
Lesson 10 - The Circular Flow of Economic Activity

INTRODUCTION

Economics

The *circular flow of economic activity* is a simplified macroeconomic model of the basic economic relationships in a market economy. This model gives the students an overview of how households, businesses and government interact in different markets by exchanging goods and services, productive resources (also known as *inputs* or the *factors of production*) and money.

Reasoning

People respond to incentives. Households have incentives to provide resources to businesses to receive income in return. They then have incentives to use their income to purchase goods and services to satisfy their wants. Businesses have incentives to earn profits and, therefore, to produce the goods and services that consumers want. To produce goods and services, businesses need to purchase resources from households. The circular-flow model and the simulation in this lesson demonstrate these important relationships.

CONCEPTS

Circular flow of goods, services, productive resources and money payments

Interdependence

Productive resources

(natural, human and capital)

Resource payments

(wages and salaries, rent, interest, profit)

CONTENT STANDARDS

7. Markets exist when buyers and sellers interact. This interaction determines market prices and thereby allocates scarce goods and services.
16. There is an economic role for government to play in a market economy whenever the benefits of a government policy outweigh its costs. Governments often provide for national defense, address environmental concerns, define and protect property rights, and attempt to make markets more competitive. Most government policies also redistribute income.
18. A nation's overall levels of income, employment and prices are determined by the interaction of spending and production decisions made by all households, firms, government agencies and others in the economy.

OBJECTIVES

Students will

1. Identify and describe the three types of productive resources (inputs) and the kind of income each resource earns.
2. Analyze the economic relationships between households and businesses in a market economy.
3. Use a circular-flow diagram to illustrate the economic relationships among households, businesses and government.

LESSON DESCRIPTION

In this lesson, the students read about market interactions and participate in a simulation. “Econoland” involves transactions between businesses and households in two kinds of markets: *product* markets and *resource* (or input) markets. They discuss how the government fits into this model and translate their conclusions into a circular-flow diagram.

TIME REQUIRED

75 minutes: 45 minutes to conduct and discuss the simulation and 30 minutes to complete Activities 10.5 and 10.6

MATERIALS

Note: Prepare materials for the simulation before class, mainly cutting apart activity sheets and creating sets of materials for the students. If possible, laminate badges, cards and money to use in multiple classes.

1. Visuals 10.1 and 10.2
2. A copy of Activity 10.1 (two pages) for each student
3. Enough copies of Activity 10.2 (one Business Badge and 10 \$100 bills) for half the students in the class. These students will represent businesses.
4. Enough copies of Activity 10.3 (five Human Resources cards, five Natural Resources cards and five Capital Goods cards) for the rest of the students in the class, who will represent households. Mix the sets up so the cards are not distributed equally: Make one set with 15 Natural Resources cards, for example, and another with 10 Human Resources cards and five Capital Goods cards. Just make sure each set includes a total of 15 cards.
5. Enough copies of Activity 10.4 (10 Econo cards) for half the students in the class. You will need to cut these cards apart, but they don’t need to be put into sets. Econos will be distributed during the simulation,

so you can put them in an envelope or container to make it easy to give them out.

6. A copy of Activity 10.5 and Activity 10.6 for each student
7. A large piece of paper on which you have written ECONO FACTORY
8. Masking tape or straight pins so the students can wear the Business Badges
9. **(Optional)** Two small prizes

PROCEDURE

1. Explain to the students that people participate in the economy in a variety of ways. People make decisions as consumers when they purchase goods and services. They make decisions as producers when they provide human and natural resources they own to businesses or when their savings allow businesses to borrow to make investments in capital goods. They also make decisions as citizens, especially as voters, that influence the economic decisions made collectively in the economy.
2. Explain that the class will engage in a simulation called “Econoland” to learn about the interrelationships between households and businesses in a market economy.
3. Give each student a copy of Activity 10.1. Instruct the students to read “Overview.” Review the role of households, the three categories of productive resources and the roles of business firms. Answer any questions about the concepts involved.
4. Divide the class in half. Students in one group will represent business firms and students in the other group will represent households. Give each business firm 10 \$100 bills and a Business Badge to wear during the simulation. Have business firms tape or pin their badges to their shirts to make them more recognizable to the households. Give each household a set of 15 resources cards.

5. Have the students read the instructions for the “Econoland” simulation on the second page of Activity 10.1. Make sure households know they must sell their resources cards for money and then use the money to buy Eonos, which represent products. Make sure businesses know they must pay money for the resources cards and then sell Eonos to the households.
6. Tape the ECONO FACTORY sign in the place where firms will exchange three cards – one Natural Resources, one Human Resources and one Capital Goods – for one Econo. Remind the students that Eonos represent goods and services businesses sell to households. You or a student you select will staff the Econo Factory.
7. Review the instructions for the simulation and answer any questions. Remind the students that the goal of each business firm is to end the simulation with as much money as possible. Businesses must pay money to obtain the productive-resources cards. The goal of each household is to end with as many Eonos as possible. Households must sell their resources cards for money, and they may buy only Eonos with money.
8. Conduct the simulation. Allow the students up to 20 minutes to engage in their exchange activities (they usually finish in 15 minutes or less). When you observe that about half the households have sold all their resources cards, announce that exchanges will end in five minutes. Students must know in advance when the exchange period will end so they can plan for the orderly sale of their remaining productive resources and Eonos. (Some households might try to circumvent the business process by bringing resources cards directly to the Econo Factory. Explain that they lack a Business Badge and therefore cannot produce Eonos. If a student is staffing the Econo Factory, make sure the student is aware of this possibility and knows how to respond.)
9. After the simulation ends and the students have returned to their seats, ask them how well they did: Which household obtained the most goods and services (Eonos) during the simulation? Which business firm now has the most money? **(Optional)** Provide a small prize to the household with the most Eonos and to the business with the most money.
10. Project Visual 10.1. Explain that the diagram shows the circular flow of productive resources (factors of production), goods and services (products) and money payments. Ask the students to describe how households and businesses are interdependent. Ask them to relate the circular-flow diagram on Visual 10.1 to the “Econoland” simulation. *Students who represented businesses acquired productive resources (human-resources, natural-resources and capital-goods cards) from households through the Resource Market in exchange for money-income payments. Businesses exchanged resources cards for Eonos, which represent goods and services. Businesses sold Eonos to households through the Product Market in exchange for money payments.*
11. Distribute a copy of Activity 10.5 to each student. Tell the students to answer Questions 1, 2 and 3 using the information they gained from the simulation and from Visual 10.1 (reproduced at the top of Activity 10.5). Discuss their answers to the questions.
 1. According to the diagram, in which markets do businesses give money-income payments to households in exchange for their productive resources? *Resource markets*
 2. In which markets do households give money payments to businesses in exchange for goods and services? *Product markets*
 3. What did Eonos represent in the simulation? *Goods and services businesses sell to households*

12. Project Visual 10.2, and ask the students to compare this diagram with the diagram on Activity 10.5. Discuss all the ways the circular-flow model was altered to incorporate the government sector and suggest that even more changes would have to be made to the chart if we were to incorporate international-trade relationships.

13. Distribute Activity 10.6 and note that the circular-flow diagram from Visual 10.2 is reproduced at the top. Instruct the students to answer Questions 1, 2, 3 and 4 using the information on Activity 10.6. Discuss the answers.

1. Give an example of a productive resource that households sell to government. *Answers will vary and include teachers working in public schools.*

2. Give an example of a good or service that businesses sell to government. *Answers will vary and include computers, communications satellites, accounting services and airplanes.*

3. Give an example of a good or service that government provides to households in exchange for money payments, mainly taxes. *Answers will vary and include schools, police and fire departments, roads and libraries.*

4. Give an example of a good or service that government provides to businesses in exchange for money payments. *Answers will vary and include police, highways, air-traffic control services and disaster assistance.*

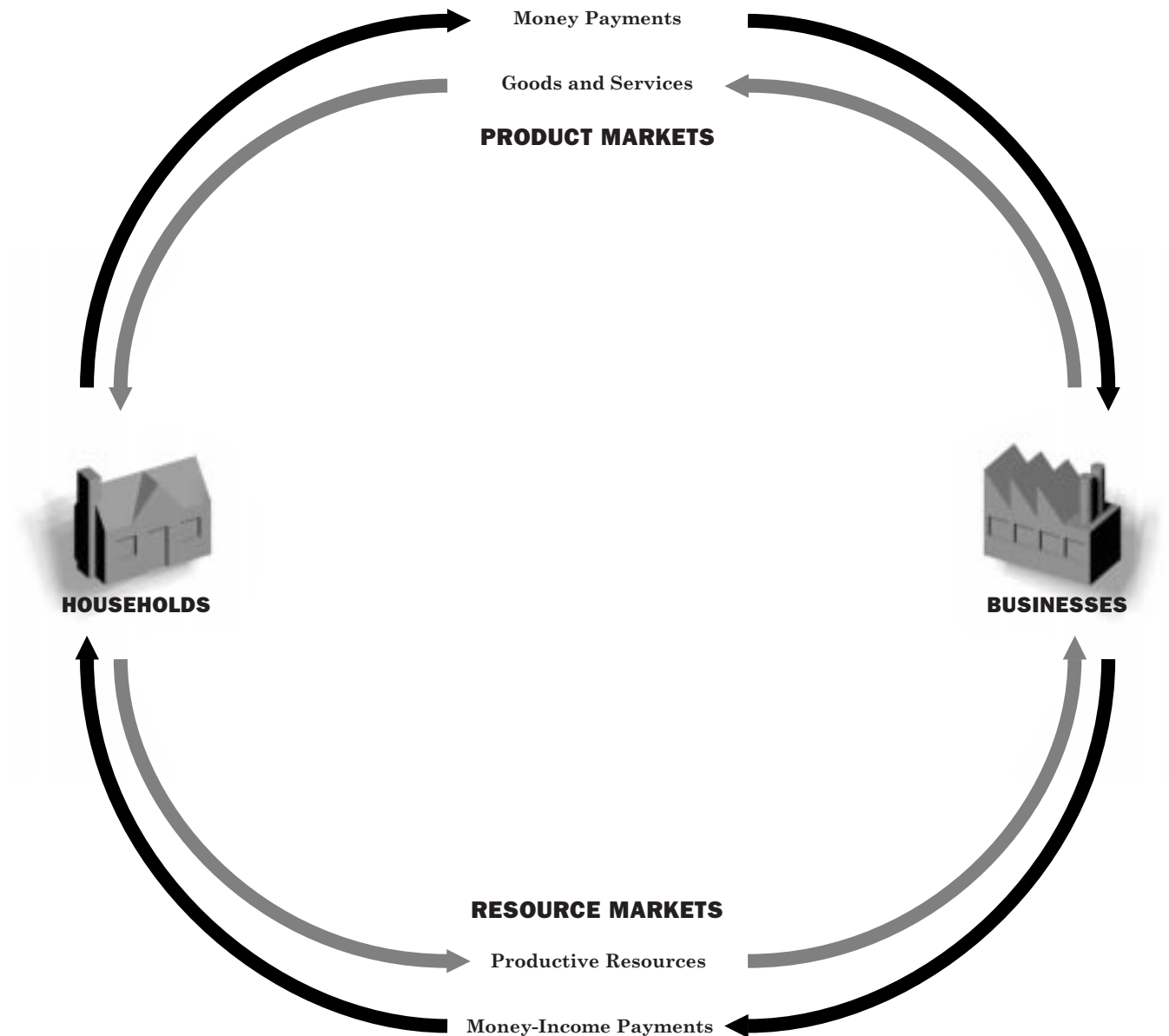
Note: *Transfer payments* are government payments for which recipients do not currently perform productive services. Significant transfer payments in the United States today include Social Security benefits, Medicare and Medicaid, government-employee retirement benefits, unemployment compensation and public assistance such as food stamps.

CLOSURE

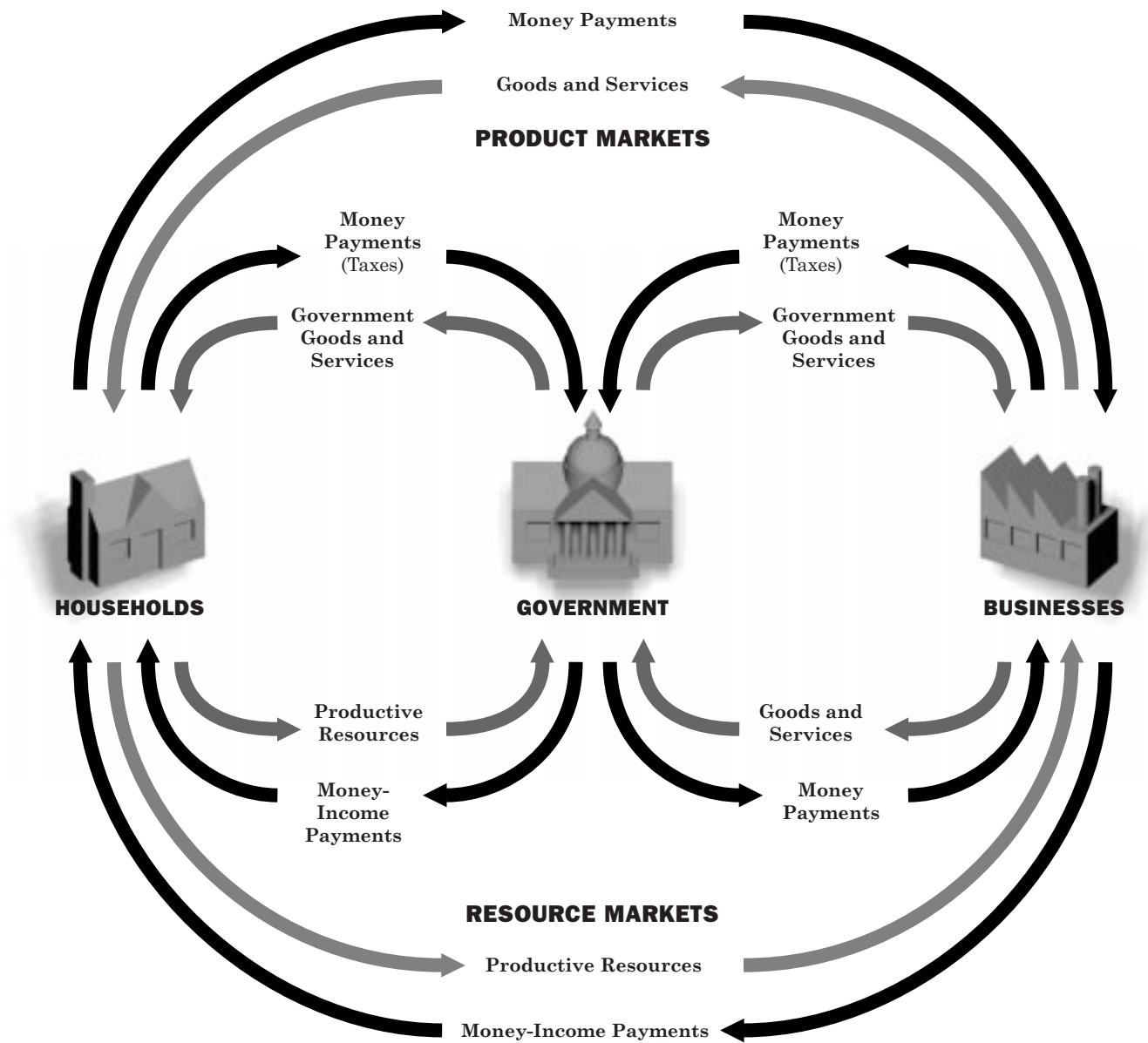
Explain to the class that the U.S. economy is organized around a system of private markets in which prices for goods and services are determined by the interaction of buyers and sellers. This form of economic activity creates a type of interdependence between people in households and people in businesses. Ask:

1. How do individuals and families in households depend on people in businesses?
People in households buy the goods and services they desire from businesses. They sell the productive resources they own to businesses to earn income.
2. How do businesses depend on individuals and families in households?
Businesses sell goods and services to households to earn revenue and make a profit. They purchase productive resources from households to produce the goods and services consumers desire.
3. What is the role of government in the circular flow of economic activity?
Government taxes businesses and households to pay for the productive resources it uses to provide certain kinds of goods and services to households and businesses.

VISUAL 10.1 THE CIRCULAR FLOW OF PRODUCTIVE RESOURCES, GOODS AND SERVICES AND MONEY PAYMENTS



VISUAL 10.2 GOVERNMENT IN THE CIRCULAR FLOW



ACTIVITY 10.1

EARNING A LIVING IN ECONOLAND

OVERVIEW

The Roles of Households (Individuals and Families)

Individuals function as both consumers and producers. In the U.S. economy, households act as consumers when they buy goods and services that businesses produce. These exchanges take place in *product markets*. Buying food at a local grocery store is an exchange in a product market.

As resource owners, individuals function as producers by supplying productive resources to businesses, which use these resources to produce goods and services. These exchanges take place in *resource markets* (also called *factor*, *productive-resource* or *input markets*). Examples of transactions that occur in resource markets are businesses paying wages to workers, rent to landowners or interest on loans for plant and equipment.

Businesses use three categories of productive resources to produce goods and services: human resources, natural resources and capital.

Human resources are the number of people available for work and the skills and motivation of these individuals. Businesses pay wages and salaries to households for their labor services. *Entrepreneurship* refers to a special type of human resource that assumes the risk of organizing other resources to produce goods and services. The payment to entrepreneurs is called *profit*.

Natural resources are gifts of nature. These include undeveloped land, oceans and rivers, forests, oil and mineral deposits, and climactic conditions.

Capital refers to the manufactured or constructed items that businesses use in the production process. These items include buildings, machinery and equipment. (In everyday speech, people commonly refer to money as capital; but in economics, the term *capital* refers to the real productive resources used to produce other goods and services.)

The Roles of Business Firms

Like households, businesses function as both consumers and producers. Businesses supply goods and services in the product market. They are the buyers, or consumers, of the productive resources (human resources, natural resources and capital resources) used to produce goods and services. Businesses try to sell their products for more than their costs of production, thereby earning a profit. If a business is not successful, it will incur losses. In order to earn a profit, businesses must supply products that households want to buy and supply these products at competitive prices. If a business doesn't produce what households want to buy, or if it doesn't keep its costs of production low enough to compete with other producers, it will incur losses. A firm will eventually go out of business if it continues to incur losses.

ACTIVITY 10.1, continued

EARNING A LIVING IN ECONOLAND

INSTRUCTIONS FOR THE ECONOLAND SIMULATION

In this simulation, you will play the role of either a household or a business. Read carefully about both roles. Then your teacher will assign your role.

Households:

Your first goal is to sell to businesses the human resources, natural resources and capital goods they use to produce a product. Then, with the income you earn from selling those productive resources, you will purchase from businesses the goods and services your household wants to consume. In this simulation, these goods and services are called Eonos. Your success as a household will be measured by the number of Eonos you accumulate. You will be given 15 Productive Resource cards. You may not want to sell all your resources immediately because their prices may change as the game goes on. In general, however, the more resources you sell, the more money you will earn to acquire Eonos. Be sure to sell all your resource cards before the activity ends, because at the end of the simulation, only the Eonos you have will count.

Business Firms:

Your goal is to earn a profit by supplying the goods and services households want. In this activity, the only products households want to buy are Eonos. To produce one Econo, you must acquire one unit of human resources, one unit of natural resources and one unit of capital goods. You must buy these resources from households at the best price you can negotiate. Once you have accumulated one unit of each resource, you may turn the set of three cards in at the Econo Factory, which will produce one Econo for you. You are then free to sell the Econo to any household for the best price you can negotiate. To earn a profit, you must sell the Econo for more than your costs of production, which in this game include the wages and salaries paid for the use of human resources, the rent paid for the use of natural resources and the interest paid for the use of capital. You can then use the money you receive to buy more productive resources in order to produce and sell more Eonos. You have \$1,000 to start the game. Your business success will be measured by the dollars you have at the end of the activity. Try to sell all your Eonos by the end of the activity. If you run out of money and have no Eonos to sell, announce publicly that you are bankrupt and return to your seat.

A Word about Pricing:

You will use only \$100 bills in this activity. It is possible to arrive at prices other than \$100, \$200, \$300, etc., by combining several items in a single transaction. For example, two Productive Resources cards could be sold for \$300, which is the equivalent of \$150 each. Five cards could be sold for \$300, which is the equivalent of \$60 each. However, you must agree on a price for which an exchange can take place using the denominations of money provided in the simulation. The suggested price range for Productive Resources cards is \$50 to \$300, but any price that buyers and sellers agree to and can complete using \$100 bills is acceptable.

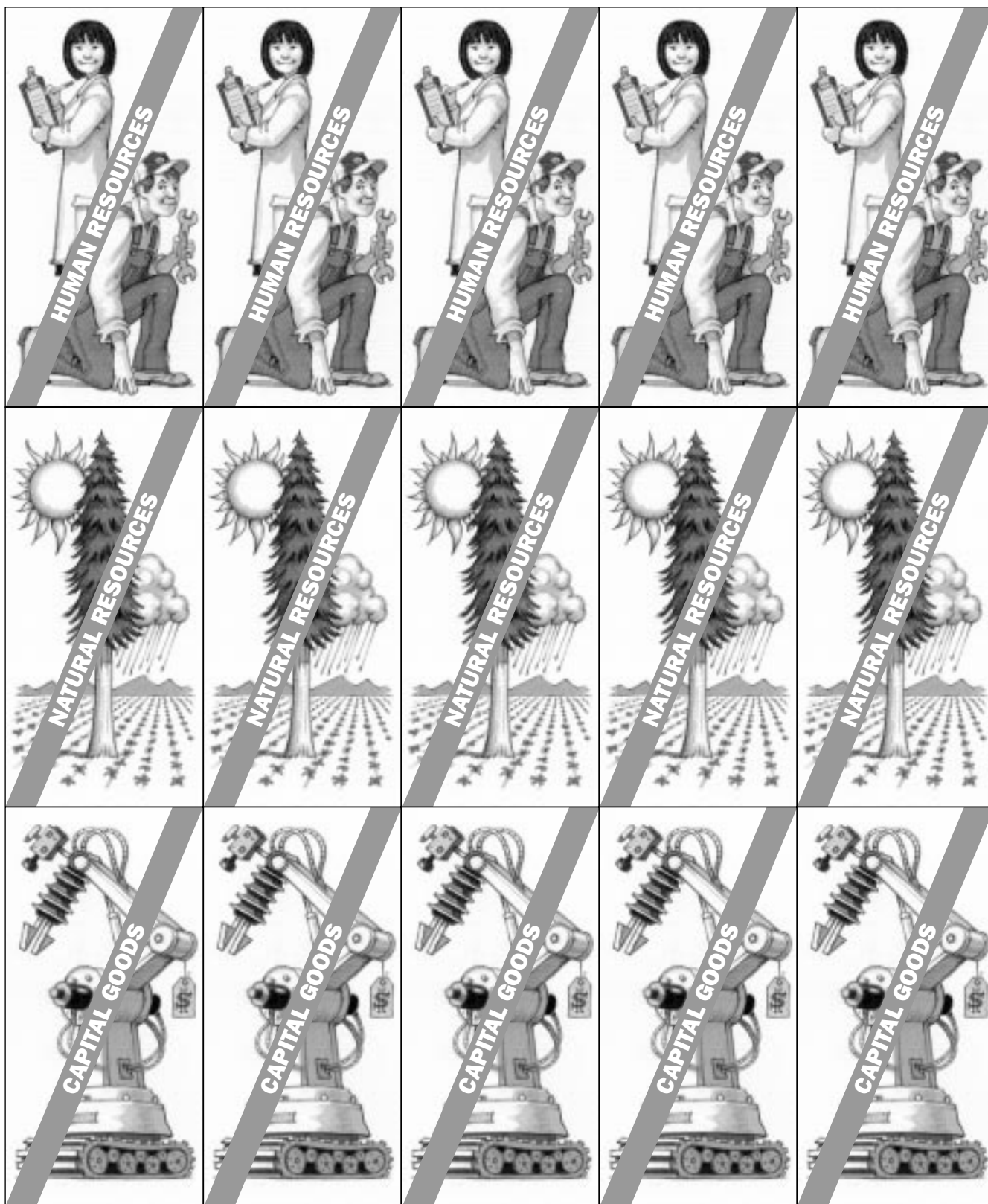
ACTIVITY 10.2

BUSINESS BADGE AND MONEY



ACTIVITY 10.3

HOUSEHOLD CARDS

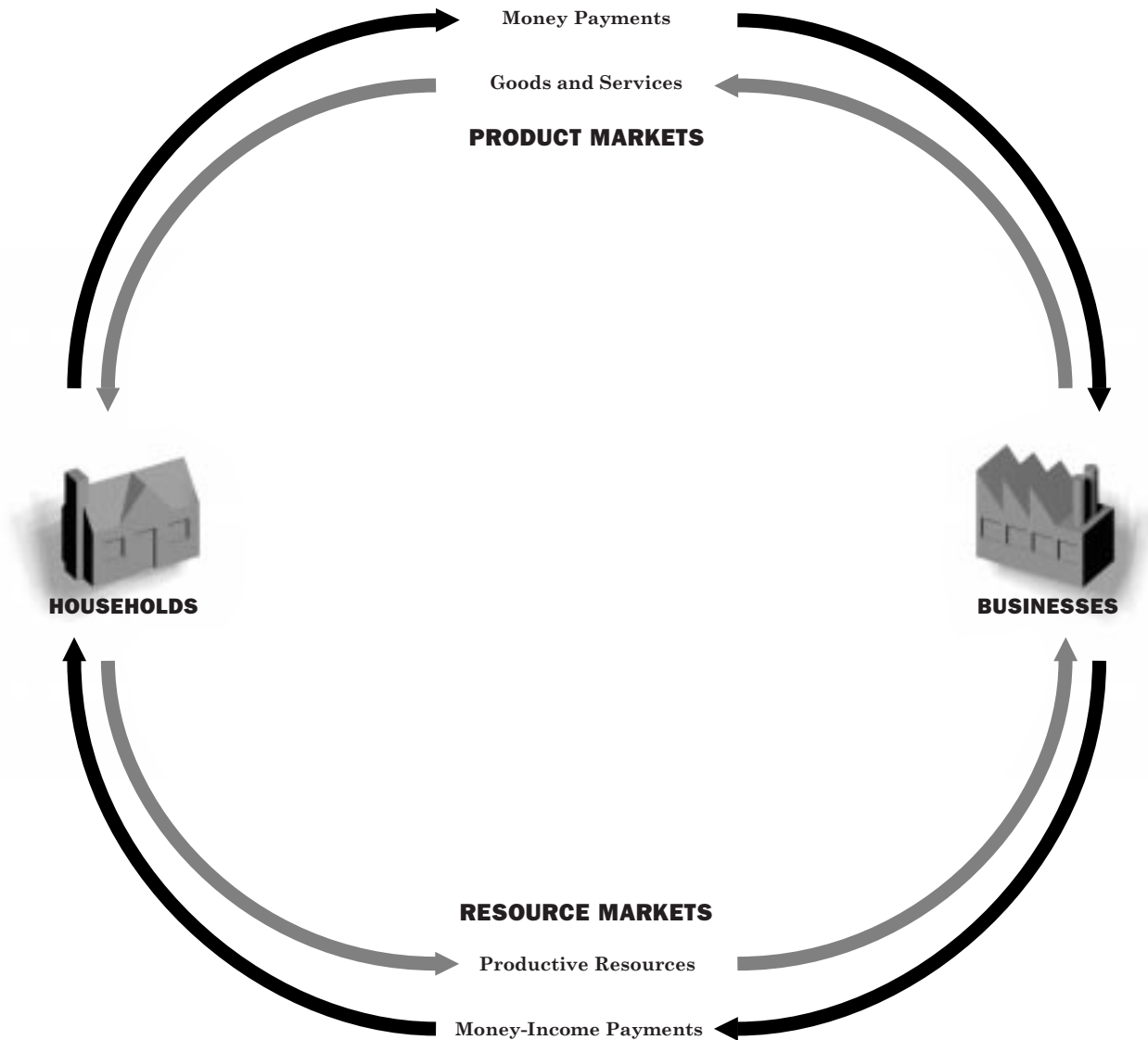


ACTIVITY 10.4
ECONO CARDS

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ACTIVITY 10.5

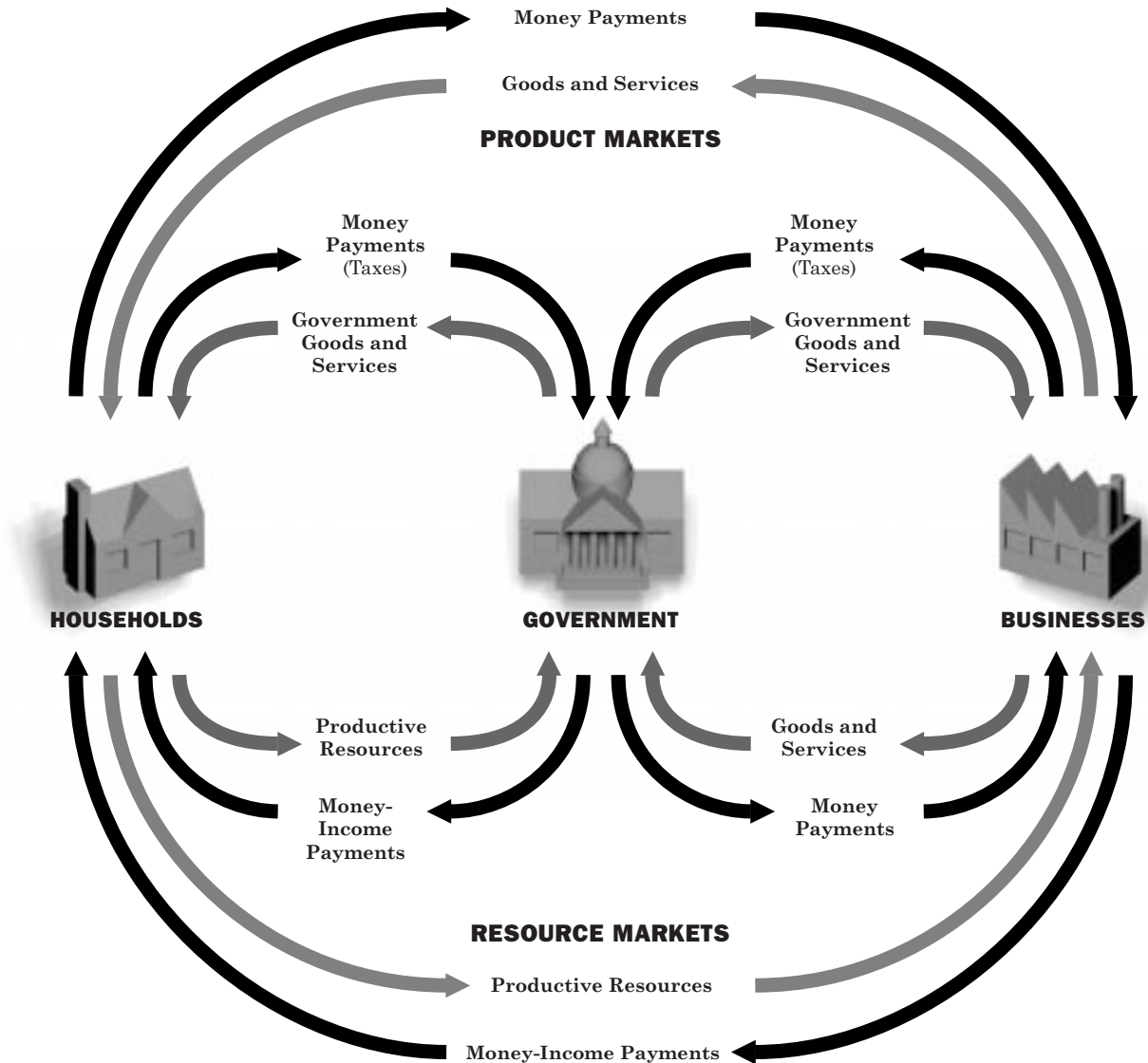
THE CIRCULAR FLOW OF PRODUCTIVE RESOURCES, GOODS AND SERVICES AND MONEY PAYMENTS



1. According to the diagram, in which markets do businesses give money-income payments to households in exchange for their productive resources?
2. In which markets do households give money payments to businesses in exchange for goods and services?
3. What did Econos represent in the simulation?

ACTIVITY 10.6

GOVERNMENT IN THE CIRCULAR FLOW



1. Give an example of a productive resource that households sell to government.
2. Give an example of a good or service that businesses sell to government.
3. Give an example of a good or service that government provides to households in exchange for money payments, mainly taxes.
4. Give an example of a good or service that government provides to businesses in exchange for money payments.