Learning outcomes

Once you have studied this chapter you should be able to

- describe how total production, total income and total spending in the economy are related
- distinguish between stocks and flows
- distinguish between households and firms and show how their decisions and activities are interrelated
- describe the government sector and show how it interacts with households and firms
- show how the foreign sector interacts with the domestic economy
- show where the financial sector fits into the overall picture

In this chapter we introduce the major participants in the economy. They are households, firms, the government and the foreign sector. We also introduce the major markets and flows and show how all these elements are interrelated in a mixed economy. The major markets are the markets for goods and services, the factor markets and the financial markets. The major flows are production, income and spending. Total spending in the economy consists of spending by households, firms, the government and the foreign sector.

The various circular flows illustrated and explained in this chapter might seem very simple, but they are essential guides towards understanding how the different sectors and markets are interrelated.

In economics everything is related to everything else, often in more than one way.
ANONYMOUS

Consumption is the sole end and purpose of all production.
ADAM SMITH

The whole of science is nothing more than the refinement of everyday thinking.
ALBERT EINSTEIN
PART I  INTRODUCTION

Experienced economists often stress that you need a good imagination to understand the functioning of the economy as a whole. When you are studying microeconomics, that is, when you are examining individual parts of the economy by putting them under a "microscope", you can often fall back on your own experience. For example, everyone is a consumer and can therefore rely on his or her own experience when analysing individual or household decisions on what goods to buy, how time is spent, etc. In other words, you can place yourself in the position of the decision maker to try to understand how he or she behaves. You have probably also seen a vegetable market or a flea market and can therefore envisage what an individual market looks like and how it operates.

However, at the macroeconomic level, that is, when you are dealing with the economy as a whole, things are different. No one has ever seen the South African economy and no one ever will. Moreover, the concepts we deal with at the macroeconomic level (like the market for all goods and services produced in a country) do not refer to things that really exist. There is no physical market where all goods and services are bought and sold. Likewise, the general price level is an abstract concept which does not exist in a physical sense.

When dealing with the economy as a whole we therefore have to imagine things. We have to have mental pictures about how the economy fits together. A useful way of obtaining such pictures is to use simplified diagrams which set out the most important interrelationships between the major components of the economic system. In this chapter we introduce you to some of these diagrams. In addition we emphasise an important fact of economic life which non-economists often ignore or neglect when presenting their diagnoses and remedies for a country’s economic problems. This feature is the high degree of interdependence in an economic system. In an economic system everything does indeed depend on everything else.

The chapter focuses on how things fit together in a mixed economy. We start by emphasising the three major flows in the economy as a whole: total production, total income and total spending. As you will see later, particularly in Part IV, these three flows and their interdependence form the cornerstone of the study of macroeconomics. In Sections 3.2 to 3.5 we construct a variety of pictures which show the major sectors and interrelationships in the economy. This is done on a step-by-step basis.

We start off by considering an economy that consists only of households and firms. After describing what is meant by households and firms, we construct a simple picture of how they are linked. In the following section we introduce and describe the government, and then add it to the picture presented in the previous section. The next step is to introduce the rest of the world, which we call the foreign sector. At that stage we have various pictures of how households, firms, the government and the foreign sector interact. The overall picture is completed by also pointing out where the financial sector fits into the picture.

As mentioned earlier, the purpose of these pictures is to obtain some mental image of how the economy fits together. We show the major parts and how they are interrelated. These pictures are gross simplifications, since we ignore many details. But they are essential to our understanding of how the economy works. Without such pictures it is virtually impossible to make sense of the complicated workings of the economic system.

3.1 Production, income and spending

As we saw in Chapter 2, economics is essentially concerned with what to produce, how to produce it and how to distribute the products between the various participants. Note that the focus is on production. It stands to reason, therefore, that the total production of goods and services is of major concern to economists. But production is not pursued for its own sake. The ultimate aim is to use or consume the products to satisfy human wants. The logical sequence is therefore as follows: production creates income (earned in the production process by the various factors of production) and this income is then spent to purchase the products. The sequence contains three major elements: production, income and spending. In practice, of course, everything is happening at the same time: production occurs, income is earned, and all or part of the income is spent to buy the goods and services that are available. In other words, there is a continuous circular flow of production, income and spending in the economy – see Figure 3-1.

One aspect of the economic problem that is not included in this simple diagram is how the income is distributed among the various participants in the economy. This important issue was introduced in Chapter 2 and you will encounter it again at various places in the rest of the book. At this stage, however, we are primarily interested in how the major components of the mixed economy are linked. We therefore ignore the details of the distribution problem for the time being. These details are not essential to a basic understanding of how things fit together, and might divert your attention from the essential elements. We assume that the income earned by the various factors of production are the “correct” amounts and focus on total income rather than its distribution.

Production, income and spending are all flows. To understand what this means, we have to distinguish between stocks (which are measured at a particular point in time) and flows (which are measured over a period). To illustrate this, consider the level of the water in a dam. The level of the water in a dam can
only be measured exactly at a particular point in time. For example, at 00:00 on 1 May 2007 the level of the Gariep dam was at 72.64 per cent of its capacity. This kind of variable, which can only be measured at a particular point in time, is called a stock variable, or simply a stock. The flow of water into the dam, on the other hand, can only be measured over a period, that is as a rate, irrespective of how short such a period might be. Thus, the flow into the Gariep dam can be expressed as so many cubic metres of water per second, per minute, per hour or per day. For example, on 1 May 2007 the inflow into the Gariep dam was measured at 250 cubic metres per second. This kind of variable, which can only be measured over a period, is called a flow variable or simply a flow. Production, income and spending all fall into this category – they are all flows which can only be measured over a period. In practice the total production, income and spending in the economy are measured quarterly but the main interest is in the annual levels of production, income and spending.

Further examples of stocks and flows are provided in Box 3-1. In the rest of this book we shall frequently remind you of the difference between stocks and flows.

In a mixed economy the households, firms, the government and the foreign sector all participate in the production process. They all contribute towards total production, they all earn an income and they all spend their incomes. Apart from production, income and spending, the other important economic activity that links the various sectors in an economy is exchange.

3.2 The interdependence between households and firms

Households

A household can be defined as all the people who live together and who make joint economic decisions or who are subjected to others who make such decisions for them. A household can consist of an individual, a family or any group of people who have a joint income and take decisions together. Every person in the economy belongs to a household.

The household is the basic decision-making unit in the economy. In primitive societies households were the only decision-making units. The others (firms, the government and the foreign sector) only came later. Recall, from Chapter 1, that the word “economics” is derived from a Greek word meaning the management of the household. This underlines the central role of households in the economy.

Members of households consume goods and services to satisfy their wants. They are therefore called consumers. The act of using or consuming goods and services is called consumption. The total spending of all households on consumer goods and services is called total or aggregate consumption expenditure, or simply total consumption. We use the symbol $C$ to indicate total consumption or consumer spending in the economy. (Note that a symbol is merely an abbreviation or shorthand for a concept or a variable.)

Because households are the basic units in the economy, we often use the term households when we refer to individuals or consumers. In other words, the terms households, individuals and consumers are used interchangeably. In a market economy it is households or consumers who largely determine what should be produced.

In a mixed economy most of the factors of production are owned by households. Labour is obviously owned by the members of households. Many of the other means of production, such as capital goods, are also owned by individuals. For example, even large business concerns like Anglo American, Sanlam and Pick ‘n Pay are owned by their shareholders. The factors of production of these companies are therefore ultimately owned by individuals or households.
Although households own the factors of production, these factors cannot satisfy human wants directly. Households therefore sell their factors of production (labour, capital, etc) to firms that combine these factors and convert them into goods and services. In return for the factors of production that they supply, the households receive income in the form of salaries and wages, rent, interest and profit. This income is then used to purchase consumer goods and services which satisfy their wants.

In economic analysis we assume that consumers are rational. By this we mean that households always attempt to maximise their satisfaction, given the means at their disposal. The decisions of households are examined in Part II, particularly in Chapter 10.

To summarise: Every individual is a member of a household. Households are the basic units in an economic system. They own the factors of production and sell these factors on the factor markets to firms. In exchange for the services of their factors of production, households receive an income which they use to purchase consumer goods and services in the goods markets. These goods and services are then consumed to satisfy human wants.
**Firms**

The next component of the mixed economy is the firm. A firm can be defined as the unit that employs factors of production to produce goods and services that are sold in the goods markets. Firms are the basic productive units in the economy. A firm is actually an artificial unit. It is ultimately owned by or operated for the benefit of one or more individuals or households. As mentioned above, even large firms are ultimately owned by their shareholders. Firms can take different forms – see Box 3-2.

**BOX 3-2 DIFFERENT TYPES OF FIRM**

Firms can take various forms. The following are the most common types of firm in South Africa.

- **Individual (or sole) proprietorships.** Many firms are owned by a single person who makes all the decisions, receives the entire profits and is legally responsible for the debts of the firm. Examples include shops, cafés, farms, hairdressers and plumbing services. This type of firm is particularly suited to activities which require personal supervision but where the scale of operations and the financing requirements are not large. It is relatively easy to form or to dissolve. All the decision-making power is vested in the owner and there is a strong incentive to manage the business efficiently. A sole proprietorship has no separate existence from the owner – the assets of the firm are the assets of the owner. Its main weakness is its unlimited liability: the owner is responsible for all the debts and losses incurred by the firm. All the owner’s assets may therefore have to be used to settle the debts of the firm. Another weakness is the limited ability to raise funds for expansion.

- **Partnerships.** This form of business does not differ much from individually owned businesses. Partnerships are suited to activities which do not require large amounts of financing but which need specialised ability. Partnerships are therefore often set up in the case of professional services. Doctors, dentists, attorneys, engineers and accountants frequently form partnerships. Although this type of firm can realise the benefits of specialisation and also potentially has greater access to finance, it is also characterised by unlimited liability. Moreover, the partners are the joint owners of the firm, and the actions of any one partner are therefore binding on the others.

- **Companies.** A company is a business whose identity in the eyes of the law is separate from the identity of its owners. It is the least risky form of business, since the liability (and thus the risk) of the owners (or shareholders) is usually limited to the value of the shares they own. Companies can generally also attract more financing than other types of firm, through the sale of shares (equity) or bonds or via bank credit. Another benefit is the fact that specialists can be appointed to manage the business, although the separation of ownership and management (control) can create problems – see the discussion of the principal-agent problem in Box 11-1. This type of firm, which requires a significant amount of red tape to establish, is also sometimes abused by unscrupulous business people. There are two types of companies: private companies and public companies.

  A *private company* is limited to a maximum of 50 members and the right to transfer its shares is restricted. Private companies need have only one shareholder. In South Africa a private company can be identified by the abbreviation (Pty) Ltd which appears after its name. This is an abbreviation for “proprietary limited.” Examples include Alusaf (Pty) Ltd, Clicks Stores (Pty) Ltd, Johnson Tiles (Pty) Ltd and Sapekoe (Pty) Ltd.

  In contrast, a *public company* may not have fewer than seven shareholders. There is, however, no maximum number of shareholders in the case of public companies. A public company is a company that wishes to raise capital (in the financial sense) from the public and its shares are therefore easily transferable. Many public companies are listed on the JSE Securities Exchange where their shares are traded every weekday. They are called *listed companies.* Examples include Anglo American, Remgro, Richemont, Old Mutual, Sappi, Sanlam, Pick ‘n Pay and Sasol.
Whereas households are engaged in consumption, firms are engaged primarily in production. Firms are the units that convert factors of production into the goods and services that households desire. Firms are therefore the buyers in the factor markets and the sellers in the goods markets. In a market economy it is firms which largely decide how goods and services will be produced.

In economic analysis we assume that firms, like households, are also rational. By this we mean that firms always aim to achieve maximum profit. Profit is the difference between revenue and cost. When analysing the decisions of firms, we ignore the differences between different types of firm. This enables us to treat the firm as the basic decision-making unit on the production or supply side of goods markets. The behaviour of firms comes under the spotlight in Part II, particularly in Chapters 11 to 13.

All individuals who own or work for a firm are also members of a household. They are therefore engaged in two sets of decisions. They make consumer decisions like any other individual or household but when they are at work they make business decisions relating to the objectives of the firms that they own or work for.

One of the factors of production purchased by firms is capital. As explained in Chapter 2, capital goods are man-made factors of production, such as machinery and equipment, which are used to produce goods and services. The act of purchasing capital goods is called investment or capital formation, which is denoted by the symbol \( I \). Whereas households are responsible for spending on consumer goods \( (C) \), firms are responsible for spending on capital goods \( (I) \).

To summarise: Firms purchase factors of production in the factor markets. They transform the factors into goods and services which are then sold in the goods markets.

**Goods market**

Recall from Section 2.4 that a market is any contact or communication between potential buyers and potential sellers of a good or service. There are thousands of markets for consumer goods and services in the economy. To understand how the different elements of the economy are related, we lump all these different markets together under the heading “the goods market”. In economics we call this “aggregation”.

In macroeconomics we treat the goods market as if there were only one market for all goods and services in the economy. In microeconomics we analyse each of the markets individually.

**Factor market**

Factors of production are purchased and sold in many different markets. They are called factor markets. The factor markets include the labour market and the markets for capital goods. The incomes earned by the factors of production (ie their prices) can be grouped into four categories: wages and salaries, rent, interest and profit.

In macroeconomics we tend to aggregate the factor markets and treat them as if there were only one market for factors of production in the economy – “the factor market”. In microeconomics we examine the individual markets in detail.
The circular flow of goods and services

The interaction between households and firms can be illustrated with the aid of a simple diagram. This diagram, which is called the circular flow of goods and services, is an example of the type of picture that is required to understand how the different parts of the economy fit together. It is the most basic description of the production process in the economy.

We show the households, the firms, the goods market and the factor market in Figure 3-2. The households offer their factors of production for sale on the factor market where these factors are purchased by the firms. The firms combine the factors of production and produce consumer goods and services. These goods and services are offered for sale on the goods market where they are purchased by the households.

**FIGURE 3-2 The circular flow of goods and services**

Households sell their factors of production to firms in the factor market. The firms transform these factors into goods and services which are then sold to households in the goods market.

The circular flow of income and spending

In Figure 3-2 we show how goods and services flow between households and firms. The interaction between households and firms can also be illustrated by showing the flow of income and spending. This is done in Figure 3-3. The flow of income and spending is usually a monetary flow (ie a flow of money). Its direction is opposite to the flow of goods and services. Firms purchase factors of production in the factor market. This spending by firms represents the income (wages, salaries, rent, interest and profit) of the households. The households, in turn, spend their income by purchasing goods and services in the goods market. The spending by the households represents the income of the firms.

The links between households and firms that are illustrated in Figures 3-2 and 3-3 are quite simple. But they are also very important. As emphasised earlier, it is absolutely essential to have some mental images of how the different parts of the economy fit together.

3.3 Introducing the government

Government is a broad term that includes all aspects of local, regional (or provincial) and national government. In economics we often refer to the public sector, which includes everything that is owned by government as the representative of the people. The composition of the public sector in South Africa is described in Box 3-3. The public sector is more closely examined in Chapter 16.

Government includes all politicians, civil servants, government agencies and other bodies belonging to or under the control of government. It therefore includes the President, cabinet ministers, provincial premiers, mayors, everyone working for central government, provincial governments and municipalities, and public corporations such as Eskom, Transnet and the South African Reserve Bank.

In their official capacities, the President, the Minister of Finance, all other politicians and all civil servants are part of the government sector, but in their private capacities they are all members of households as well. When they decide which goods to consume, they are driven by the same motives as any
other individual or household, but in their official
capacities they are supposed to serve the community
at large.
In contrast to households and firms, who are
assumed to act rationally and consistently, we do not
assume that government always acts in a consistent
fashion. Government is supposed to attain national
goals which may vary from time to time. For example,
the objectives of the ANC government elected in
South Africa in June 1999 differed radically in many
respects from the objectives that were pursued by the
National Party government during the heyday of
apartheid. Another reason why government does not
necessarily act consistently is to be found in the objec-
tives of politicians and public officials (or bureau-
crats). Every politician or public official has personal
objectives (such as re-election, promotion, power,
prestige) as well as public service objectives. For
example, in a democratic system the main objective of
politicians is to achieve success at the next elections.
This often results in a bias towards policies which will
yield immediate or short-term benefits.
The role of government in the economy has already
been touched on in Chapter 2 and is discussed further

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**BOX 3-3 THE PUBLIC SECTOR IN SOUTH AFRICA**

The composition of the public sector in South Africa is outlined in the diagram below. The core of the public
sector is **central government**. Central government includes all the different government depart-
ments, extra-budgetary agencies such as the Council for Scientific and Industrial Research and the South
African Bureau of Standards, and universities.
The next level is **general government**. This is obtained by adding provincial government and local
government to central government. **Provincial government** includes the administrations of the nine
provinces. **Local government** includes metropolitan councils, municipalities and district councils.

The final level is the **public sector**. The public sector includes the general government and the public
corporations and other state enterprises. Public corporations are firms that are controlled by the govern-
ment, either by the number of shares the government owns in them or through the appointment of mem-
bers of the board of directors. Examples include Eskom, Armscor, the Atomic Energy Corporation, the
Industrial Development Corporation, Rand Water, the SABC, the Post Office and Transnet. Although public
corporations form part of the public sector, their decisions are often based on the same principles as
those of other business concerns. In terms of our circular flow diagrams they can therefore be regarded
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This often results in a bias towards policies which will
yield immediate or short-term benefits.
The role of government in the economy has already
been touched on in Chapter 2 and is discussed further
in Chapter 16. For the present it is sufficient to note a few important aspects of government activity. The primary function of government is to establish the framework within which the economy operates. Government also participates in the circular flow of production, income and spending. It purchases factors of production (primarily labour) from households in the factor market and also purchases goods and services from firms in the goods market. In return, government provides households and firms with public goods and services such as defence, law and order, education, health services, roads and dams. These services are financed mainly by levying taxes on the income and expenditure of households and firms. Government also transfers some of its tax revenue directly to needy people such as old-age pensioners.

Government’s economic activity thus involves three important flows:

- **government expenditure** on goods and services (including factor services) – this is usually denoted by the symbol $G$.
- **taxes** levied on (and paid by) households and firms – taxes are usually represented by the symbol $T$.
- **transfer payments**, that is, the transfer of income and expenditure from certain individuals and groups (eg the wealthy) to other individuals and groups (eg the poor).

Unlike government spending and taxation, transfer payments do not directly affect the overall size of the production, income and expenditure flows. We therefore focus only on government spending $G$ and taxes $T$. **Government spending** constitutes an injection into the flow of spending and income while **taxes** constitute a leakage or withdrawal from the circular flow of income between households and firms.

The various links between government, on the one hand, and households and firms, on the other, are illustrated in Figure 3-4. Part of the circular flow diagram, which illustrates the interaction between households and firms, is exactly the same as in Fig-

**FIGURE 3-4** The government in the circular flow of production, income and spending

The government purchases factors of production (mainly labour) from households in the factor market, and goods from firms in the goods market. Government provides public goods and services to households and firms. Government spending is financed by taxes paid by households and firms.
3.4 Introducing the foreign sector

The fourth major sector to consider is the rest of the world, which we call the foreign sector. The South African economy has always had strong links with the rest of the world. The South African economy is thus an open economy. Many of the goods produced in South Africa are sold to other countries while many of the consumer and capital goods consumed and used in South Africa are produced in the rest of the world. In addition, many foreign companies operate in South Africa while some South African firms also operate elsewhere. The various flows between South Africa and the rest of the world are summarised in the balance of payments, which is introduced in Chapter 4.

In recent years the economic links between different countries have become stronger and more complex. This is usually described as globalisation. Advances in transport and communication have opened up international markets. Many firms therefore tend to look at the whole world as a potential market for their goods or services. Nowadays people often say that the world has become a global village in which firms from different countries have to compete with each other. It has also become very easy to shift funds between countries. Economic or political developments in a country can thus easily result in massive flows of funds into or out of that country.

As you learn more about economics, you will come to realise that a country’s economic links with the rest of the world are often crucial determinants of the level and pace of economic activity in the domestic economy. This point is emphasised at various points in the rest of the book.

The foreign sector consists of all countries and institutions outside the country’s borders – see Box 3-4. South Africa’s foreign sector is discussed in more detail in Chapter 17.

The flows of goods and services between the domestic economy and the foreign sector are exports, which we denote with the symbol $X$, and imports, which we denote with the symbol $Z$.

South Africa’s exports consist mainly of gold and other minerals while the country’s imports are mainly

| BOX 3-4 THE FOREIGN SECTOR |

The foreign sector consists of all the countries in the rest of the world as well as international institutions which govern the flow of goods and services and the flow of funds between different countries.

The countries of the world can be divided into two broad categories: industrial countries and developing countries. The World Bank classifies its members into four groups: low-income economies, lower-middle-income economies, upper-middle-income economies and high-income economies.

- The high-income economies are the industrial countries. They include countries such as the United States, Japan, Germany, the United Kingdom, France, Canada, Australia and Italy. Most of the industrial countries are in Europe.

- The other three categories identified by the World Bank are all developing countries (which are sometimes called less developed countries or LDCs). The developing countries are heavily concentrated in Africa, Asia and South America. For example, most of the low-income countries are situated in Africa, with Ethiopia, Burundi and Sierra Leone among the poorest. Most South American countries are middle-income developing countries, as is South Africa.

Most of South Africa’s trade and other economic links are with the industrial countries. For example, in 2005 about 60 per cent of South Africa’s exports went to the industrial countries while more than half of the country’s imports also came from these countries. By contrast, only about 9 per cent of our exports went to the rest of Africa, while Africa only provided about 4 per cent of South Africa’s imports.

The most important international economic organisations are the International Monetary Fund, the World Bank and the World Trade Organisation. We provide more detail about these institutions and our links with other countries in Chapters 5 and 17.
capital and intermediate goods that are used in the production process. In the case of South Africa’s exports the spending originates in the rest of the world. This spending represents the income of our exporters. Exports thus constitute an addition or injection into the circular flow of income and spending in the domestic economy.

In the case of imports the spending originates in the domestic economy. This spending by importers represents the income of the other countries’ exporters. Imports thus constitute a leakage or withdrawal from the circular flow of income and spending in the domestic economy.

As in the other cases, the flow of income and spending is in the opposite direction to the flow of goods and services. We concentrate on the flow of income and spending between the domestic economy and the foreign sector rather than on the flow of goods and services. This flow of income and spending is shown in Figure 3-5.

FIGURE 3-5 The foreign sector in the circular flow of income and spending

In this section we show where financial institutions fit into the overall picture. Financial institutions include banks such as Standard Bank and Nedbank, insurance companies such as Old Mutual and Sanlam, pension funds such as the Mine Employees Pension Fund, and the JSE Securities Exchange. These institutions are not directly involved in the production of goods. They act as links between households or firms with surplus funds and other participants that require funds, for example firms that wish to expand their activities. In this regard one can distinguish between surplus units (ie those who are in a position to save because they spend less than they earn) and deficit units (ie those who require funds because their spending exceeds their income).

To indicate the position of financial institutions or the financial sector in the economy, we use a simple circular flow which excludes government and the foreign sector. Households and firms who do not spend all their income during any particular period (ie surplus units) save some of their income. We use the symbol S to indicate saving. As far as households are concerned, the decision to save is a decision not to consume. In other words, saving can be defined as the act of not consuming. Likewise, firms can also save by not spending all their income. When saving occurs, there is a leakage or withdrawal from the circular flow of income and spending. Saving is channelled to financial institutions, for example in the form of saving deposits with banks. These funds are then available to firms that wish to borrow to expand their productive capacity (ie deficit units). Firms expand their productive capacity by purchasing capital goods such as machinery and equipment. Recall that this is called investment (I). When firms purchase capital goods, that is, when they invest, there is an addition or injection into the circular flow of income and spending.

The main function of the financial sector is therefore to act as a funnel through which saving can be channelled back into the circular flow in the form of investment spending.

In Figure 3-6 we show the circular flow of income and spending between households and firms. To keep things as simple as possible, the factor market, goods market, government and foreign sector have all been omitted. The financial sector acts as an intermediary between those who save and those who wish to invest. Households and firms channel their savings to the financial sector which then lends the funds to those firms that wish to borrow to invest. Saving is a withdrawal or leakage from the circular flow, whereas investment is an addition or injection. This also points to a connection between the expansion of the production capacity (through investment) and the
decision to refrain from spending on consumer goods (saving). The importance of saving and investment is emphasised at various places in the rest of the book, particularly in Part IV. We deal more fully with the financial sector in Chapter 15.

3.6 Total production, income and spending revisited

In this chapter we introduced three important flows in the economy: production, income and spending. Total (or aggregate) production is simply the production of all goods and services in the economy. This production generates an income, the value of which is equal to the total production. Total income in the economy is the income that is earned by the various factors of production, that is, wages and salaries, rent, interest and profit. The equality between the value of production and the value of income is explained further in the next chapter.

We also introduced total spending (or expenditure) in the economy. Note that “total” and “aggregate” are synonyms and that spending and expenditure also have the same meaning. These terms are used interchangeably in the rest of the book. In other words, when we talk about total spending and aggregate expenditure we are referring to the same flow. Aggregate spending on South African goods and services consists of spending by the four sectors:

- spending by households on consumer goods and services ($C$)
- spending by firms on capital goods ($I$)
- spending by government on goods and services ($G$)
- spending by foreigners on South African goods and services ($X$) minus spending by South Africans on imported goods and services ($Z$)

Total expenditure can therefore be written as $C + I + G + X - Z$. You will encounter these components of total expenditure frequently in the rest of the book, particularly in Part IV.

Apart from these elements of total spending, we have introduced two other important flows. They are taxes ($T$), which are paid to government and saving ($S$), which refers to income that is not spent. $T$ and $S$ represent leakages or withdrawals from the circular flow of income and spending in the economy. The other important leakage is imports ($Z$), which have to be subtracted from exports ($X$), as we have done above.

These flows and the four sectors have been combined to construct a number of pictures of how the main elements of the economy fit together. All the details were not included in every picture. Many other possible pictures can therefore also be constructed. Figure 3-7 represents one such picture. It is a combination of Figures 3-4, 3-5 and 3-6, and summarises most of the important concepts introduced in this chapter.

As an exercise you can try to construct your own detailed picture of how the flows, markets and sectors are interrelated. This will help to give you that all-important “feel” for the basic fact of economic interdependence which is so essential in understanding how the economy works.
This figure summarises the essence of the previous circular flow diagrams. The basic flow is between households and firms. This represents consumption expenditure (C). Saving (S), taxes (T) and imports (Z) are all leakages from the circular flow. Investment spending (I), government spending (G) and exports (X) are all injections into the circular flow.

IMPORTANT CONCEPTS

<table>
<thead>
<tr>
<th>Production (or output)</th>
<th>Government</th>
<th>Investment spending (I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>Foreign sector</td>
<td>Government spending (G)</td>
</tr>
<tr>
<td>Spending (or expenditure)</td>
<td>Goods market</td>
<td>Exports (X)</td>
</tr>
<tr>
<td>Stocks and flows</td>
<td>Factor market</td>
<td>Saving (S)</td>
</tr>
<tr>
<td>Households</td>
<td>Circular flow</td>
<td>Taxes (T)</td>
</tr>
<tr>
<td>Firms</td>
<td>Consumption expenditure (C)</td>
<td>Imports (Z)</td>
</tr>
</tbody>
</table>

REVIEW QUESTIONS

1. Use examples to explain the difference between stock variables (stocks) and flow variables (flows) in economics.

2. Explain how (a) the government sector, (b) the foreign sector and (c) financial institutions fit into the circular flow of income and spending in the economy.

3. Describe the circular flow of income and spending in the economy.

4. List the main injections into the circular flow of income and spending, and the main leakages from this flow.

5. Discuss the main categories of spending in the economy.
Some words of wisdom

Many are the occasions on which I have participated in discussions about policies involving economic issues in which those participating have included economists of all shades of political opinion together with non-economists of all shades of political opinion. Almost whatever the subject of discussion, the outcome after a brief interval is predictable. The economists will be found aligned on one side of the subject – the free enterprisers along with the central planners, the Republicans along with the Democrats, libertarians and generally even socialists; the bulk of the group – academics, businessmen, lawyers, you name it, generally on the other.

MILTON FRIEDMAN
(Foreword to Allen, WR. 1981. The midnight economist. Chicago: The Playboy Press, xiii-xiv)

To a well-trained economist [his way of looking at things] seems so natural and obvious that he is likely to dismiss it as trivial. One of the important things I have learned in twenty years of intimate contact with non-economists of all kinds – civil servants, engineers, scientists and politicians – is that it is not an obvious procedure to other people, and is therefore far from trivial.

CHARLES HITCH

The more I studied economic science, the smaller appeared the knowledge which I had of it, in proportion to the knowledge that I needed.

ALFRED MARSHALL

You don’t need to have a PhD in economics to realise that the government has made a mess of South Africa’s economy.

TREVOR MANUEL
(Sunday Times, 15 September 1991)