



Keith Draycott/Getty Images

Who makes the Dreamliner?

The Australian and Global Economies

2

LEARNING OBJECTIVES

When you have completed your study of this chapter, you will be able to

- 1 Describe what, how and for whom goods and services are produced in Australia.
- 2 Describe what, how and for whom goods and services are produced in the global economy.
- 3 Explain the circular flow model of the Australian economy and of the global economy.

2.1 WHAT, HOW AND FOR WHOM?

Walk around a shopping mall and pay close attention to the range of goods and services that are being offered for sale. Go inside some of the shops and look at the labels to see where various items are manufactured. The next time you travel on an interstate highway, look at the large trucks and pay attention to the names and products printed on their sides and the places in which the trucks are registered. Install the *Yellow Pages* app and click through a few sections. Notice the huge range of goods and services that businesses are offering.

You've just done a sampling of *what* goods and services are produced and consumed in Australia today.

■ What Do We Produce?

We place the goods and services produced into two large groups:

- Consumption goods and services
- Capital goods

Consumption Goods and Services

Consumption goods and services are items that individuals and governments buy and use up in the current period. Consumption goods and services bought by households include items such as housing, cars, bottled water, sushi, noodles, chocolate bars, Arnott's Tim Tams, movies, tennis lessons, barbershop services and dental services. Consumption goods and services bought by governments include items such as police and fire services, rubbish collection and education.

Capital Goods

Capital goods are goods that businesses and governments buy to increase productive resources to use over future periods to produce other goods and services. Capital goods bought by businesses include items such as auto assembly lines, shopping malls, airplanes and oil tankers. Capital goods bought by governments include ships and aeroplanes for national security, schools and universities and highways.

Consumption goods and services represent 80 per cent of Australian production by value and that percentage doesn't fluctuate much. *Eye on the Australian Economy* opposite breaks the goods and services down into smaller categories.

Financial and insurance services is the largest category, with 9.2 per cent of the value of total production. Mining comes next at 9.1 per cent. The third-largest item is the services of rental and owner-occupied housing. Other large components of production are construction, health care and social assistance, education, transport and warehousing, retail trades and wholesale trades.

The manufacture of goods and services represents only 6.7 per cent of total production in Australia. Part (b) of the figure opposite shows a breakdown of this total. You can see that food and drink production is the largest item at 25 per cent of total manufacturing. Other large items are machinery and equipment, metal products and a range of chemical products.

Australia's farms produce only 2.4 per cent of total production.

The long-term trends in production are an expanding services sector and shrinking manufacturing and agriculture sectors.

Consumption goods and services

Goods and services that individuals and governments buy and use in the current period.

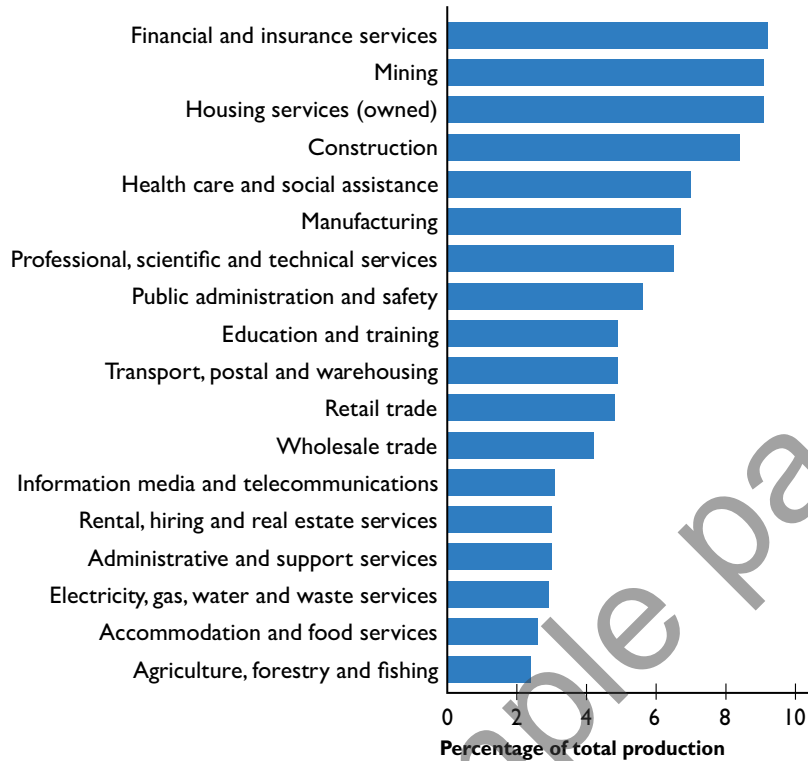
Capital goods

Goods bought by businesses and governments to increase productive resources to use over future periods to produce other goods and services.

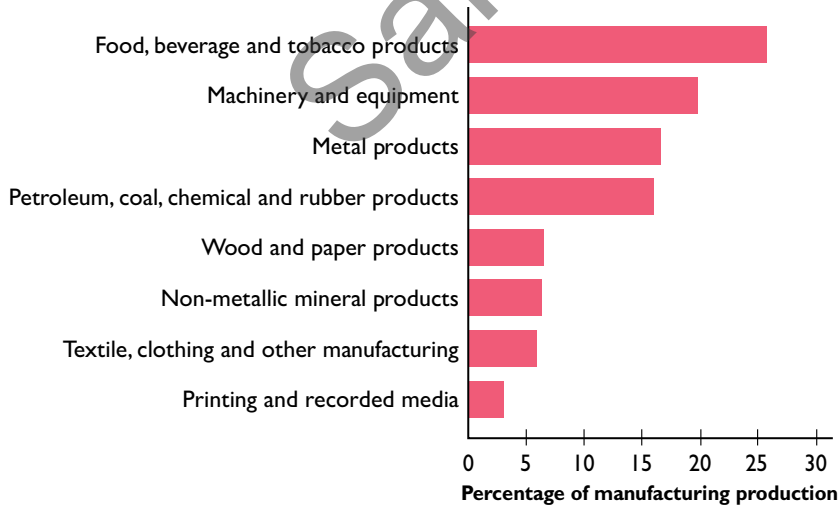


EYE on the AUSTRALIAN ECONOMY

What We Produce



(a) Goods and services produced in the Australian economy



(b) Australian manufacturing: Some details

SOURCE OF DATA: Australian Bureau of Statistics.



Financial services ...



health care services ...



and education services are among the largest categories of services produced.



Food is the largest category of goods produced.



EYE on the PAST

Changes in What We Produce

Holden produced the first all-Australian car in 1948. By 1958 the firm was producing more than 40 per cent (by value) of the cars sold in Australia. Its production passed 1 million in 1962 and 2 million in 1968.

During the 1970s and 1980s other car makers, such as Toyota and Mazda, gave Holden tough competition and, by 1999, Toyota had almost 30 per cent of the Australian car market.

During the 2000s competition stiffened further and the prices of imported vehicles made it impossible for Holden to operate profitably. In February 2014, the firm announced that it would stop making cars in Australia.



Dragi Markovic/National Museum of Australia

The Holden 48-215 (known as the “FX”) was the first Holden car commercially sold in Australia in 1949.

Factors of production

The productive resources that are used to produce goods and services—land, labour, capital and entrepreneurship.

Land

The “gifts of nature,” or *natural resources*, that we use to produce goods and services.

How Do We Produce?

Goods and services are produced by using productive resources. Economists call the productive resources **factors of production**. Factors of production are grouped into four categories:

- Land
- Labour
- Capital
- Entrepreneurship

Land

In economics, **land** includes all the “gifts of nature” that we use to produce goods and services. Land is what, in everyday language, we call *natural resources*. It includes land in the everyday sense, minerals, energy, water, air and wild plants, animals, birds and fish. Some of these resources are renewable, and some are non-renewable. The Australian government Department of the Environment manages and monitors the quantity and quality of natural resources.

Australia covers almost 7.7 million square kilometres. About 11 per cent of the land is protected by legislation. In 2018, 53 per cent of the land was used for agriculture and 5 per cent was urban, but urban land use is growing and agricultural land use is shrinking.

Our land surface and water resources are renewable, and some of our mineral resources can be recycled. But many mineral resources can be used only once. They are non-renewable resources. Of these, Australia has vast known reserves of coal and natural gas.

Labour

Labour is the work time and work effort that people devote to producing goods and services. Labour includes the physical and mental efforts of all the people who work on farms and construction sites and in factories, shops and offices. The Australian Bureau of Statistics measures the quantity of labour at work every month.

In Australia in September 2018, 12.6 million people had jobs or were available for work. Some worked full time, some worked part time and some were unemployed but looking for an acceptable vacant job. The total amount of time worked during 2018 was about 20 billion hours.

The quantity of labour increases as the adult population increases. The quantity of labour also increases if a larger percentage of the population takes jobs. During the past 50 years, a larger proportion of women have taken paid work and this trend has increased the quantity of labour. At the same time, a slightly smaller proportion of men have taken paid work and this trend has decreased the quantity of labour.

The *quality* of labour depends on how skilled people are. A labourer who can push a hand cart but can't drive a truck is much less productive than one who can drive. An office worker who can use a computer is much more productive than one who can't. Economists use a special name for human skill: human capital. **Human capital** is the knowledge and skill that people obtain from education, on-the-job training and work experience.

You are building your own human capital right now as you work on your economics course and other subjects. Your human capital will continue to grow when you get a full-time job and become better at it. Human capital improves the *quality* of labour and increases the quantity of goods and services that labour can produce.

Capital

Capital consists of the tools, instruments, machines, buildings and other items that have been produced in the past and that businesses now use to produce goods and services. Capital includes hammers and screwdrivers, computers, car assembly lines, office towers and warehouses, dams and power plants, aeroplanes, shirt factories and shopping malls.

Capital also includes inventories of unsold goods or of partly finished goods on a production line. And capital includes what is sometimes called *infrastructure capital*, such as highways and airports.

Capital, like human capital, makes labour more productive. A truck driver can produce vastly more transportation services than someone pushing a hand cart; motorways enables us to produce vastly more transportation services than was possible on the old highways that preceded them.

The Australian Bureau of Statistics keeps track of the total value of capital in Australia and how it grows over time. Today, the value of capital in the Australian economy is around \$200,000 per person or \$4.5 trillion.

Financial Capital Is Not Capital

In everyday language, we talk about money, stocks and bonds as being capital. These items are *financial capital*, and they are not productive resources. They enable people to provide businesses with financial resources, but they are *not* used to produce goods and services. They are not capital.

Labour

The work time and work effort that people devote to producing goods and services.

Human capital

The knowledge and skill that people obtain from education, on-the-job training and work experience.

Capital

Tools, instruments, machines, buildings and other items that have been produced in the past and that businesses now use to produce goods and services.



EYE on the AUSTRALIAN ECONOMY

Changes in How We Produce in the Information Economy

The information economy consists of the jobs and businesses that produce and use computers and equipment powered by computer chips. This information economy is highly visible in your daily life.

The pairs of images here illustrate two examples. In each pair, a new technology enables capital to replace labour.

The top pair of pictures illustrate the replacement of supermarket cashiers (labour) with self-checkout (capital). Until a few years ago, supermarkets had a bank of checkout lanes, each operated by its own cashier. Today, in some stores, most of the checkout lanes have gone and been replaced by a bank of self-checkout computers.

The bottom pair of pictures illustrate another recent replacement of labour with capital: self-check-in. Air passengers today issue their own boarding pass, often at their own computer before leaving home. For international flights, some of these machines now even check passport details.



Robert Kneschke/Fotolia.com



Alice McBroom/Pearson Australia

The number of supermarket cashiers and airline check-in agents is shrinking, but the new technologies that are replacing them are creating a

whole range of new jobs for people who make, program, install and repair the vast number of machines.



Alice McBroom/Pearson Australia



Alice McBroom/Pearson Australia

Entrepreneurship

The human resource that organises labour, land and capital to produce goods and services.

Entrepreneurship

Entrepreneurship is the human resource that organises land, labour and capital to produce goods and services. Entrepreneurs are creative and imaginative. They come up with new ideas about what and how to produce, make business decisions and bear the risks that arise from these decisions. If their ideas work out, they earn a profit. If their ideas turn out to be wrong, they bear the loss.

The quantity of entrepreneurship is hard to describe or measure. During some periods, there appears to be a great deal of imaginative entrepreneurship around. People such as Gerry Harvey, who created Harvey Norman, one of Australia's largest retailers; Bill Gates, who founded the Microsoft empire; and Mark Zuckerberg, who founded Facebook, are examples of extraordinary entrepreneurial talent. But these highly visible entrepreneurs are just the tip of an iceberg that consists of hundreds of thousands of people who run businesses, large and small.

■ For Whom Do We Produce?

Who gets the goods and services depends on the incomes that people earn. A large income enables a person to buy large quantities of goods and services. A small income leaves a person with a small quantity of goods and services.

People earn their incomes by selling the services of the factors of production they own. **Rent** is paid for the use of land, **wages** are paid for the services of labour, **interest** is paid for the use of capital and entrepreneurs receive a **profit** (or incur a **loss**) for running their businesses. What are the shares of these four factor incomes in Australia? Which factor receives the largest share?

Figure 2.1(a) answers these questions. It shows that wages were 53 per cent of total income in 2018 and rent, interest and profit were 47 per cent of total income. These percentages remain remarkably constant over time. We call the distribution of income among the factors of production the *functional distribution of income*.

Figure 2.1(b) shows the *personal distribution of income*—the distribution of income among households—in 2018. Some households, like that of cricketer Steve Smith, earn more than a million dollars a year. These households are in the richest 20 per cent who earn 40 per cent of total income. Households at the other end of the scale, like coffee shop workers, are in the poorest 20 per cent who earn only 8 per cent of total income. The distribution of income has been changing and becoming more unequal. The rich have become richer. But it isn't the case, on the whole, that the poor have become poorer. They just haven't become richer as fast as the rich have.

Rent

Income paid for the use of land.

Wages

Income paid for the services of labour.

Interest

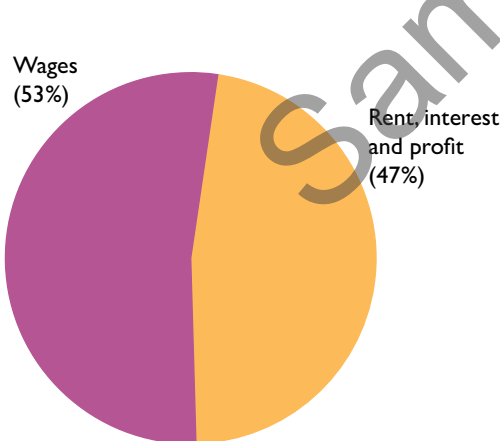
Income paid for the use of capital.

Profit (or loss)

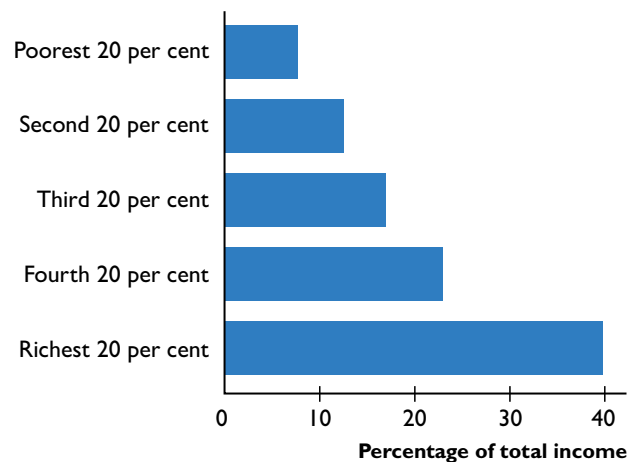
Income earned by an entrepreneur for running a business.

■ **FIGURE 2.1**
For Whom in 2018

MyLab Economics Animation



(a) Functional distribution of income



(b) Personal distribution of income

SOURCE OF DATA: Australian Bureau of Statistics.

In 2018, wages (the income from labour) were 53 per cent of total income. Rent, interest and profit (the income from the services of land, capital and entrepreneurship) were 47 per cent of total income.

In 2018, the 20 per cent of the population with the highest incomes received 40 per cent of total income. The 20 per cent with the lowest incomes received only 8 per cent of total income.

REVIEW 2.1

Describe what, how and for whom goods and services are produced in Australia.

Practice Problems

1. What are the types of goods and services produced? Give an example of each (different from those in the chapter) and distinguish between them.
2. Name the four factors of production and the incomes they earn.
3. Distinguish between the functional distribution of income and the personal distribution of income.
4. In Australia, which factor of production earned the largest share of income in 2014 and what percentage did it earn?

In the News

What Microloans Miss

The 2006 Nobel Peace Prize winner Muhammad Yunus has said that “all people are entrepreneurs” and that microloans will pull poor people out of poverty. Only 14 per cent of Americans are entrepreneurs while almost 40 per cent of Peruvians are.

Source: James Surowiecki, *The New Yorker*, 17 March 2008

With only 14 per cent of Americans earning their income from entrepreneurship, from what factor of production do most Americans earn their income? What is that income called? Why might so many people in Peru be entrepreneurs?

Solutions to Practice Problems

1. The goods and services produced fall into two types: consumption goods and services and capital goods. A hamburger is a consumption good and a haircut is a consumption service. An oil rig and car assembly line are capital goods. A consumption good or service is an item that is bought by individuals or the government and is used up in the current period. A capital good is bought by businesses or the government and it is used over and over again to produce other goods and services.
2. The factors of production are land, labour, capital and entrepreneurship. Land earns rent; labour earns wages; capital earns interest; and entrepreneurship earns profit or incurs a loss.
3. The functional distribution of income shows the percentage of total income received by each factor of production. The personal distribution of income shows how total income is shared among households.
4. Labour is the factor of production that earns the largest share of income. In 2014, labour in Australia earned 53 per cent of total income.

Solution to In the News

Most Americans, like Australians, earn their income from supplying labour services and the income they earn is called a wage. Peru is a poor country in which jobs are more limited than in the United States and Australia. So to earn an income, many Peruvians are self-employed and work as small entrepreneurs.

2.2 THE GLOBAL ECONOMY

We're now going to look at *what*, *how* and *for whom* goods and services get produced in the global economy. We'll begin with a brief overview of the people and countries that form the global economy.

■ The People

Visit the Australian Bureau of Statistics website and go to the population clock to find out how many people there are today in Australia. On the day these words were written, 20 October 2018, the clock recorded a population of 25,109,112. The world population clock recorded a population of 7,657,904,853. The Australian clock ticks along showing a population increase of one person every 1 minute and 18 seconds. The world clock spins faster, adding 150 people in the same 1 minute and 18 seconds.

■ The Economies

The world's 7.7 billion (and rising) population lives in 176 economies, which the International Monetary Fund classifies into two broad groups:

- Advanced economies
- Emerging market and developing economies

Advanced Economies

Advanced economies are the richest 29 countries (or areas). Australia, the United States, Japan, Italy, Germany, France, the United Kingdom and Canada belong to this group. So do four new industrial Asian economies: Hong Kong, South Korea, Singapore and Taiwan. The other advanced economies include New Zealand and most of the rest of Western Europe. Almost 1 billion people (15 per cent of the world's population) live in the advanced economies.

Emerging Market and Developing Economies

Emerging market economies are 28 countries in Central and Eastern Europe and Asia. Almost 500 million people live in these countries—about half of the number in the advanced economies. These countries are important because they are emerging (hence the name) from a system of state-owned production, central economic planning and heavily regulated markets and moving towards a system of free enterprise and unregulated markets.

Developing economies are the 119 countries in Africa, Asia, the Middle East, Europe and Central and South America. More than 5.5 billion people—almost four out of every five people—live in the developing economies.

Developing economies vary enormously in size, the level of average income and the rate of growth of production and incomes. But in all the developing economies, average incomes are much lower than those in the advanced economies and, in some cases, they are extremely low.

Five emerging market and developing economies, representing 3 billion people or 42 per cent of the world's population and known as BRICS (Brazil, Russia, India, China and South Africa), hold regular meetings to advance the interests of these nations and draw attention to their development problems.

■ What in the Global Economy?

First, let’s look at the big picture. Imagine that each year the global economy produces an enormous pie. In 2018, the pie was worth about \$76 trillion! To give this number some meaning, if the pie were shared equally among the world’s 7.7 billion people, each of us would get a slice worth \$9,870.

Where Is the Global Pie Baked?

Figure 2.2 shows us where in the world the pie is baked. The advanced economies produce 50 per cent—1 per cent in Australia, 19 per cent in the United States, 14 per cent in the Euro area and 16 per cent in the other advanced economies. This 50 per cent of global output (by value) is produced by 15 per cent of the world’s population.

The BRICS economies, highlighted in the figure, together produce 28 per cent of the world’s output. China, with 15 per cent of world production, dominates this group and South Africa, the group’s smallest member, produces barely 1 per cent of global output. This 28 per cent of the global pie is baked by 42 per cent of the world’s population.

The remaining 22 per cent of the global pie comes from other emerging market and developing economies and is baked by 43 per cent of the world’s people.

Unlike the slices of an apple pie, those of the global pie have different fillings. Some slices have more oil, some more food, some more clothing, some more housing services, some more cars and so on. Let’s look at some of these different fillings and at some similarities too.

■ FIGURE 2.2

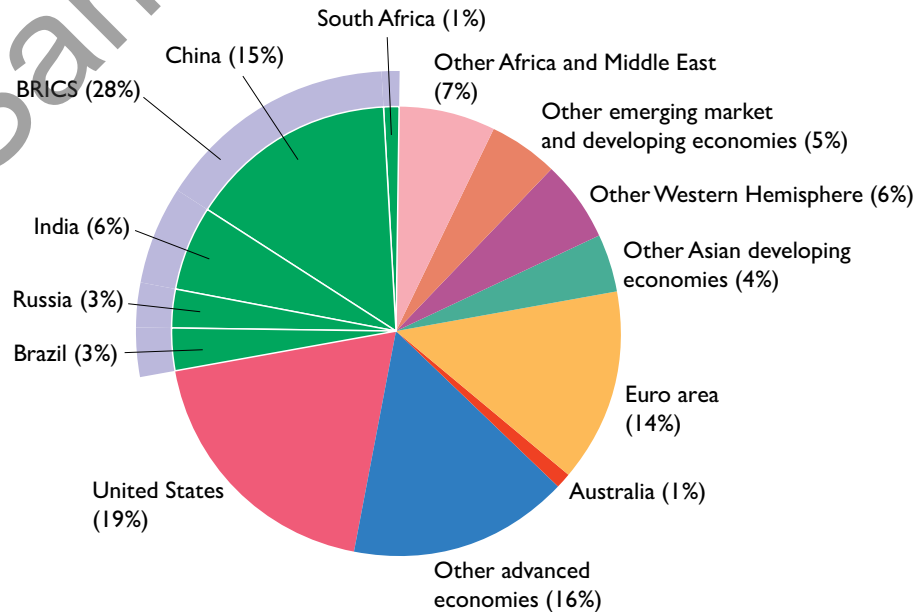
What in the Global Economy in 2018

MyLab Economics Animation

If we show the value of production in the world economy as a pie, Australia produces a slice that is 1 per cent of the total. The United States produces the biggest slice—19 per cent of the total. The Euro area produces 14 per cent and other advanced economies 16 per cent, so together, the advanced economies produce 50 per cent of global output.

Another 28 per cent of the global pie comes from the BRICS economies, and China, with 15 per cent of world output, dominates this group.

The remaining 22 per cent of world output comes from emerging market and developing economies in Africa, Asia, the Middle East and the Western Hemisphere.



SOURCE OF DATA: International Monetary Fund, World Economic Outlook Database.

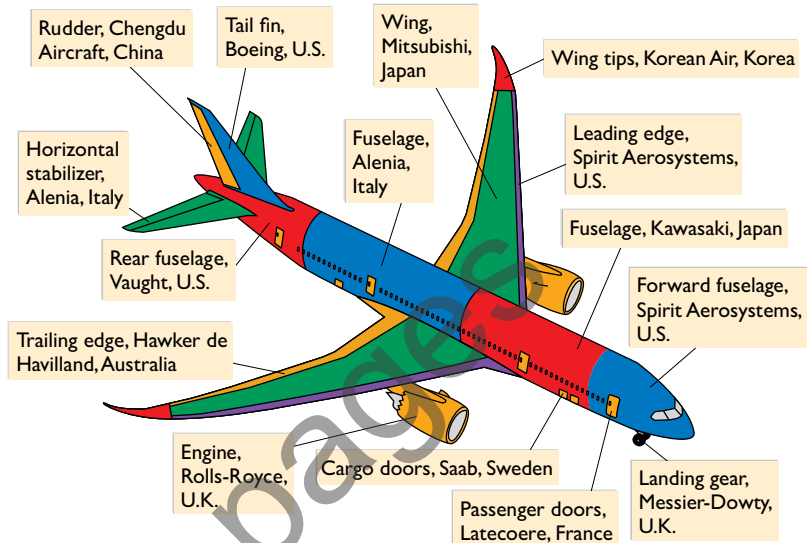


EYE on the DREAMLINER

Who Makes the Dreamliner?

Boeing designed, assembles and markets the Dreamliner, but the aeroplane is made by more than 400 firms on four continents that employ thousands of workers and millions of dollars' worth of specialised capital equipment. The graphic identifies some of the firms and the components they make.

Boeing and all these firms make decisions and pay their workers, investors and raw material suppliers to influence *what, how* and *for whom* goods and services are produced. All these decisions are made in self-interest, and produce an aeroplane at the lowest possible cost.



Some Differences in What Is Produced

What is produced in the developing economies contrasts sharply with that of the advanced economies. Manufacturing is the big story. Developing economies have large and growing industries, which produce textiles, footwear, sports gear, toys, electronic goods, furniture, steel and even cars and aeroplanes.

Food production is a small part of the Australian and other advanced economies and a large part of the developing economies such as Brazil, China and India. But the advanced economies produce about one-third of the world's food. How come? *Total* production is much larger in the advanced economies than in the developing economies, but a small percentage of a big number can be *greater* than a large percentage of a small number!

Some Similarities in What Is Produced

If you were to visit a shopping mall in the United States, Canada, England, Japan, or any of the other advanced economies, you would wonder whether you had left Australia. You would see Starbucks, Pizza Hut, Domino's Pizza, KFC, Kmart, Walmart, Target, Gap, Tommy Hilfiger, Billabong, Banana Republic, the upscale Louis Vuitton and Burberry and a host of other familiar names. And, of course, you would see "Macca's" golden arches. You would see them in any of the 119 countries in which one or more of McDonald's 30,000 restaurants are located.

The similarities among the advanced economies go beyond the view from main street and the shopping mall. The structure of *what* is produced is similar in these economies. As percentages of the total economy, agriculture and manufacturing are small and shrinking whereas services are large and expanding.



McDonald's in Shanghai.

■ How in the Global Economy?

Goods and services are produced using land, labour, capital and entrepreneurial resources, and the combinations of the resources used are chosen to produce at the lowest possible cost. Each country or region has its own blend of factors of production, but there are some interesting common patterns and crucial differences between the advanced and developing economies that we'll now examine.

Human Capital Differences

One of the biggest distinguishing features of an advanced economy from an emerging market or developing economy is its quantity of *human capital*. Advanced economies have much higher levels of human capital.

Education levels are the handiest measure of human capital. In an advanced economy such as Australia, almost everyone has completed high school. And 30 per cent of the Australian population has completed 4 years or more of university.

In contrast, in developing economies, the proportion of the population who has completed high school or has a university degree is small. In the poorest of the developing economies, many children even miss out on basic primary education—they just don't go to school at all.

On-the-job training and experience are also much less extensive in the developing economies than in the advanced economies.

Physical Capital Differences

Another major feature of an advanced economy that differentiates it from a developing economy is the amount of capital available for producing goods and services. The differences begin with the basic transportation system. In the advanced economies, a well-developed highway system connects all the major cities and points of production. You can see this difference vividly if you open a road atlas of North America: Contrast the U.S. interstate highway system with the sparse highways of Mexico. You would see a similar contrast if you flipped through a road atlas of Western Europe and Africa.

But it isn't the case that the developing economies have no highways and no modern trucks and cars. In fact, some of them have the newest and the best. But the new and best are usually inside and around the major cities—see *Eye on the Global Economy* opposite.

The contrasts in the transportation system are matched by those on farms and in factories. In general, the more advanced the economy, the greater are the amount and sophistication of the capital equipment used in production. But again, the contrast is not all or nothing. Some factories in India, China and other parts of Asia use the very latest technologies. Furniture manufacturing is an example. To make furniture of a quality that Australians are willing to buy, firms in Asia use machines like those in the furniture factories of America and Europe.

The differences in human capital and physical capital between advanced and developing economies have a big effect on *who* gets the goods and services, which we'll now examine.

■ For Whom in the Global Economy?

Who gets the world's goods and services depends on the incomes that people earn. We're now going to see how incomes are distributed within economies and across the world.



EYE on the GLOBAL ECONOMY

Differences in How We Produce

Big differences exist in how goods and services are produced and the images here illustrate three examples.

Laundry services (top), transportation services (centre) and highway systems (bottom) can use a large amount of capital and almost no labour (left) or use almost no capital and a large amount of labour (right).

Capital-intensive automatic laundry equipment, big trucks and multi-lane paved freeways are common in advanced economies but rare in poorer developing economies.

Riverside clothes washing, human pedal power and unsealed dirt tracks are seen only in developing economies.

But we also see huge differences even within a developing economy. The bottom pictures contrast Beijing's capital-intensive highway system with the unpaved and sometimes hazardous roads of rural China.



Dave and Les Jacobs/Getty Images



Ron Nickel/Getty Images



Muzaffer Akarca/Getty Images



Peter Stuckings/Getty Images



Panorama/Alamy



Keren Su/Alamy

Personal Distribution of Income

You saw earlier (on p. 37) that, in Australia, the lowest-paid 20 per cent of the population receives 8 per cent of total income and the highest-paid 20 per cent receives 40 per cent of total income. The personal distribution of income in the world economy is much more unequal. According to World Bank data, the lowest-paid 20 per cent of the world's population receives 2 per cent of world income and the highest-paid 20 per cent receives about 70 per cent of world income.

International Distribution

Much of the greater inequality at the global level arises from differences in average incomes among countries. Figure 2.3 shows some of these differences. It shows the U.S. dollar value of what people can afford each day on average. You can see that in Australia, that number is \$127 a day—an average person in Australia can buy goods and services that cost \$127. This amount is around five times the

world average. The European Union has an average income of around 82 per cent that of Australia at \$105 per day. Income levels fall off quickly as we move farther down the graph, with Russia at \$71 a day, China \$39 a day, India \$19 a day and Sub-Saharan Africa only \$10 a day.

As people have lost well-paid manufacturing jobs and found lower-paid service jobs, inequality has increased in most advanced economies. Inequality is also increasing in the developing economies. People with skills enjoy rapidly rising incomes, but the incomes of the unskilled are falling.

A Happy Paradox and a Huge Challenge

Despite the increase in inequality inside most countries, inequality across the entire world has decreased during the past 20 years. And most important, according to Xavier Sala-i-Martin, an economics professor at Columbia University, extreme poverty has declined. Professor Sala-i-Martin estimates that between 1976 and 1998, the number of people who earn \$1 a day or less fell by 235 million and the number who earn \$2 a day or less fell by 450 million. This positive situation arises because in China, the largest nation, incomes have increased rapidly and lifted millions from extreme poverty. Incomes are growing quickly in India too.

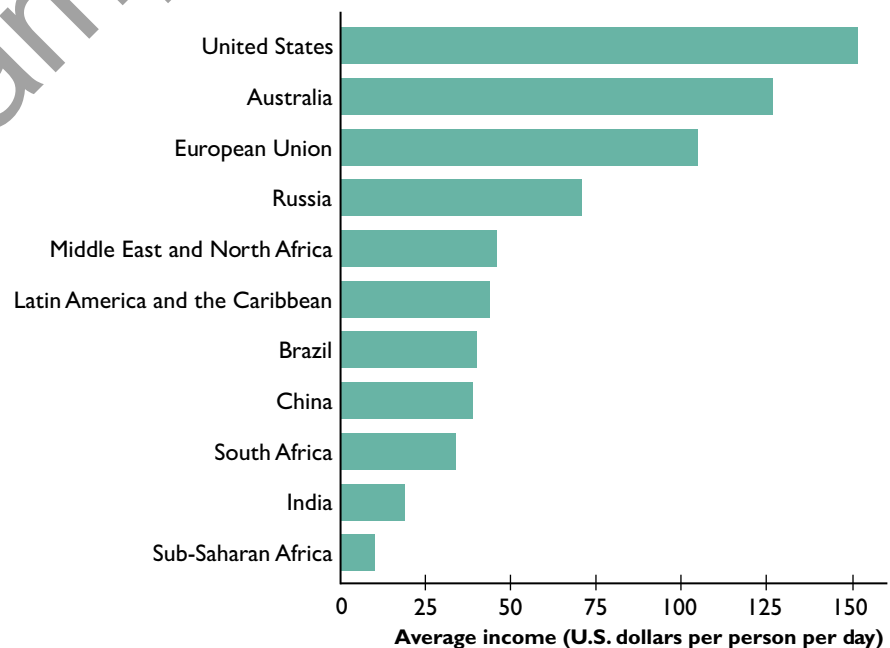
Lifting Africa from poverty is today's big challenge. In 1960, 11 per cent of the world's poor lived in Africa but, in 1998, 66 per cent did. Between 1976 and 1998, the number of people in Africa who earned \$1 a day or less rose by 175 million and the number who earned \$2 a day or less rose by 227 million.

FIGURE 2.3

For Whom in the Global Economy in 2018

MyLab Economics Animation

In 2018, the average income per person per day in the United States was in \$152. In terms of U.S. dollars, average income per person per day was \$127 in Australia, \$105 in the European Union and \$71 in Russia. The number falls to \$39 in China, \$19 in India and \$10 in Sub-Saharan Africa.



SOURCE OF DATA: International Monetary Fund, World Economic Outlook Database, October 2018.



EYE on YOUR LIFE

The Australian and Global Economies in Your Life

You've encountered a lot of facts and trends about what, how and for whom goods and services are produced in the Australian and global economies. How can you use this information? You can use it in two ways:

1. To inform your choice of career
2. To inform your stand on the politics of protecting Australian jobs

Career Choices

As you think about your future career, you are now better informed about some of the key trends. You know that manufacturing is shrinking. The Australian economy is what is sometimes called a *post-industrial economy*. Industries that provided the backbone of the economy in previous generations have fallen to barely a

tenth of the economy today, and the trend continues. It is possible that by the middle of the current century, manufacturing will be as small a source of jobs as agriculture is today.

So, a job in a manufacturing business is likely to lead to some tough situations and possibly the need for several job changes over a working life.

As manufacturing shrinks, so services expand, and this expansion will continue. The provision of health care, education, communication, wholesale and retail trades and entertainment are all likely to expand in the future and will be sources of increasing employment and rising wages. A job in a service-oriented business is more likely to lead to steady advances in income.

Political Stand on Job Protection

As you think about the stand you will take on the political question of protecting Australian jobs, you are better informed about the basic facts and trends.

When you hear that manufacturing jobs are disappearing to China, you will be able to place that news in historical perspective. You might reasonably be concerned, especially if you or a member of your family has lost a job. But you know that trying to reverse or even halt this process is flying in the face of stubborn historical trends.

In later chapters, you will learn that there are good economic reasons to be skeptical about any form of protection and placing limits on competition.

REVIEW 2.2

Describe what, how and for whom goods and services are produced in the global economy.

Practice Problems

1. Describe what, how and for whom goods and services are produced in developing economies.
2. A Clinton Foundation success story is that it loaned \$23,000 to Rwandan coffee growers to support improvements to coffee washing stations and provided technical support. What was the source of the success?

Solutions to Practice Problems

1. In developing countries, agriculture is the largest percentage, manufacturing is an increasing percentage and services are a small percentage of total production. Most production does not use modern capital-intensive technologies, but some industries do. People who work in factories have rising incomes while those who work in rural industries are left behind.
2. The technical support allowed Rwandan coffee growers to improve their knowledge of coffee farming, which increased their human capital. The improvements to washing stations was a change in physical capital that allowed farmers to increase the quantity of washed coffee.

MyLab Economics

Study Plan 2.2

Circular flow model

A model of the economy that shows the circular flow of expenditures and incomes that result from decision makers' choices and the way those choices interact to determine what, how and for whom goods and services are produced.

Households

Individuals or groups of people living together.

Firms

The institutions that organise the production of goods and services.

Market

Any arrangement that brings buyers and sellers together and enables them to get information and do business with each other.

Goods markets

Markets in which goods and services are bought and sold.

Factor markets

Markets in which the services of factors of production are bought and sold.

2.3 THE CIRCULAR FLOWS

We can organise the data you've just studied using the **circular flow model**—a model of the economy that shows the circular flow of expenditures and incomes that result from decision makers' choices and the way those choices interact to determine what, how and for whom goods and services are produced. Figure 2.4 shows the circular flow model.

Households and Firms

Households are individuals or groups of people living together. The 9 million households in Australia own the factors of production—land, labour, capital and entrepreneurship—and choose the quantities of these resources to provide to firms. Households also choose the quantities of goods and services to buy.

Firms are the institutions that organise the production of goods and services. The 2 million firms in Australia choose the quantities of the factors of production to hire and the quantities of goods and services to produce.

Markets

Households choose the quantities of the factors of production to provide to firms, and firms choose the quantities of the services of the factors of production to hire. Firms choose the quantities of goods and services to produce, and households choose the quantities of goods and services to buy. How are these choices coordinated and made compatible? The answer is: by markets.

A **market** is any arrangement that brings buyers and sellers together and enables them to get information and do business with each other. An example is the market in which oil is bought and sold—the world oil market. The world oil market is not a place. It is the network of oil producers, oil users, wholesalers and brokers who buy and sell oil. In the world oil market, decision makers do not meet physically. They make deals by telephone and the Internet.

Figure 2.4 identifies two types of markets: goods markets and factor markets. Goods and services are bought and sold in **goods markets**; and the services of factors of production are bought and sold in **factor markets**.

Real Flows and Money Flows

When households choose the quantities of services of land, labour, capital and entrepreneurship to offer in factor markets, they respond to the incomes they receive—rent for land, wages for labour, interest for capital and profit for entrepreneurship. When firms choose the quantities of factor services to hire, they respond to the rent, wages, interest and profits they must pay to households.

Similarly, when firms choose the quantities of goods and services to produce and offer for sale in goods markets, they respond to the amounts that they receive from the expenditures that households make. And when households choose the quantities of goods and services to buy, they respond to the amounts they must pay to firms.

Figure 2.4 shows the flows that result from these choices made by households and firms. The flows shown in orange are *real flows*: the flows of the factors of production that go from households through factor markets to firms and of the goods and services that go from firms through goods markets to households. The flows in the opposite direction are *money flows*: the flows of payments made

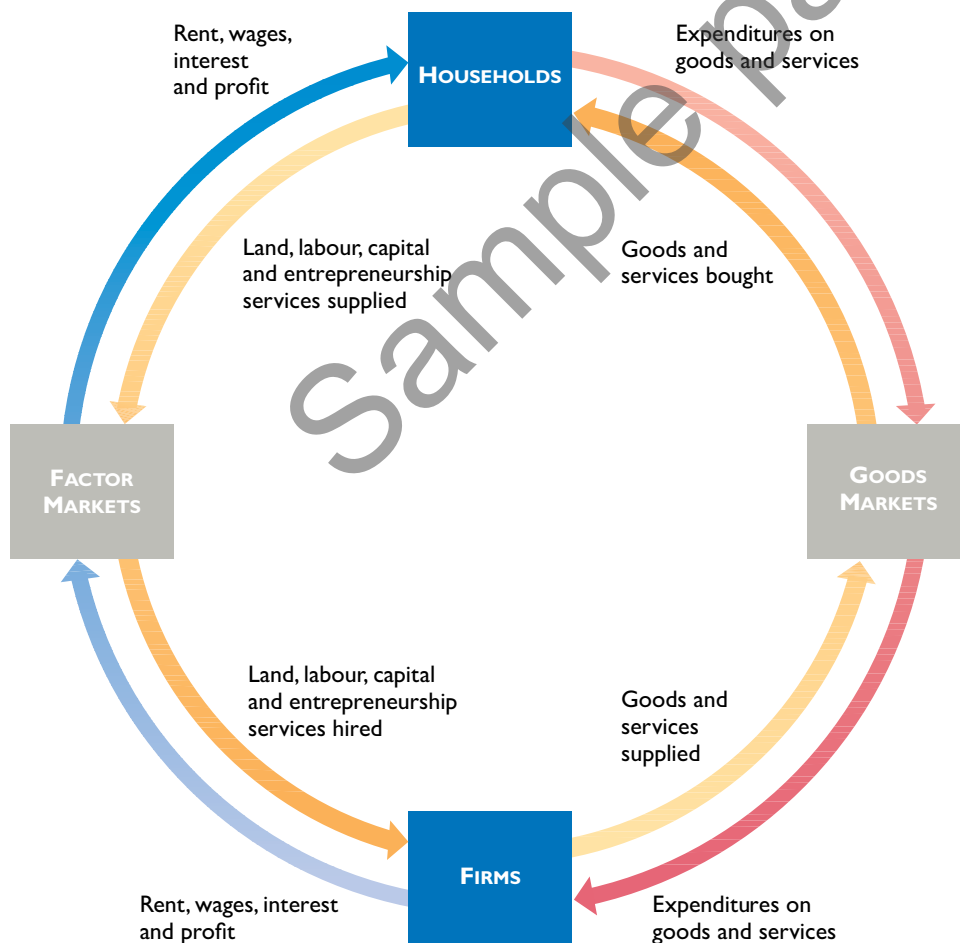
in exchange for the services of factors of production (shown in blue) and of expenditures on goods and services (shown in red).

Lying behind these real flows and money flows are millions of individual choices about what to consume and what and how to produce. These choices result in buying plans by households and selling plans by firms in goods markets. And the choices result in selling plans by households and buying plans by firms in factor markets that interact to determine the prices that people pay and the incomes they earn, and so determine for whom goods and services are produced. You'll learn in Chapter 4 how markets coordinate the buying plans and selling plans of households and firms and make them compatible.

Firms produce most of the goods and services that we consume, but governments provide some of the services that we enjoy. Governments also play a big role in modifying for whom goods and services are produced by changing the personal distribution of income. We're now going to look at the role of governments in the Australian economy and add them to the circular flow model.

FIGURE 2.4
The Circular Flow Model

MyLab Economics Animation



The orange flows are the services of factors of production that go from households through factor markets to firms and the goods and services that go from firms through goods markets to households. These flows are *real* flows.

The blue flow is the income earned by the factors of production, and the red flow is the expenditures on goods and services. These flows are *money* flows.

The choices that generate these real and money flows determine *what, how and for whom* goods and services are produced.

■ Governments

Some 600 organisations operate as governments in Australia. Some are tiny like the Shire of Peppermint Grove Western Australia, and some are enormous like the Australian federal government. We divide governments into two levels:

- Federal government
- State and local government

Federal Government

The federal government's major expenditures provide

1. Goods and services
2. Transfer payments to individuals
3. Transfers to state and local governments

The goods and services provided by the federal government include the legal system, which protects property and enforces contracts and national defence. Transfer payments to individuals include unemployment benefits, income for retired people and health care payments. Federal government transfers to state and local governments are payments designed to provide more equality across the states and regions.

The federal government finances its expenditures by collecting a variety of taxes. The main taxes paid to the federal government are

1. Personal income taxes
2. Business income taxes
3. The Goods and Services tax

In 2013/14, the federal government spent \$388 billion—about 24 per cent of the total value of all the goods and services produced in Australia in that year. The taxes they raised were less than this amount—the government had a deficit.

State and Local Government

The state and local governments' major expenditures are to provide

1. Goods and services
2. Social benefits

The goods and services provided by state and local governments include the state courts and police, schools, roads, waste collection and disposal, water supplies and sewage management. Social benefits provided by state governments include housing aid to low-income families.

State and local governments finance these expenditures by collecting taxes and receiving transfers from the federal government. The main taxes paid to state and local governments are

1. Land taxes
2. Rates (property taxes)
3. Payroll taxes
4. Stamp duties

In 2013/14, state and local governments spent \$230 billion or 15 per cent of the total value of all the goods and services produced in Australia.

■ Governments in the Circular Flow

Figure 2.5 adds governments to the circular flow model. As you study this figure, first notice that the outer circle is the same as in Figure 2.4. In addition to these flows, governments buy goods and services from firms. The red arrows that run from governments through the goods markets to firms show this expenditure.

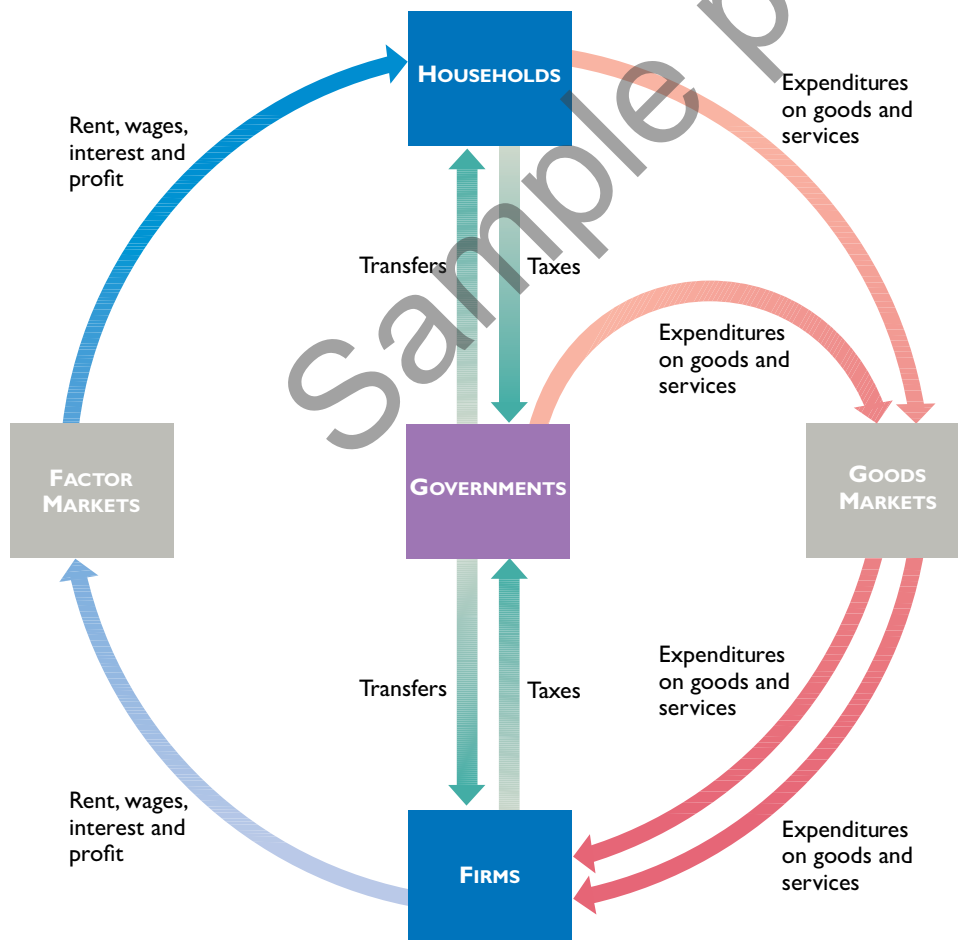
Households and firms pay taxes to governments. The green arrows running directly from households and firms to governments show these flows. Also, governments make money payments to households and firms. The green arrows running directly from governments to households and firms show these flows. Taxes and transfers are direct transactions with governments and do not go through the goods markets and factor markets.

Not part of the circular flow and not visible in Figure 2.5, governments provide the legal framework within which all transactions occur. For example, governments operate the courts and legal system that enable contracts to be written and enforced.

■ FIGURE 2.5

Governments in the Circular Flow

MyLab Economics Animation



The green flows from households and firms to governments are taxes, and the green flows from governments to households and firms are money transfers.

The red flow from governments through the goods markets to firms is the expenditure on goods and services by governments.

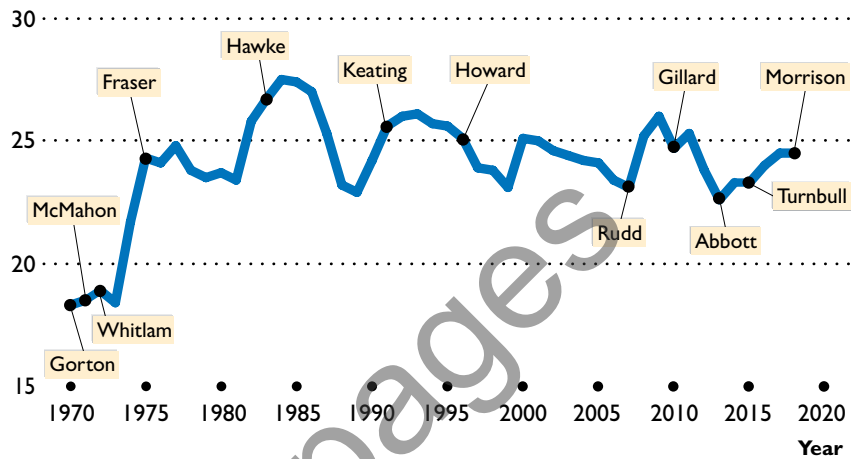


EYE on the PAST

The Fluctuating Size of Government

Forty-eight years ago, the Australian federal government spent 18 cents out of each dollar earned. Today, the federal government spends 25 cents. Government grew in a single spurt after Gough Whitlam came to office as Prime Minister in 1972. Since that time, the size of the government has fluctuated. Fraser and Rudd increased spending, Hawke and Howard lowered it and Keating and Gillard held it steady. But no government after Whitlam tried to undo the expanded role of Canberra.

Federal expenditures (percentage of GDP)



SOURCE OF DATA: Australian Government Budget, Historical Data.

■ Circular Flows in the Global Economy

Households and firms in the Australian economy interact with households and firms in other economies in two main ways: They buy and sell goods and services and they borrow and lend. We call these two activities:

- International trade
- International finance

International Trade

Many of the goods that you buy were not made in Australia. Your iPod, Wii games, Nike shoes, mobile, T-shirt and bike were made somewhere in Asia or possibly Europe or South or Central America. The goods and services that we buy from firms in other countries are Australian *imports*.

Much of what is produced in Australia doesn't end up being bought by Australians. The mining companies, for example, sell most of their output to foreign power generators. The banks of Sydney and Melbourne sell banking services to Europeans and Asians. The goods and services that we sell to households and firms in other countries are Australian *exports*.

International Finance

When firms or governments want to borrow, they look for the lowest interest rate available. Sometimes, that is outside Australia. Also, when the value of our imports exceeds the value of our exports, we must borrow from the rest of the world.

Firms and governments in the rest of the world behave in the same way. They look for the lowest interest rate at which to borrow and the highest at which to lend. They might borrow from or lend to Australians.

Figure 2.6 shows the flows through goods markets and financial markets in the global economy. Households and firms in the Australian economy interact with those in the rest of the world (other economies) in goods markets and financial markets.

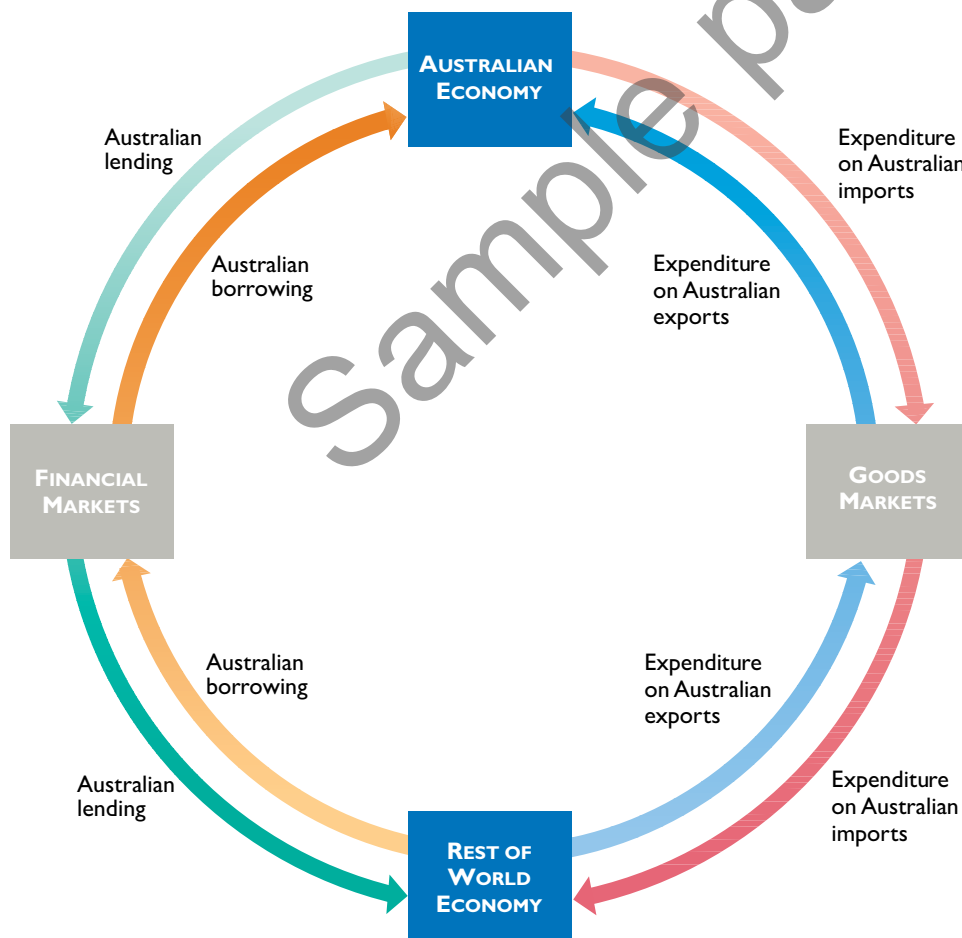
The red flow shows the expenditure by Australians on imports of goods and services, and the blue flow shows the expenditure by the rest of the world on Australian exports (other countries' imports). The green flow shows Australian lending to the rest of the world, and the orange flow shows Australian borrowing from the rest of the world.

It is these international trade and international finance flows that tie nations together in the global economy and through which global booms and slumps are transmitted.

FIGURE 2.6

Circular Flows in the Global Economy

MyLab Economics Animation



Households and firms in the Australian economy interact with those in the rest of the world (other economies) in goods markets and financial markets.

The red flow shows the expenditure by Australians on imports of goods and services, and the blue flow shows the expenditure by the rest of the world on Australian exports (other countries' imports).

The green flow shows Australian lending to the rest of the world, and the orange flow shows Australian borrowing from the rest of the world.



EYE on the GLOBAL ECONOMY

The Ups and Downs in International Trade

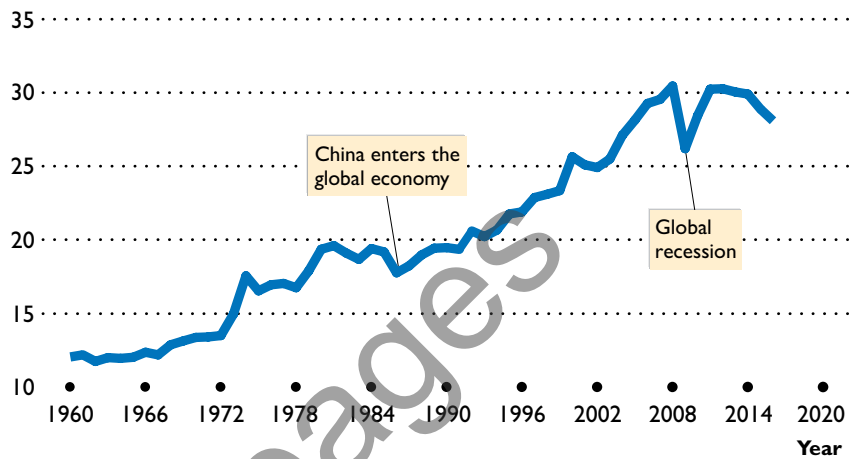
International trade expanded rapidly after China became a powerful player in the global economy.

At an average growth rate of close to 7 per cent a year, world trade has doubled every decade and increased as a percentage of world production.

After China entered the global economy in 1986, the growth in world trade increased until 2009 when the global recession reduced world trade.

After the recession of 2009, world trade bounced back to more than 30 per cent of global production in 2011 and 2012.

Global international trade (percentage of world GDP)



SOURCE OF DATA: World Bank, 2018.

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Study Plan 2.3

Key Terms Quiz

REVIEW 2.3

Explain the circular flow model of the Australian economy and of the global economy.

Practice Problems

1. Describe the flows in the circular flow model in which consumption expenditure, purchases of new national defence equipment and payments for labour services appear. Through which market does each of these flows pass?
2. Of the flows that run between households, firms and governments in the circular flow model, which ones are real flows and which are money flows?

Solutions to Practice Problems

1. Consumption expenditure flows from households to firms through the goods market. Purchases of national defence flow from governments to firms through the goods market. Payments for labour services flow from firms to households through the factor market.
2. The real flows are the flows of services of factors of production that go from households to firms through factor markets and the goods and services that go from firms to households and from firms to governments through goods markets. The money flows are the flows of factor incomes, household and government expenditures on goods and services, taxes and transfers.

CHAPTER SUMMARY

Key Points

1. Describe what, how and for whom goods and services are produced in Australia.

- Financial services and mining produce the largest percentage of goods and services in Australia.
- Goods and services are produced by using the four factors of production: land, labour, capital and entrepreneurship.
- The incomes people earn (rent for land, wages for labour, interest for capital and profit for entrepreneurship) determine who gets the goods and services produced.

2. Describe what, how and for whom goods and services are produced in the global economy.

- Fifty per cent of the world's production (by value) comes from the advanced industrial countries.
- Production in the advanced economies uses more capital (both machines and human), but some developing economies use the latest capital and technologies.
- The global distribution of income is more unequal than the Australian distribution. Poverty has fallen in Asia, but it has increased in Africa.

3. Explain the circular flow model of the Australian economy and of the global economy.

- The circular flow model of the Australian economy shows the real flows of factors of production and goods and the corresponding money flows of incomes and expenditures.
- Governments in the circular flow receive taxes, make transfers and buy goods and services.
- The circular flow model of the global economy shows the flows of Australian exports and imports and the international financial flows that result from lending to and borrowing from other countries.

Key Terms

Capital, 35
 Capital goods, 32
 Circular flow model, 46
 Consumption goods and services, 32
 Entrepreneurship, 36
 Factor markets, 46

Factors of production, 34
 Firms, 46
 Goods markets, 46
 Households, 46
 Human capital, 35
 Interest, 37

[MyLab Economics Key Terms Quiz](#)

Labour, 35
 Land, 34
 Market, 46
 Profit (or loss), 37
 Rent, 37
 Wages, 37

CHAPTER REVIEW

Study Plan Problems and Applications

1. Explain which of the following items are *not* consumption goods and services:
 - A chocolate bar
 - A ski lift
 - A golf ball
2. Explain which of the following items are *not* capital goods:
 - A car assembly line
 - A shopping mall
 - A golf ball
3. Explain which of the following items are *not* factors of production:
 - Vans used by a baker to deliver bread
 - 1,000 shares of Amazon.com stock
 - Undiscovered oil in the Southern Ocean
4. Which factor of production earns the highest percentage of total Australian income? Define that factor of production. What is the income earned by this factor of production called?
5. With more job training and more scholarships to poor Australian students, which special factor of production is likely to grow faster than in the past?
6. Define the factor of production called capital. Give three examples of capital, different from those in the chapter. Distinguish between the factor of production capital and financial capital.

LIST 1

- You buy a coffee at Starbucks.
- The government buys some HP computers.
- A student works at a copy shop.
- Westpac rents a building to Marriot hotels.
- You pay your income tax.

7. Suppose a new multi-billion dollar government program awards grants to small business owners who are either women, Aborigines or war veterans. Explain how you would expect this program to influence *what, how* and *for whom* goods and services are produced in Australia.

8. In the circular flow model, explain the real flow and/or the money flow in which item in List 1 belongs. Show your answers on a graph.

9. **Joe Hockey's Higher Education Reforms**

We will allow universities to set their own tuition fees, students will still be eligible for concessional higher education loans and one dollar out of every five dollars in additional tuition revenue will be used to fund scholarships to those from disadvantaged backgrounds who want to attend university.

Source: *Budget Speech*, 13 May 2014

How do you think the personal distribution of income would change if all Joe Hockey's proposals had become law?

10. Compare the scale of agricultural production in the advanced and developing economies. In which is the percentage higher? In which is the total amount produced greater?
11. Read *Eye on the Dreamliner* on p. 41 and then answer the following questions:
 - How many firms are involved in the production of the Dreamliner and how many are identified in the figure on p. 41?
 - Is the Dreamliner a capital good or a consumption good? Explain why.
 - State the factors of production that make the Dreamliner and provide an example of each.
 - Explain how the production of the Dreamliner influences *what, how* and *for whom* goods and services are produced.
 - Use a graph to show where in the circular flow model of the global economy the flows of the components listed on p. 41 appear and where the sales of Dreamliners appear.

Additional Problems and Applications



- Boeing's Dreamliner has had a rocky start.
 - Why doesn't Boeing manufacture all the components of the Dreamliner at its own factory in the United States?
 - Describe some of the changes in *what*, *how* and *for whom*, that would occur if Boeing manufactured all the components of the Dreamliner at its own factories in the United States.
 - State some of the tradeoffs that Boeing faces in making the Dreamliner.
 - Why might Boeing's decisions in making the Dreamliner be in the social interest?
- The global economy has three mobile users for every fixed line user. Two in every three mobile phone users live in a developing nation and the growth rate is fastest in Africa. In 2000, 1 African in 50 had a mobile phone; in 2009, it was 14 in 50. Describe the changes in *what*, *how* and *for whom* telecommunication services are produced in the global economy.
- Which of the entries in List 1 are consumption goods and services and which are government goods? Explain your choice.
- Which of the entries in List 1 are capital goods? Explain your choice.
- Which of the entries in List 1 are factors of production? Explain your choice.
- In the African nation of Senegal, to enrol in school a child needs a birth certificate that costs \$25. This price is several weeks' income for many families. Explain how this requirement is likely to affect the growth of human capital in Senegal.
- China's Prosperity Brings Income Gap**

The Asian Development Bank [ADB] reports that China has the largest gap between the rich and the poor in Asia. Ifzal Ali, the ADB's chief economist, claims it is not that the rich are getting richer and the poor are getting poorer, but that the rich are getting richer faster than the poor.

Source: *Financial Times*, 9 August 2007

Explain how the distribution of personal income in China can be becoming more unequal even though the poorest 20 per cent are getting richer.

- On a graph of the circular flow model, indicate in which real flow or money flow each entry in List 2 belongs.

Use the following information to work Problems 9 and 10.

Poor India Makes Millionaires at Fastest Pace

India, with the world's largest population of poor people, also paradoxically created millionaires at the fastest pace in the world. Millionaires increased by 22.7 per cent to 123,000. In contrast, the number of Indians living on less than \$1 a day is 350 million and those living on less than \$2 a day is 700 million. In other words, there are 7,000 very poor Indians for every millionaire.

Source: *The Times of India*, 25 June 2008

- How is the personal distribution of income in India changing?
- Why might incomes of \$1 a day and \$2 a day underestimate the value of the goods and services that these households actually consume?

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Homework, Quiz or Test if assigned

LIST 1

- A motorway
- An aeroplane
- A school teacher
- A navy submarine
- A garbage truck
- A pack of bubble gum
- The NSW state premier
- A strawberry field
- A movie
- An ATM

LIST 2

- Qantas pays its workers wages.
- ANZ pays a dividend to its shareholders.
- You buy your groceries.
- BlueScope Steel buys robots.
- Rex Airlines rents some aircraft.
- Nike pays Nick Kyrgios for promoting its sports shoes.

Multiple Choice Quiz

1. Which of the following classifications is correct?
 - A. City streets are consumption goods because they wear out with use.
 - B. Shares of company stock are capital goods because when people buy and sell them they make a profit.
 - C. The coffee maker in the coffee shop at an airport is a consumption good because people buy the coffee it produces.
 - D. Parliament security is a government service because it is paid for by the government.
2. Which of the following statements about Australian production is correct?
 - A. Construction accounts for a larger percentage of total production than does manufacturing.
 - B. Mining accounts for 12.6 per cent of the value of total production, larger than any other item of services or goods.
 - C. Consumption goods and services represent 80 per cent of Australian production by value and that percentage doesn't fluctuate much.
 - D. The manufacture of goods represents more than 50 per cent of total production.
3. Which of the following items is *not* a factor of production?
 - A. An oil rig
 - B. A ski jump
 - C. A bank loan to a farmer
 - D. An orange grove
4. What is human capital?
 - A. Immigrant labour
 - B. Someone who operates heavy equipment
 - C. Your lecturer's knowledge of the economy
 - D. A robot on a car assembly line
5. Which of the following statements is correct?
 - A. Labour earns wages and entrepreneurship earns bonuses.
 - B. Land earns interest and capital earns rent.
 - C. Entrepreneurship earns interest and capital earns profit.
 - D. Capital earns interest and labour earns wages.
6. How are goods and services produced in the global economy?
 - A. Developing countries use less human capital but just as much physical capital as advanced economies.
 - B. Emerging economies use more capital-intensive technology than do developing economies.
 - C. Human capital in all economies is similar.
 - D. Advanced economies use less capital than developing economies.
7. In the circular flow model, which of the following items is a real flow?
 - A. The flow of government expenditures to firms for the goods bought
 - B. The flow of income from firms to households for the services of the factors of production hired
 - C. The flow of Australian borrowing from the rest of the world
 - D. The flow of labour services from households to firms