will determine how many workers a firm in a perfectly competitive product market will hire compared to employment for a firm that sells its product in an imperfectly competitive market. In the second, you will research wages and demand for labor in a specific labor market of your choice.

## Part 1 - Determining Employment Levels to Maximize Profit

Suppose that you are planning to open a lawn maintenance business. You have a riding lawn mower and a push mower, an edger, bush trimmer, and some other lawn tools. Since there are many companies in your area offering lawn services, the market for lawn care is perfect competition, and the price is \$60 per lawn.

In the following table, you have estimated your production function based on the capital that you have (your lawn equipment) and different numbers of workers that you are considering hiring at the perfectly competitive labor market wage of \$150 per day.

Labor	Output (lawns per day)	Marginal Product of Labor	Value of the Marginal Product of Labor
0	0		
1	6		
2	11		
3	15		
4	18		
5	20		

1. Complete the table by finding the marginal product of labor and the value of the marginal product of labor. Based on these calculations, how many people should you hire to maximize profits?

Now, suppose that the market for lawn care changes to imperfect competition because many of the companies offering lawn services differentiate their product, and the demand curve for lawn care changes to reflect the table below.

Labor	Output (lawns per day	Price (per lawn)	Total Revenue	Marginal Revenue Product of Labor
0	0	\$60		
1	6	55		
2	11	50		
3	15	45		
4	18	40		
5	20	35		

Chapter 14 Project

- 2. Find the total revenue and the marginal revenue product of labor to complete the table above. If the market for workers is still competitive, with a wage of \$150 per day, how many workers will you hire to maximize profit?
- **3.** Is the employment rate in an imperfectly competitive product higher or lower than employment in a perfectly competitive product market? Explain.

## Part 2 - Researching a Specific Labor Market

Checklist

- 1. Choose an occupation that you are interested in pursuing. Use the following link to find some information about the labor market of that occupation: hawkes.biz/occupationlabormarkets
- 2. Find the current number of people employed in this occupation and the median annual wage, both nationally and in your state.
- 3. Use the following link to find by how much employment in the occupation will change between 2016 and 2026: hawkes.biz/occupationemployment
- **4.** Based on this information about the labor market in the occupation, are you satisfied with your choice? Explain how the labor market may change.

_	
Part	1
	Consider a lawn business in a perfectly competitive market.
	Complete the table: find the $MP_L$ and $VMP_L$ .
	Determine how many people you should hire.
	Consider a lawn business in an imperfectly competitive market.
	Complete the table: find Total Revenue and $MRP_{L}$
	Compare employment between markets.
Part	2
	Research an occupation.
	Find the estimated future employment change.
	Reflect and explain the labor market of your future occupation.

# Chapter 15 Project

# **Poverty and Income Inequality**

#### **Purpose**

In Chapter 15, you have learned about poverty, some programs designed to assist people who live in poverty, and income inequality.

The purpose of this exercise is to show what it means to live in poverty and to measure the change in income equality in the United States over time.

#### **Directions**

This exercise has two parts. In the first part, you will try to budget everyday expenses on the income that defines the poverty level. In the second part, you will measure income inequality in the U.S. between 1974 and today.

## Part 1 - Budgeting on a Poverty Line Income

In 2018, the poverty line was defined as an income of \$13,064 or less per year for an individual under the age of 65. In estimating the poverty line, the government assumes that one-third of income will be spent for food.

- 1. How much of the \$13,064 income will be spent for food in a year? In a day? How would you manage to eat on this amount every day?
- 2. If your annual income is \$13,064, then your monthly income would be approximately \$1,089. If you use one-third of your income on food, how would you allocate your monthly income of \$1,089 between these categories of expenditures?

Expenditure Category	Monthly Spending
Food	\$363
Housing	
Transportation (car payment, insurance, gas, tires, maintenance)	
Additional expenses (electricity, wireless, TV, water)	
Clothing	
School expenses	
Other (health insurance, health care entertainment, debt repayment, donations)	

3. Research and estimate your expected future income when you finish college and begin working full-time in your chosen occupation. How does the poverty budget you completed in #2 compare with the budget you hope to have in the future?

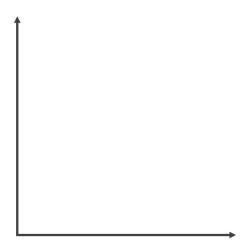
# Part 2 - Measuring Income Inequality

The following table uses quintiles to show the distribution of income in the U.S. in 1974 and 2017.

1. Complete the table by finding the cumulative share of each quintile.

Income Category	Share of Income in 1974 (%)	Cumulative Share in 1974 (%)	Share of Income in 2017 (%)	Cumulative Share in 2017 (%)
First quintile	4.3		3.1	
Second quintile	10.6		8.2	
Third quintile	17.0		14.3	
Fourth quintile	24.6		24.4	
Fifth quintile	43.5		45.6	

2. Using the data you calculated in the previous table, create a Lorenz curve diagram reflecting the income distributions for 1975 and 2017 on the same graph.



**3.** What has happened to income inequality in the forty-two years between 1974 and 2017? What could have caused this change in income inequality?

# Checklist

#### Part 1

- Consider spending decisions with an income below the poverty line.
- Estimate your budget if your income was below the poverty line.
- Compare your expected budget to the poverty budget.

#### Part 2

- ☐ Calculate the cumulative share across quintiles in both 1974 and 2017.
- ☐ Construct a Lorenz curve diagram.
- ☐ Compare income inequality.

# **Chapter 16** Project

# Information, Risk, and Insurance

## **Purpose**

In this chapter, you learned that imperfect and asymmetric information can affect equilibrium prices and quantities in all markets and what can be done to reduce the impact of imperfect information. You also learned about the problems that imperfect information causes in insurance markets and how insurance companies try to reduce the impact of imperfect information.

The first purpose of this exercise is for you to identify situations where imperfect information is a factor and to suggest ways in which the impact of imperfect information might be decreased. The

second purpose is to identify the problems of adverse selection and moral hazard and explain what can be done to reduce their impact.

#### **Directions**

This exercise has two parts. In the first, you will identify situations where there is imperfect information, then indicate missing information from both the buyer's and the seller's perspective and suggest ways to increase information available. In the second part, you will determine if a situation is an example of adverse selection or moral hazard and suggest ways that these problems can be reduced.

# Part 1 - Imperfect Information

1. In the following table, for each situation with imperfect information, indicate the information that the buyer and/or the seller are missing and what can be done to increase information available to either or both sides of the market.

In the last two rows, list two transactions where you were affected by imperfect information and indicate what you did, or could do in the future, to reduce the impact of imperfect information.

Situation	Buyer	Seller	Ways to Reduce the Imperfect Information Problem
Buying a used car			
A doctor recommends knee replacement surgery for you			
Booking a hotel for a vacation in Canada			
Hiring someone to paint your house			

	g a lawyer to represent mall business				
Part	2 - Adverse Sel	ection and Mora	al Hazard		
In	dicate if the follo		e an examp		election or moral hazard.
1.	A university doesn't and graduate.	know if a student that the	hey admit will	remain in school, co	mplete their program of study,
2.	Most of the people b	buying health insurance	are either sick,	elderly, or both.	
3.		companies must insure emping, and race car driv		same low-cost prem	ium, many people pursue careers
4.	Some people respor		nat promise ver	y low interest rates a	nd encourage balance transfers
5.	People who have ho	omeowners' insurance do	on't put new ba	tteries in their smok	e alarms.
	<b>?</b> Checklist				
Part					
	•	th imperfect information			
		ice imperfect information	n.		
Part		on as a moral hazard or a	dverse selection	n.	

☐ Provide a possible solution for each situation.

# Chapter 17 Project

## **Financial Markets**

#### **Purpose**

After finishing this chapter, you have learned that households have a range of investment choices available to them, including but not limited to bank accounts; investments, like stocks; and tangible assets, like a house. Let's explore how an individual's investment choices relate to everyday life.

The purpose of this exercise is to help you understand that investment options vary with respect to rate of return, risk level, and liquidity.

How an individual chooses among these options often changes, especially as he or she grows older.

#### **Directions**

This exercise has two parts. In the first, you will consider how your investment choices may change over the course of your lifetime. In the second part, you will consider one specific type of investment and how you can tailor that investment experience to your life.

#### Part 1 - Investment Choices over Your Lifetime

This chapter divided the mechanisms used by households to save money into three categories:

- Deposits in bank accounts
- · Investments in bonds, stocks, money market mutual funds, and stock and bond mutual funds
- Housing and other tangible assets, like gold

Table 3 in Lesson 17.2 elaborated on these categories with more specificity, describing how the rate of return, risk level, and liquidity vary with each.

Assuming that you always desire a high rate of return, let's consider how your risk level and need for liquid assets might be a function of your stage in life by completing the following chart. Complete the following tasks for each stage of life indicated:

- Summarize what your life might be like in terms of relevant factors like age, employment, income, debt, financial responsibilities, and life goals.
- Predict your risk level (high, medium, low), with a brief statement explaining why.
- Predict your need for liquid assets (high, medium, low), with a brief statement explaining why.

Stage in Life	What Life Is/ Might Be Like	Risk Level and Why	Need for Liquidity and Why
Now			
Fifteen years from now			
Forty years from now			

Once the chart is complete, use it in conjunction with Table 3 in Lesson 17.2 to write an essay that identifies your ideal investment choice in each stage of life, justifies each investment choice, and explains why your investment choices are different (or not) in each stage of your life.

Your essay should be at least three paragraphs in length and describe your investment choices in the context of your own everyday life. The best analysis will be specific and demonstrate application to your own experiences.

Chapter 17 Project

# Part 2 - Tailoring a Stock Choice to Your Life

Table 3 in Lesson 17.2 describes a stock as a high-return investment choice with medium-to-high risk and medium liquidity. In addition to these characteristics, a stock is an investment choice that is unique in how it can be tailored to your life.

Suppose you have the opportunity to purchase a stock and invest in a company. Which stock would you choose? In addition to considering the aforementioned risk level and liquidity, and assuming your goal is high return, you may consider these other factors:

- Historical performance
- Trends in the marketplace
- Companies with strong or particularly interesting business models

Create a presentation informing why the stock is a wise investment.

Sizes of companies

Checklist

- Products you use everyday that you think are particularly interesting or might prove to be successful
- Research/what you see in the news
- Talking to family and friends
- Industry and/or company analysis

Compose a one-slide digital presentation to "pitch" your stock choice. Your goal is to explain your stock choice and convince a hypothetical audience that it was a responsible choice. Note that while it may be tempting to invest in large companies or companies that have historically performed well, it is important to base your investment decision on multiple factors. It is also wise to do your own research before choosing a stock rather than simply relying on the advice of others. You may come across a "hidden gem"!

# Part 1 Consider your current and future needs for liquid assets. Understand the characteristics of different financial investments. Determine investment choices based on your needs and characteristics. Write an essay analyzing your investment choices. Part 2 Choose any stock. Identify your stock's characteristics (level of risk, liquidity, etc.).

# Chapter 18 Project

# **Public Economy**

#### **Purpose**

After finishing this chapter, you have learned that the advantage of a democratic system of government over other systems is that it allows everyone in a society an equal say. Let's explore how this relates to your everyday life.

The purpose of this exercise is to help you understand a practical difficulty that arises in a democracy when people follow their own self-interest, which is that most people who are

eligible to vote choose not to. This is despite the fact that the failure to vote in an election could lead to outcomes that are not favorable to the voter.

#### **Directions**

This exercise has two parts. In the first, you will consider which factors play a role in your decision to vote in an upcoming election. In the second, you will use your own experience to incentivize other similar individuals to vote.

#### Part 1 - What Makes You Vote?

Chapter 18 mentioned various factors that influence an individual's decision to vote. These factors relate to the economic notion that individuals make decisions guided by their own self-interest. These are some factors:

- The voter's belief in how likely it is his or her vote will affect the outcome
- Cost of the voter acquiring and assimilating information about the policies up for vote
- Demographics of the voter, such as age, marital status, employment, and income
- Ease of registering to vote
- Ease of casting votes, related to such issues as times when polls are open
- Involvement of special-interest groups in the election
- Policies at stake in the election

Also noted in this chapter was the statistic that voter turnout tends to be less than 50% of eligible voters in congressional elections when there is no presidential race and local elections.

First, review these factors and choose the three that you believe most directly influence your decision to vote in a *local* election. Then, identify a fourth factor that is not included in the list. Finally, write an essay describing why each of the four factors you selected plays a role in your decision to vote and how the economic notion of self-interest guides your decision.

Your essay should be at least three paragraphs in length and describe the decision to vote in a local election in the context of your own everyday life. The best analysis will be specific and demonstrate application to your experiences as a voter.

# Part 2 - Getting Others to Vote

In Part 1, you identified four factors influencing your personal decision to vote in a local election. In Part 2, consider how an external force could use these factors to incentivize you to vote in a local election. Use that consideration to construct an  $8.5 \times 11$  in. poster or flyer that could be distributed to eligible voters similar to yourself to encourage their participation in a local election. Your goal is to improve the aforementioned statistic that less than half of eligible voters participate in local elections. The best flyer demonstrates a clear connection to the four factors you chose in Part 1.

Project

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Choose three factors that influence your decision to ve
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- ☐ Identify your own factor that influences you to vote.
- ☐ Describe and apply your own experiences to each factor.

# Part 2

- ☐ Construct a flyer/poster.
- ☐ Appeal to each of the factors you chose in Part 1.

Chapter 19 Project

# **Chapter 19** Project

# The Macroeconomic Perspective

#### Purpose

In this chapter, you learned about how GDP helps with measuring the size of the economy. When evaluating economic statistics, there is a significant difference between nominal and real measurements, which refer to whether inflation has distorted a given statistic.

It is also common to use GDP as a measure of economic welfare or standard of living. The level of GDP per capita captures some of what we mean by the phrase standard of living, which is a broader term than GDP.

The purpose of this exercise is to illustrate an application of a macroeconomic perspective and understand the building blocks that lead to increased GDP per capita.

#### **Directions**

This exercise has two parts. In the first, you will be reflecting on prompts prior to the assignment.

In the second, you will be comparing the United States with another country to understand the building blocks that lead to increased GDP per capita.

## Part 1 - Pre-Assignment Reflection

In Chapter 19, you learned about how GDP is a rough estimate, but useful. Even though GDP does not measure the standard of living with any exactness, it does measure production well and signify when a country is materially better or worse off in terms of jobs and incomes.

Answer the following questions using clear, detailed, and complete thoughts. Include at least three sentences per question; one sentence should provide evidence (e.g., from the textbook, notes, etc.) to support your thoughts.

- What does "educational attainment" mean to you?
- What does "health improvement" mean to you?
- Describe two examples of environmental protections used in the U.S. today.
- Illustrate an example of increased GDP per capita that you learned in Chapter 6.

# Part 2 - Researching Building Blocks of Increased GDP per Capita

In Chapter 19, you also learned that there are building blocks, or factors, that lead to increased GDP per capita. GDP per capita is not the most accurate measure of the standard of living, but it does measure production and indicate improvements and growth in the economy that allow an economist to estimate the nation's standard of living.

Choose a country to compare to the U.S. Think of how your chosen country has increased its GDP per capita.

- 2. Research and describe specific ways your chosen country improved each factor that can lead to increased GDP per capita.
  - This portion should be a minimum of three sentences for each factor. You must provide evidence from the text, notes, or a credible external source. If you use an external source, remember to cite it.
- 3. Compare the improvements in your chosen country to the improvements and economy of the U.S.

If you have trouble, refer to Lesson 19.4 to refresh your understanding of the factors that can lead to increased GDP per capita.

# Checklist

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Part	1
	Write the pre-assignment reflection.
	Include three sentences per prompt.
	Use one sentence to include evidence.
Part	2
	Choose a country besides the U.S. to compare the factors of increased GDP per capita.
	Discuss and research improvements in each factor.
	Include three sentences per factor.
	Provide evidence for each.
	Compare how the U.S. and the chosen country vary in the factors of increased GDP per capita.

Chapter 20 Project

# **Chapter 20** Project

## **Economic Growth**

#### **Purpose**

In this chapter, you learned how GDP and GDP per capita impact not only standard of living, but also overall modern economic growth. However, a country's economy may need to sacrifice natural resources and the environment to improve standard of living. You also learned about the recipe for economic growth: labor productivity, human capital and technology, and physical capital.

The purpose of this exercise is to illustrate an application of the economic growth formula and to use visuals to establish an understanding of each concept in the formula.

#### **Directions**

This exercise has two parts. In the first part, you will be demonstrating understanding of the topics covered in this chapter. In the second part, you will be applying the concepts by creating memes.

# Part 1 - Pre-Assignment Reflection

The following questions ask you to recall vital information from this chapter that will help you in your next step of the project. Answer these questions using clear, detailed, and complete thoughts:

- 1. How are GDP and GDP per capita related to a country's standard of living?
- 2. What can be said about a country that is experiencing decreased labor productivity?
- **3.** Describe two examples of how a country would decide to sacrifice natural resources and environmental protection to improve standard of living and economic growth.
- 4. What is the economic growth formula that you learned from Chapter 20?

#### Part 2 - Economic Memes

According to the website Dictionary, a meme is "a humorous image, video, piece of text, etc., that is copied (often with slight variations) and spread rapidly by internet users." You've probably seen, and even circulated, many memes. They flood the internet, our cell phones, and our inboxes.

For this portion of the assignment, you will be creating memes for each component of the economic growth formula: labor productivity, human capital and technology, physical capital, and economic growth.

- 1. Develop an image that best represents each of the four components and its effect on economic growth. (*Note:* The pictures must be original. You may not use pictures available on the internet and/or from other sources.
- 2. Use each image as the basis of a meme for each economic concept.
- 3. Write one to two paragraphs per meme that explain each picture and how it communicates that particular phase of economic growth. Also, describe a specific instance in which a country has made improvements to that component of the economic growth formula, and explain how it benefited the country's economy.

# **Examples**

Here is an example of a meme explaining elasticity and inelasticity:



# Checklist

#### Part 1

☐ Complete pre-assignment reflection questions.

#### Part 2

- ☐ Create four original images related to each component of economic growth.
- ☐ Use the images to create four memes.
- Write one to two paragraphs per meme that demonstrate understanding of that portion of the economic growth formula.
- Provide a specific example of improvements to each component of the economic growth formula.

Chapter 21 Project

# **Chapter 21** Project

# Unemployment

#### **Purpose**

In this chapter, you have learned about how the unemployment rate is calculated, how various individuals in the U.S. population are classified with regard to labor market statistics, and the relationship between unemployment and real GDP. You have also identified the types of unemployment that exist in the economy and reviewed data related to changes in the unemployment rate over the decades.

The purpose of this project is to apply the process used to classify individuals within the labor market and to identify types of unemployment, along with historical changes in the unemployment rate.

#### **Directions**

This project has two parts. First, you will work on your own to apply the process used by the Bureau of Labor Statistics to provide the unemployment rate. You will also research historical changes in the unemployment rate, making a connection to potential GDP.

In the second part, you will work with a classmate to consider the accuracy of the unemployment rate and to make distinctions between the types of unemployment.

# Part 1 - Current Population Survey and Changes in Unemployment

Provide at least three examples of a U.S. citizen age 16 or above that would be considered out of the U.S. labor force.

Evaluate the validity of the following statement:

As the United States population continues to grow, it should be expected that the unemployment rate will rise.

To what extent should the U.S. government attempt to completely eliminate frictional unemployment?

Assume that the natural unemployment rate is 5%. Use FRED data (hawkes.biz/fredunemploy) and provide specific years from each of the past five decades when the economy operated at its potential GDP, below its potential GDP, and above its potential GDP (if applicable). Include the unemployment rate for each of the three years selected from each of the five decades.

# Part 2 - Debating the Accuracy of the Unemployment Rate and Distinguishing Among the Types of Unemployment

Work with a classmate to complete the following task.

After reading about the process used by the Bureau of Labor Statistics to calculate the unemployment rate, consider potential arguments related to the accuracy of the unemployment rate. One student will defend "Position A" while the other will defend "Position B." When defending the position, the student should explain which classification of employment the position benefits. Each student will then evaluate the validity of the other student's argument. Be sure to share the results with your instructor.

1. (Student 1) Position A:

The unemployment rate must be understated each month because:

**2.** (Student 2) Evaluation of arguments presented for Position A:

(Student 2) Position B:

The unemployment rate must be overstated each month because:

**3.** (Student 1) Evaluation of arguments presented for Position B:

Project

Describe several scenarios where a worker becomes frictionally, structurally, and cyclically unemployed. Share your scenarios with a classmate, who will examine their accuracy.

For your classmate's answers, explain why each scenario is accurate or inaccurate. Share each scenario and your feedback with your classmate and instructor. Be sure to include your classmate's name in the submission to your instructor.

# Checklist

# Part 1

- ☐ Answer the critical thinking questions.
- ☐ Research and evaluate past unemployment rates.

## Part 2

	our position	

- ☐ Evaluate a classmate's position.
- ☐ Describe three types of unemployment.
- ☐ Evaluate a classmate's scenarios.



# **Chapter 22** Project

## **Inflation**

## **Purpose**

In this chapter, you have learned how inflation is tracked. You have also learned that all market participants are not equally impacted by changes in the cost of living. The cost-of-living index allows for a calculation of real values, which adjust important variables for changes in the cost of living.

The purpose of this exercise is to illustrate how inflation can affect market participants in everyday life and to research information provided by the Bureau of Labor Statistics to develop a greater understanding of how inflation is tracked.

#### **Directions**

This exercise has two parts. In the first, you will read several scenarios and identify how inflation should be considered when making everyday life decisions and how changes in the cost of living can affect market participants. In the second, you will utilize consumer price index data in an effort to calculate real values and develop a price index.

## Part 1 - Considering How Inflation Impacts Outcomes of Life Choices

Read the following scenarios, and answer the questions associated with each.

#### Scenario 1

Gerson and his wife, Stevie, are having a disagreement regarding finances and consumption. Gerson lives near a country club that offers golf, tennis, a swimming pool, and social events. Unfortunately, Gerson's family has not been able to afford a membership. Since Gerson just received a \$1,500 raise to his annual \$75,000 salary, he believes he can now afford to purchase a membership for the upcoming year. Member dues would be \$120 per month. Stevie agrees that a membership would be nice, but disagrees that the family can now afford the membership because of the \$1,500 raise. Assuming inflation has been steady at 2.5% per year, does Stevie have a point?

#### Scenario 2

Malak and Lella are coworkers and friends. They started their jobs in the same year and work the same positions at their firm, earning the same salaries. They even purchased homes in the same neighborhood at the same price. Malak and Lella currently both pay \$1,400 per month for their mortgages. The only difference is that Malak has a fixed-rate mortgage, while Lella opted for the adjustable-rate mortgage. Since inflation has been higher than normal, Malak and Lella both received a salary increase equal to changes in the consumer price index. Lella has complained that she cannot afford any more than she could last year, despite the raise. She is surprised to see that Malak was able to purchase an expensive gym membership after the raise. She is just as thrifty as Malak and does not understand why she cannot also afford to purchase the gym membership. How could it be possible that Malak can afford the gym membership while Lella cannot?

Chapter 22 Project

#### Scenario 3

Keisha has been presented an offer by her sister, Shanice. Shanice has asked to borrow \$10,000 for one year and promises to pay Keisha \$10,900 at the end of the year. Keisha is happy to help her sister out and is excited to earn \$900 in interest. Keisha has made a list of items that she hopes to purchase next year with the extra \$900. Once she received her money from Shanice, she was disappointed to find that her list now cost \$950. What real interest rate did Keisha earn? Assume that Keisha's basket price increased at the same rate as the consumer price index.

# Part 2 - Using CPI Data from the Bureau of Labor Statistics

Conduct some research online related to nominal values. Think of your favorite movies (gross income), sporting event prize purses, wage rates, or item prices. Pick one and find the nominal values across two time periods and convert these to real values. Show and explain how the real values change/difference compares to that of the nominal values. Keep in mind that you can convert any nominal value to its base period (1982–1984) equivalent by dividing the nominal value by the CPI for the respective period and then multiplying the quotient by 100. Do this for each period and then compare those real values. Use this webpage (hawkes.biz/BLSDataViewer) to locate historical CPI values.

Next, select a month and year to calculate a price index for the following four items, utilizing data from the Bureau of Labor Statistics. Use January 2012 as your base period when determining your index values. The following items are in your index basket:

- 1 lb. white uncooked rice
- 1 lb. white bread
- 1 lb. chocolate chip cookies
- 1 gal. of regular unleaded gas
- 1. What is the cost of your basket in the base period?
- 2. What period did you select? What was the cost of the basket in this period?
- **3.** What is the calculated value of the index in each period that you have researched? This will include the base period and the period that you selected. Be sure to show your calculations.
- **4.** What was the percentage change in the cost of your basket between the period selected and the base period (inflation/deflation rate)? Be sure to show your work.

# Checklist

☐ Determine the amount of inflationary/deflationary change.

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Part	1
	Read the three scenarios and answer the given questions.
	Consider how inflation affects real wage rates.
	Consider how inflation affects fixed-interest loans.
	Calculate real interest rate after inflation.
Part	2
ı aı c	_
	Find the cost of a basket of goods for a base time period.
	Find the cost of a basket of goods for a selected time period.
	Find the calculated value of the index for each time period.

Chapter 23 Project

# Chapter 23 Project

# The International Trade and Capital Flows

#### Purpose

In this chapter, you have learned how to measure a merchandise trade balance and current account balance for a nation. You have also reviewed the pros and cons of a trade deficit and a trade surplus while learning the distinction between the level of trade and the balance of trade.

The purpose of this project is to practice calculating a current account balance between trading partners and to research information provided by the United States Census Bureau related to U.S. trade.

#### **Directions**

This project has three parts. In the first, you will examine trade between two households and apply balance of trade calculations to determine the current account balance for one household.

In the second, you will investigate misconceptions related to the dangers of a trade deficit, explaining some pros of a trade deficit.

In the third, you will research data related to the trade of specific states and trade between the United States and its largest trading partners.

## Part 1 - Calculating a Current Account Balance

The Johnsons and the Normans are neighbors and often engage in trade. Last month, Tyrone Norman cut the Johnsons' grass and provided other landscaping services, earning \$200. Melinda Johnson provided a therapeutic massage to both Ronelle and Earl Norman, earning \$130. Chris Johnson sold Earl Norman a set of custom-made family monogramed cornhole boards for \$250. Ronelle Norman sold Melinda Johnson her low-carb diet cookbook for \$20. Kasey Johnson sent \$20 in a "Congratulations" card to Tyrone Norman for graduating from high school. Chris Johnson paid \$75 to Earl Norman as an interest payment on Earl's investment in the rental condo that Chris Johnson built on the Johnson property.

Calculate the current account balance for the Normans by completing the following chart:

Price	Exports (in \$)	Imports (in \$)	Balance
Goods			
Services			
Income payments			
Unilateral transfers			
Current account balance			

# Part 2 - Assessing the Public Perception Associated with Trade Deficits

It is a common myth that eliminating the trade deficit should be a priority for the United States. To validate that this is an economic misconception, please poll at least ten people. Try to survey classmates outside of economics class or even friends and family. To quickly share and manage your survey, you can use Poll Maker (hawkes.biz/PollMaker) or a similar free survey management application. Share your survey link with others via text, email, or social media.

Present the following question in your poll:

Should the United States government prioritize eliminating the U.S. trade deficit?

Yes or No

Summarize and share your survey results with your instructor, explaining two important reasons why opposition to a trade deficit can involve flawed economic logic.

# Part 3 - Using International Trade Data from the United States Census Bureau

Use this webpage (hawkes.biz/USTradeData) to, research trade data from the U.S. Census Bureau.

- 1. Determine the top two most exported commodities from the following states:
  - Alaska
  - Nevada
  - New York
  - South Carolina
  - Texas
- **2.** What is the most imported commodity of your home state? Be sure to include your home state and the commodity.

Use this webpage (hawkes.biz/ForeignTrade) to explore data from the U.S. Census Bureau. In order to find the most accurate and recent data, select a nation's name to view the trade figures for each month. Use the data provided to answer the following questions.

- **3.** Provide two nations that the United States had a trade surplus with during the most recent month. Be sure to provide the nation, month, and balance of trade.
- **4.** Determine the largest three trading partners for the United States in the most recent month. Starting with the largest, provide the percentage of total U.S. trade represented by each nation.

The U.S. Census Bureau uses end-use codes to classify exported and imported merchandise based on the principal use of the good or service. This webpage (hawkes.biz/ExportsUS) lists the values of U.S. exports to other countries.

**5.** For each of the largest trading partners you listed in Question 4, list the top two exports from the U.S. For each export, list the end-use code and the value (in thousands of dollars). Be sure to use the data from the most recent year listed.

This webpage (hawkes.biz/ImportsUS) lists the values of U.S. imports from other countries.6. For each of the largest trading partners you listed in Question 4, list the top two imports to the U.S. For each import, list the end-use code and the value (in thousands of dollars). Be sure to use the data from the most recent year listed.

Now, visit this webpage (hawkes.biz/USTrade).

7. For each of the largest trading partners you listed in Question 4, list the balance of trade (in millions of dollars). Be sure to use the data from the most recent year listed.

**8.** During the research you just conducted, did any data surprise you? Were any of your findings consistent with your expectations related to U.S. trade?

# Checklist

☐ Reflect on findings.

	Checkist
Part	Calculate the current account balance in a fictional scenario.
Part	2
	Create a trade deficit poll and survey.
	Summarize survey results.
	Understand public opposition to a U.S. trade deficit.
Part	3
	Research top exports from states.
	Identify most imported commodity of home state.
	Identify nations with trade surpluses.
	Determine largest trading partners with U.S.
	Research top imports/exports for U.S.
	Provide the balance of trade for U.S.

Chapter 24 Project

# Chapter 24 Project

# The Aggregate Demand/Aggregate Supply Model

#### **Purpose**

In this chapter, you have learned how the aggregate demand/aggregate supply (AD/AS) model is constructed. The AD/AS model demonstrates how the price level and gross domestic product (GDP) are determined and how fiscal policy (changes in taxes and government spending) can be employed to influence macroeconomic outcomes.

The purpose of this project is to analyze the economic effects of recent recessions and the U.S. government's responses to them.

#### **Directions**

This project has three parts. In the first, you will evaluate how consumption and investment were affected during the Great Recession and how the drop in these two variables combined to reduce AD.

In the second, you will summarize the final impact such changes had on the following macroeconomic variables and indicators: real GDP, changes in the price level (i.e., the inflation rate), the unemployment rate, and the consumer and business confidence indices.

In the third, you will analyze the macroeconomic impacts of the CARES Act and how this compared to the governmental policies enacted during the Great Recession.

## Part 1 - Evaluating the Macroeconomic Conditions of the Great Recession

The Great Recession was the economic downturn in the U.S. from 2007 to 2009 that occurred as the result of a burst housing bubble and financial crisis. The following links provide a graphic representation of the trends of different components in the U.S. economy. Pay attention to the data for years leading up to and during the Great Recession.

#### 1. Real personal consumer expenditures

At this webpage (hawkes.biz/PCEC), examine the trends in real personal consumption expenditures from 2006 to 2019. Set the dates of observation as 2006 to 2019.

#### 2. Consumer confidence in the U.S.

At this webpage (hawkes.biz/CI), examine the trends in consumer confidence in the U.S. from 2006 to 2019. Set the dates of observation as 2006 to 2019.

## 3. Real gross private domestic investment

At this webpage (hawkes.biz/GPDI), examine the trends in real gross private domestic investment from 2006 to 2019. Set the dates of observation as 2006 to 2019.

#### 4. Business Confidence U.S. vs. Global Average

At this webpage (hawkes.biz/BCI), examine the comparison of business confidence in the U.S. versus the global average. Set the dates of observation as 2006 to 2019.

#### 5. Inflation rate

At this webpage (hawkes.biz/ICP), examine the inflation rate for consumer prices in the U.S. Set the dates of observation as 2006 to 2019.

After you review all the data, explain the dramatic changes that occurred in each of these variables in the year preceding the Great Recession (2006), during the Great Recession, and in the years of recovery immediately following the Great Recession (2010–2016). Is this consistent with the idea that negative information/economic conditions feed on themselves and make the situation worse? If so, how? Be specific in your explanation. Be sure to support your explanation with evidence from each of the economic indices.

# Part 2 - How the U.S. Government Used Fiscal Policy to Combat the Great Recession

The Obama administration developed the American Recovery and Reinvestment Act of 2009 (ARRA) in response to the Great Recession. The following two articles describe the goals and the effect of the stimulus package: (hawkes.biz/ARRA1) and (hawkes.biz/ARRA2).

Using evidence from the articles, explain and assess the effectiveness of the fiscal policy measures undertaken by the Obama administration during (and in the immediate years following) the Great Recession.

Second, within the context of the AD/AS diagram, demonstrate the impact of the aforementioned policies on AD and the resulting changes in the price level (that is, the inflation rate) and GDP. (*Note*: Use Figure 5 in Lesson 24.1 as your starting point for the graphing portion of this exercise. Recall that expansionary fiscal policy would cause the AD curve to shift right, demonstrating an increase.)

# Part 3 - Evaluate How the U.S. Government Used Fiscal Policy to Respond to the COVID-19 Pandemic

The Trump administration developed the Coronavirus Aid, Relief, and Economic Security (CARES) Act in response to the economic turmoil resulting from the 2020 COVID-19 pandemic. The scope of this act was staggering, distributing over \$2 trillion of federal funds to families and firms across the United States. The following two articles discuss the macroeconomic impact on the country: (hawkes.biz/CARES1) and (hawkes.biz/CARES2).

Using evidence from the articles, discuss the short- and long-term effects of the CARES Act on both unemployment and GDP.

Explain how changes in aggregate demand or aggregate supply incited the government to pass the CARES Act.

Next, explain how changes in aggregate supply and aggregate demand were different during the COVID-19 pandemic than they were preceding the American Recovery and Reinvestment Act of 2009.

# Checklist

☐ Compare the CARES Act to ARRA.

Part	1
	Develop an understanding of the following macroeconomic variables: consumer expenditures, investment expenditures, consumer confidence, business confidence, the inflation rate, and the business cycle.
	Investigate the provided data.
	Analyze the changes that occurred in macroeconomic variables before (2006), during (2007–2009), and after (2010–2016) the Great Recession.
	Interpret the impact that negative information/economic conditions have on behavior.
Part	2
	Read the articles provided.
	Describe, explain, and assess the effectiveness of ARRA.
	Using the AD/AS diagram, evaluate the impact ARRA had on AD and the resulting impact on changes in the price level and GDP.
Part	3
	Read the articles provided.
	Explain the governmental incentives to pass the CARES Act.

Chapter 25 Project

# **Chapter 25** Project

# The Keynesian Perspective

#### **Purpose**

In this chapter, you have learned the determinants of aggregate demand. You have also learned how macroeconomic equilibrium changes due to shifts in aggregate demand, including the multiplier effect of spending changes. You have studied how the perceived relationship between unemployment and inflation can be evaluated, and you have also learned the zones along the aggregate supply curve.

The purpose of this project is to identify specific changes in aggregate demand components and make distinctions between zones of the real-world aggregate supply curve. You will also apply the Phillips curve to aggregate data and changes to factor prices.

#### **Directions**

This project has three parts. In the first, you will work on your own and then with a classmate to apply the concepts of aggregate demand components to real economic events.

In the second, you will identify the zone of the aggregate supply curve where macroeconomic equilibrium occurs.

In the third, you will apply the Phillips curve individually and then with a classmate.

# Part 1 - Aggregate Demand in the News

Review the following articles:

- 1. "Congressional Budget Office: Budget Deficit Grows \$39B in First Quarter" (hawkes.biz/AD1)
- 2. "Consumer Index Sinks to All-Time Low" (hawkes.biz/AD2)
- 3. "U.S. Firms Pull Back on Investment" (hawkes.biz/AD3)
- 4. "China's Economic Slowdown" (hawkes.biz/AD4)

Explain how each event would affect aggregate demand in the U.S. economy. Be sure to include the component of aggregate demand that contributes to the overall shift.

For each component of AD, research and provide an article headline and link. Also, explain the direction that AD will shift.

- Consumption expenditure
- Investment expenditure
- · Government spending
- Spending on net exports (exports minus imports)

Exchange your list with another classmate. Check your classmate's work for accuracy and answer the following questions for each link. Provide your classmate's headlines, article links, aggregate demand applications, and your feedback. Remember to include the name of the classmate that you exchanged headlines with.

Did each article relate to the component of aggregate demand that your classmate chose? Explain why or why not.

Did your classmate correctly determine how aggregate demand would shift? Explain why or why not.

## Part 2 - Determining Aggregate Supply Zone

For the following "headlines," assume that the average annual economic growth rate is 3%, and the normal annual inflation rate is 2%. Indicate and explain which zone of the real-world aggregate supply curve would best apply. Also, describe the slope of the real-world aggregate supply curve zone.

#### Headline 1

The annualized economic growth rate has slipped to -5%, while the annual inflation rate is 1%. Aggregate demand continues to decline.

#### Headline 2

The annualized economic growth rate is 1.5%, while the annual inflation rate has increased to 6%. Aggregate demand in the economy continues to rise.

#### Headline 3

The annualized economic growth rate is 3%, while the annual inflation rate is 2%. The unemployment rate is consistent with the natural rate of unemployment.

## Part 3 - Applying the Phillips Curve

Review the following hypothetical unemployment rates, considering 4% unemployment to be the level of full employment. Assuming a normal and expected inflation rate of 2% annually, fill in hypothetical inflation rates that would be consistent with the Phillips curve.

Year	Unemployment Rate	Inflation Rate
2035	8%	
2036	6%	
2037	4%	
2038	2.5%	

Review this data (hawkes.biz/CrudeOil) provided by Macrotrends LLC on the trend of U.S. crude oil production over the past ten years. Assuming *ceteris paribus*, would this trend lead to a stronger inverse relationship between unemployment and inflation, as indicated by the Phillips curve?

Chapter 25 Project

# Checklist

Part	1
	Read the provided articles.
	Connect a component of aggregate demand to each article.
	Describe the shift of aggregate demand for each article.
	Research a news articles for each component of aggregate demand.
	Describe the effect on aggregate demand for each article.
	Exchange and check classmate's articles.
Part	Determine the appropriate aggregate supply zone.
Part	Fill in hypothetical inflation rates in accordance with the Phillips curve.

☐ Review data and note trends of U.S. crude oil production.

☐ Explain possible future economic effect of trend.

# **Chapter 26** Project

# The Neoclassical Perspective

#### **Purpose**

In this chapter, you have learned the building blocks of the neoclassical economic perspective. You have learned that the neoclassical model emphasizes aggregate supply and determinants of productivity, keeping the focus on long-run economic growth. You have studied how price adjustments ultimately bring output levels back to potential GDP within the neoclassical model and how there is no long-run tradeoff between inflation and unemployment.

The purpose of this project is to distinguish between Keynesian and neoclassical economic perspectives and to apply each perspective to economic events in the news.

#### **Directions**

This project has two parts. In the first, you will work on your own to distinguish between examples of the Keynesian and neoclassical perspectives. You will also assess the value created by each perspective and apply the neoclassical perspective to the Phillips curve.

In the second, you will work with a classmate to identify and apply both perspectives to economic events in the news.

# Part 1 - Distinguishing between Keynesian and Neoclassical Economic Perspectives

Evaluate the following statements and classify each statement as exhibiting a Keynesian perspective or a neoclassical perspective. Be sure to explain your answer.

- 1. Congress has approved a stimulus plan to mail economic impact payments of \$1,200 to taxpayers earning less than \$75,000 per year.
- 4. A shift toward sales taxes and away from income taxes would provide individuals with increased options to save income. The reduction in interest rates would lead to greater capital investment spending, boosting capital per worker.
- Cyclical unemployment must be reduced by running a fiscal deficit, shifting aggregate demand to the right.
- **5.** The U.S. government should pay for the retraining of those who become structurally unemployed.
- A voucher system would provide children with greater school choice, leading to increased consumption of higher quality education, ultimately boosting future worker productivity.
- **6.** Rising export demand due to a thriving global economy will not result in higher long-term output in the U.S. economy.

Review the following hypothetical inflation rates, considering 4% unemployment to be the level of full employment. Assuming a normal and expected inflation rate of 2% annually, fill in hypothetical unemployment rates that would be consistent with the neoclassical Phillips curve.

Year	Unemployment Rate	Inflation Rate
2035		10%
2036		7%
2037		4%
2038		0%

After studying the Keynesian and neoclassical economic perspectives, in your opinion, what are the most valuable takeaways from each approach?

# Part 2 - Working in a Group to Apply Economic Perspectives

With a classmate, provide links to two articles that report on a policy initiative that applies the Keynesian perspective. Additionally, find two more articles that report on a policy initiative that applies the neoclassical perspective. For each article, explain how any policies mentioned are focused on long-term or short-term economic effects. Be sure to use articles from trustworthy sources.

Exchange your work with another group. Does your group agree with the connections made by the other group? Explain why or why not. Be sure to include the names of the group members that you exchanged articles with, the articles/links, the connections made by the other group, and your group's feedback.

# Checklist

Part	1
	Determine whether each statement exhibits a Keynesian or neoclassical perspective.
	Fill in hypothetical unemployment rates for the neoclassical Phillips curve.

☐ Explain benefits of the Keynesian approach.

☐ Explain benefits of the neoclassical approach.

## Part 2

☐ Find two articles that discuss a Keynesian po	licy.
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- ☐ Find two articles that discuss a neoclassical policy.
- ☐ Explain how each article appeals to the Keynesian or neoclassical perspective.
- ☐ Exchange and review classmates' articles and connections.

Project





# **Chapter 27** Project

# **Money and Banking**

#### **Purpose**

In this chapter, you learned how money is defined and measured, the role banks play in the financial system, and how banks create money through a fractional reserve banking system.

The purpose of this project is to explain money, what happens to money during hyperinflation, and the role of banks in the Great Recession.

In the second, you will define and compare/contrast inflation, hyperinflation, and deflation and which roles of money they affect.

In the third, you will reflect upon and explain the role banks played in creating the housing bubble of the early-to-mid 2000s and its subsequent collapse during the Great Recession of December 2007-June 2009.

#### **Directions**

This project has three parts. In the first, you will explore the meaning of money.

## Part 1 - Explore the Meaning of Money

Money has a far more expansive meaning than simply the coins and bills we carry around in our pockets. Using both Lesson 27.1 and the following video, evaluate what the true definition of money entails.

"What Is Money" with Dr. Richard D. Wolff: (hawkes.biz/WhatIsMoney)

In your own words, define money, identify the roles of money, and provide examples of these roles in your own life.

# Part 2 - Compare Inflation and Deflation and Describe the Roles of Money

Inflation and deflation incur drastic effects on money and economies. The following resources provide information on the effects of inflation and deflation, along with specific examples:

Definition of deflation: (hawkes.biz/Deflation)

Historical inflation rates: (hawkes.biz/intinf)

Deflation in Japan: (hawkes.biz/Japandeflation)

Definition of hyperinflation: (hawkes.biz/Hyperinflation)

Global and historical hyperinflation: (hawkes.biz/WorldInflation)

Compare and contrast the concepts of inflation and deflation.

Identify historical periods of deflation in the U.S. and Japan, and indicate why deflation is a sign of poor macroeconomic health for an economy.

Define the term *hyperinflation* and which roles of money break down during a period of hyperinflation.

# Part 3 - Explain the Role of Banks before and during the Great Recession

Read the following articles on the Great Recession:

(hawkes.biz/GR1) (hawkes.biz/GR2) (hawkes.biz/GR3)

Describe what a housing bubble is and the role banks played in creating this bubble with subprime mortgage offerings.

Explain how this housing bubble eventually burst in the U.S., how it was a contributing (and sustaining) factor in the Great Recession, and how the U.S. housing market has changed since.

# Checklist

Part 1		
	Review Lesson 27.1.	
	Watch the video on the definition of money.	
	Explain money in your own words.	
	Identify the roles of money.	
	Provide examples of money's roles in your own life.	
Part 2		
	Read the provided articles.	
	Compare and contrast the concepts of inflation and deflation.	
	Identify historical periods of deflation in the U.S. and Japan.	
	Indicate why deflation is a sign of poor macroeconomic health for an economy.	
	Define hyperinflation.	
	Identify which roles of money break down during a period of hyperinflation.	
Part 3		
	Read the provided articles.	
	Describe a housing bubble.	
	Describe the role banks played in creating the housing bubble.	
	Explain how the housing bubble eventually burst in the U.S.	
	Explain how the housing bubble was a factor in the Great Recession.	
	Explain how the U.S. housing market has changed since the Great Recession.	

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Project



# **Chapter 28** Project

# **Monetary Policy and Bank Regulation**

#### **Purpose**

In this chapter, you learned about the structure and functions of the Federal Reserve Bank (Fed) in the U.S. You also learned how banks are supervised, regulated, and insured. Furthermore, you discovered how the Fed implements monetary policy and quantitative easing, along with how these policies affect broader macroeconomic variables. Last, you analyzed the potential pitfalls (downsides) of implementing monetary policy in regard to macroeconomic outcomes.

The purpose of this exercise is to understand how the Fed functions and the differences between monetary policy and quantitative easing (QE). You will also compare and contrast the Fed's historical monetary policies.

#### **Directions**

This exercise has two parts. In the first part, you will read about banks during the Great Recession. Then, you will reflect on this information, using what you learned in the chapter. In the second part, you will use resources to review and compare/contrast monetary policy with quantitative easing.

# Part 1 - Compare How Bank Regulation Works in Theory versus Lived Experiences

Review Lesson 28.2 and read the following articles on the Great Recession and its effect on banking.

(hawkes.biz/Recession1) (hawkes.biz/Recession2)

Explain how the classic model of bank regulation operates and then compare it to the behavior of U.S. banks leading up to and during the Great Recession.

Using specific examples from the articles, explain how the banking sector was reformed in the immediate aftermath of the Great Recession.

# Part 2 - Compare and Contrast Traditional Monetary Policy with QE

Review Lesson 28.4 and read the following articles. Also, watch the video in the first article.

(hawkes.biz/QE1) (hawkes.biz/QE2) (hawkes.biz/QE3)

Compare and contrast traditional monetary policy with quantitative easing.

Evaluate the monetary policy/QE regimens during the Great Depression with those employed during the Great Recession. How are they the same? How are they different? What was the effect?

# Checklist

Part	1
	Review Lesson 28.2.
	Read the provided articles.
	Explain how the classic model of bank regulation operates.
	Contrast the classic model with the behavior of U.S. banks leading up to and during the Great Recession.
	Explain how the banking sector reformed following the Great Recession.
Part	2
	Review Lesson 28.4.
	Review the provided resources.
	Compare and contrast traditional monetary policy with QE.
	Evaluate the monetary policy/QE regimens during the Great Depression with those employed during the Great Recession.
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# **Chapter 29** Project

# **Exchange Rates and International Capital Flows**

### **Purpose**

In this chapter, you learned the determinants of demand and supply for currencies in foreign exchange markets. You also learned how fluctuations in foreign exchange rates affect various international market participants.

The purpose of this project is to identify the impact of changes in currency markets and research realworld cases of losers due to currency appreciation.

### **Directions**

This project has three parts. In the first, you will apply the concept of currency markets to international trade.

In the second, you will calculate gains or losses from currency exchange and identify changes to currency values due to determinant changes.

In the third, you will identify potential losers from currency appreciation and present cases of actual losers from currency appreciation.

## Part 1 - Identifying the Impact of Politically Based Currency Fluctuations

Imagine that a U.S. presidential candidate makes the following statement: "The United States must strengthen the dollar against other currencies. The United States must also reduce its trade deficit."

Will U.S. voters support these statements? Why or why not?

What is the economic benefit of strengthening the U.S. dollar?

What is the benefit of reducing the U.S. trade deficit?

Is it likely that the United States will simultaneously achieve these goals? Explain your reasoning.

# Part 2 - Determine the Impact of Economic Currency Fluctuations

A portfolio investor anticipated that during December of 2019, the Canadian dollar would appreciate relative to the United States dollar. The investor purchased 25,000 in Canadian dollars (CAD) on December 2, 2019. Use the data on foreign exchange rates at this webpage (hawkes.biz/ExchangeRates) to answer the following questions.

How much did the portfolio investor purchase in CAD on December 2, 2019?

Holding all other factors constant, exactly what profit or loss would the portfolio investor earn after purchasing United States dollars on December 31, 2019?

Was this an attempt at arbitrage or hedging? Be sure to explain your answer.

Complete the following chart by determining whether the scenario is expected to cause an increase, decrease, or no change for each of the three columns.

Determinant Change	Change in Demand for Canadian Dollar	Change in Supply of Canadian Dollar	Exchange Rate of Canadian Dollar (CAD/USD)
Financial experts featured on popular news networks predict that the Canadian dollar will depreciate relative to the U.S. dollar.			
Real interest rates for Canadian securities are expected to exceed that of the United States.			
Inflation rates in Canada have been higher than anticipated, while inflation in the U.S. has remained on target.			

## Part 3 - Researching the Losers of Currency Appreciation

Provide at least three examples of how a United States firm can be harmed by currency appreciation of the U.S. dollar.

Conduct research and, for each example in your previous answer, provide specific examples of U.S. firms that were harmed by a stronger dollar. Don't forget to cite or provide links to sources.

Exchange your answers for Part 3 with a classmate.

Name of classmate you exchanged responses with:

Did your classmate cite a negative consequence of a strong dollar that you did not provide in your response?

Out of the examples shared by your classmate, which did you find to be most interesting and applicable to Chapter 29?

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# Checklist

Part	1
	Consider the fictional statements.
	Consider expected responses to the statements.
	Consider the economic effect(s) of the statements.
	Consider the likelihood of the statements.
Part	2
	Calculate the effect of appreciation.
	Determine if the scenario represents arbitrage or hedging.
	Determine the effect on the Canadian dollar based on different determinants.
Part	3
	List three risks or negative effects of currency appreciation.
	Research examples of the negative effects of appreciation.
	Evaluate a classmate's findings.

# Chapter 30 Project

# **Government Budgets and Fiscal Policy**

### **Purpose**

In this chapter, you have learned how the government collects tax revenue and utilizes that revenue in both spending and transfers. You have also learned about how the government uses fiscal policy in an effort to stabilize the economy and the challenges associated with doing so.

The purpose of this project is to identify the role of fiscal policy and to distinguish between ways of carrying out expansionary fiscal policy.

### **Directions**

This project has two parts. In the first, you will work on your own to evaluate sources of federal government tax revenue and identify both challenges and benefits of using fiscal policy to promote a smooth business cycle.

In the second, you will work in a group to debate methods of allocating fiscal stimulus to increase aggregate demand.

## Part 1 - Identifying the Role of Fiscal Policy

The Tax Foundation provides a historical record of the tax brackets and rates from year to year. In 2019, the payroll taxes for Social Security were imposed at a rate of 12.4% up to a certain wage limit; in this case, it is set at \$118,500. Medicare, on the other hand, is fixed at 2.9% with no upper ceiling. The following income tax bracket (Table 1 in Lesson 30.2) shows the tax rate assigned to a single taxpayer's income in 2019.

Income	Tax Rate
\$0-\$9,700	10%
\$9,701-\$39,475	12%
\$39,476-\$84,200	22%
\$84,201-\$160,275	24%
\$160,276-\$204,100	32%
\$204,101-\$510,300	35%
\$510,300+	37%

In 2019, Ray earned an income of \$60,000. Joan earned \$30,000, and Para earned \$180,000. Using the information provided, answer the following questions.

Who will pay the highest marginal tax rate?

Who will pay the lowest marginal tax rate?

Who will pay the highest payroll tax rate from their check for Medicare?

Who will pay the lowest payroll tax rate from their check for Social Security?

Evaluate the validity of the following statement.

A progressive income tax rate helps promote smoother business cycles.

Is this statement accurate? Why or why not?

**Project** 

After studying the differences between expansionary and contractionary fiscal policy, which policy do you believe would be the most politically challenging to implement?

## Part 2 - Debating Approaches to Expansionary Fiscal Policy

This part of the assignment will involve two debate teams. Each team, consisting of two classmates, will conduct research to support one of the following positions.

### Position A:

Expansionary fiscal policies used to increase aggregate demand during a recession should be delivered in the form of tax cuts. Present the benefits of tax cuts for aggregate demand, historical examples that support this case, and potential negative consequences associated with the alternative of increased government spending.

### Position B:

Expansionary fiscal policies used to increase aggregate demand during a recession should be delivered in the form of increased government spending. Present the benefits of increased government spending for aggregate demand, historical examples that support this case, and potential negative consequences associated with the alternative of reducing tax rates.

Who did you work with, and what position did your team represent?

What were your team's primary arguments? These arguments should be supported with historical examples.

Which students represented the opposing debate team?

What were the primary arguments of the opposing team?

After discussing and considering the arguments presented by both debate teams, what allocation of tax cuts and government spending would you suggest for a stimulus package? This question should be answered individually by each debate team member.

	CHECKIIST
Part	1
	Consider the data in Table 1.
	Answer the provided questions.
	Evaluate the given statement about progressive income tax.
	Differentiate challenges of expansionary and contractionary fiscal policy.
Part	2
	Form a debate team.
	Choose a position.
	Develop your team's argument.
	Consider and compare arguments of the other team.
	Consider your suggestion for a stimulus package.

Chapter 31 Project

# **Chapter 31** Project

# The Impacts of Government Borrowing

### **Purpose**

In this chapter, you learned how government borrowing affects private investment. You learned about the trade balance and the concept of the twin deficits of a trade and budget deficit. Furthermore, you studied the concepts of Ricardian equivalence and crowding out as they pertain to government spending.

The purpose of this project is to explore Ricardian equivalence and crowding out.

### **Directions**

This project has two parts. In the first, you will explore the concept of Ricardian equivalence and how this model holds up in real-world applications.

In the second, you will explain the macroeconomic concept of crowding out, how well the model of crowding out has held up in the real world, and how government grants affect the concept of crowding out.

## Part 1 - Exploring the Concept of Ricardian Equivalence

Review Lesson 31.3 and then read following articles.

(hawkes.biz/Ric1) (hawkes.biz/Ric2)

Explain the theory of Ricardian equivalence.

Using details from the Economics Help article, explain the theoretical problems that exist with the concept of Ricardian equivalence.

Using the Vox article, explain how well Ricardian equivalence has held up in modeling real-world behavior (with a focus on the European Union).

# Part 2 - Explaining the Macroeconomic Concept of Crowding-Out

Review Lesson 31.4 and then read the following articles.

(hawkes.biz/Crowding1) (hawkes.biz/Crowding2) (hawkes.biz/Crowding3) (hawkes.biz/Crowding4)

Define and explain the macroeconomic concept of crowding out in its standard context (of government spending crowding out private spending).

Using the article from the U.S. Tax Foundation, explain how well the concept of crowding out has held up in the real world in the United States.

Using the National Bureau of Economics (NBER) articles, explain how government grants may crowd out fundraising by charities and private donations in the U.S. and UK.

Define the concept of crowding in as it applies to charitable donations by organizations and individuals.

Explain the empirical evidence of crowding in for the U.S. and UK as provided in the NBER and Georgia State University articles.

# Checklist

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ı	I Review	Lesson	31	13

- ☐ Read the provided articles.
- ☐ Use the provided resources to answer all questions.

## Part 2

- ☐ Review Lesson 31.4.
- ☐ Read the articles provided.
- ☐ Use the provided resources to answer all questions.

Chapter 32 Project

# **Chapter 32** Project

# **Macroeconomic Policy Around the World**

### **Purpose**

In this chapter, you learned how to make comparisons of aggregate (total) economic well-being across countries on a per-capita basis. You learned how small differences in economic growth rates lead to large differences in economic outcomes over long periods of time and what constitutes the natural rate of unemployment across different countries. You studied the causes of unemployment and inflation in different countries and nations' balance of trade issues.

The purpose of this project is to develop an understanding of the rule of 72 and use it to explain how large differences in economic outcomes can occur over long periods of time between nations with disparate rates of annual economic growth. You will also evaluate the meaning of cyclical unemployment and the natural rate of unemployment and describe the problems of youth unemployment.

### **Directions**

This project has two parts. In the first, you will investigate the rule of 72 and utilize it to explain how large differences in economic outcomes have appeared over time.

In the second, you will explore the concepts of cyclical unemployment and the trends of labor unrest and labor strikes.

## Part 1 - Investigating the Concept of the Rule of 72

Review Lesson 32.2 and then read the following articles, including the video at the second link.

(hawkes.biz/72Rule1)

(hawkes.biz/72Rule2)

Define and explain how the rule of 72 model works.

Using the 2017 article from the *Journal of Economics and Finance Education* and utilizing the rule of 72, explain how differences in growth rates of China and South Korea massively outperformed long-standing economic powerhouses, such as the U.S. and Germany.

Using the CNBC article and video, explain (while providing specific examples) how this formula can work for you, in terms of investing, or against you, in terms of debt.

# Part 2 - Exploring the Concepts of Cyclical Unemployment

Review Lessons 32.3 and 32.4 and then read the following article.

(hawkes.biz/CyclicalUnemployment)

Explain the concepts of cyclical unemployment and the natural rate of unemployment, and describe the problems of youth unemployment.

Which factors do you attribute to the dramatic rise in labor strikes occurring in the U.S. since 2018?

In what ways does the article demonstrate how even a very low unemployment rate by historical standards in the U.S. can mask serious labor unrest? Is this labor unrest justified? Explain.

Do you expect the trend of rising labor unrest (manifesting, in part, in labor strikes) to continue in the U.S. over the next five years? Why or why not?

# Checklist

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- ☐ Read the articles provided.
- ☐ Use the provided resources to answer all questions.

## Part 2

- ☐ Review Lessons 32.3 and 32.4.
- ☐ Read the provided articles.
- ☐ Use the provided resources to answer all questions.

Chapter 33 Project

# **Chapter 33** Project

### **International Trade**

### **Purpose**

After finishing this chapter, you have learned that gains from trade are made when countries specialize in the production of the goods for which they have a comparative advantage. Let's explore how such gains could apply to everyday life.

The purpose of this exercise is to help you understand absolute and comparative advantage and how society benefits from trade based on comparative advantage.

### **Directions**

This exercise has two parts. In the first, you will identify the absolute and comparative advantages of two producers of food and clothing. In the second part,

you will consider the gains that could emerge from trade between the two producers and how trade benefits society.

Consider two nonprofit disaster relief agencies, The Green Triangle and The Pink Heart, that provide food and clothing to disaster areas. Assume that both The Green Triangle and The Pink Heart pursue the same mission of maximizing the provision of food and clothing in disaster areas. Instead of competing, suppose the two organizations agree to behave like countries and specialize in the production of food or clothing, trade with each other in order to obtain units of both food and clothing, and then distribute the units to different disaster areas. The agencies believe that such an agreement will allow for a greater achievement of their similar missions.

## Part 1 - Absolute and Comparative Advantage

The table below shows the possible combinations of food and clothing The Green Triangle agency can provide with a fixed budget per year:

Food (units per year)	Clothing (units per year)
60,000	0
40,000	10,000
20,000	20,000
0	30,000

Complete the table below for The Pink Heart so that The Green Triangle has an absolute and comparative advantage in the production of food and The Pink Heart has an absolute and comparative advantage in the production of clothing.

Food (units per year)	Clothing (units per year)
	0
0	

Based on the tables for the two agencies, answer the following questions:

- 1. What is the opportunity cost of The Green Triangle producing one unit of food (in terms of clothing)?
- What is the opportunity cost of The Green Triangle producing one unit of clothing (in terms of food)?
- What is the opportunity cost of The Pink Heart producing one unit of food (in terms of clothing)?
- 4. What is the opportunity cost of The Pink Heart producing one unit of clothing (in terms of food)?
- 5. Explain why The Green Triangle has an absolute and comparative advantage in the production of food.
- 6. Explain why The Pink Heart has an absolute and comparative advantage in the production of clothing.

### Part 2 - Gains from Trade and Social Benefit

In Part 1, you identified absolute and comparative advantages for two hypothetical relief agencies. Write an essay analyzing the agreement between the relief agencies. Your essay should be at least three paragraphs long and address these questions:

- 1. Which relief agency should provide food and why?
- 2. Which relief agency should provide clothing and why?
- 3. From the economist's perspective, how should society benefit from the agencies' agreement to specialize and trade? How does the outcome of the agreement compare to the alternative of the agencies being self-sufficient?
- 4. Does your answer to #3 change if you consider the question from the perspective of an individual living in a disaster area?

Completion of #4 requires you to think about potential gains from this hypothetical agreement between disaster relief agencies in the context of your own everyday life.

## Checklist

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Part	I .		
	Fill out the table illustrating absolute and comparative advantage.		
	Understand and calculate opportunity cost.		
	Explain absolute and comparative advantage.		
Part 2			
	Decide which good each agency should produce.		
	Understand specialization and trade.		
	Discuss the economic and individual benefits of the agencies' agreement to specialize and trade.		

Chapter 34 Project

# Chapter 34 Project

### **Globalization and Protectionism**

### **Purpose**

After finishing this chapter, you have learned that tariffs, tools for restricting the flow of trade, are associated with both costs and benefits that impact entire countries, producers, and consumers. Let's explore how tariffs relate to your everyday life.

The purpose of this exercise is to help you understand the costs and benefits of tariffs, as well as the considerations of decision makers who must

Chosen product with a 10% tariff:

identify whether tariffs are beneficial enough to society to implement.

### Directions

This exercise has two parts. In the first, you will consider a tariff imposed on a good important to your life. In the second, you will put yourself in the shoes of a decision maker who must decide whether or not to support the tariff.

### Part 1 - How Tariffs Affect Countries, Producers, and Consumers

Then, referring to this chapter, complete the following chart for your chosen product:

Tariffs are taxes that governments impose on imported goods and services, which in turn make imports more expensive for consumers. Tariffs are also considered a form of protectionism. While protectionism raises the price of the protected good in the domestic market, domestic producers earn more.

On September 24, 2018, President Donald Trump approved a 10% tariff on goods imported from China. The motivation behind the tariff was to discourage China from carrying out unfair trade practices with the United States. Some of the taxed goods included mandarin oranges, rawhide for pets, hair care products, dog leashes and collars, luggage, handbags, wrapping paper, gas grills, makeup mirrors, vacuum cleaners, toothbrush replacement heads, razors, air conditioners, futons, patio furniture, wooden furniture, and mattresses.

First, choose one of the products listed above that you consider to be important in your everyday life. Make note of the product below:

Benefits Associated with 10% Tariff on Chosen Product	Costs Associated with 10% Tariff on Chosen Product

Please provide *at least* five benefits and five costs. You may list more if applicable. When identifying costs and benefits, think both big and small and be specific. Consider both international and domestic effects, as well as the impact on both producers and consumers, including yourself.

Completion of the chart requires you to think about this tariff in the context of your own everyday life. The best analysis will be specific and demonstrate not only your understanding of the economic consequences of a tariff but also application to your own experiences as a consumer.

### Part 2 - Thinking Like the Decision Maker

In Part 1, you identified the costs and benefits associated with a 10% tariff on a good considered important in your everyday life. Policy makers must often make similar considerations, as well as weigh the associated costs and benefits to determine whether they merit implementation or discontinuation of the policy. This is particularly challenging when a wide range of economic participants are affected and policies have political implications.

For Part 2, imagine you are asked to make a recommendation to the president regarding continuation of the 10% tariff on the imports from China. Write a business memo of professional quality that includes the following parts:

- A confident statement recommending that the tariff be continued or discontinued
- Justification for your recommendation, generalized from the benefits and costs for your chosen product in Part 1
- · A description of the economic participants affected by your recommendation and how they are affected
- Should the tariff be discontinued? A suggestion for how the United States should alternatively confront China's unfair trade practices

To inform your recommendation, consider your analysis in Part 1. The best recommendations will be confidently stated, with justifications that are consistent with economic theory. There is not a single correct analysis; therefore, answers will vary.

☑ Checklist			
Part 1			
☐ Choose a product with a 10% tariff.			
☐ List benefits and costs of the tariff.			
Part 2			
☐ Reflect on the impact of tariffs in your everyday life.			
☐ Make a recommendation on continuing or discontinuing the tariff.			
☐ Construct a business memo supporting your recommendation.			