Clever Economics

Grade 10

Learner’s Book

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<table>
<thead>
<tr>
<th>Topic</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Topic 1: Basic economic concepts</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>Topic 2: The basic economic problem</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Topic 3: Circular flow and quantitative elements</td>
<td>36</td>
</tr>
<tr>
<td>4</td>
<td>Topic 4: Business cycles</td>
<td>62</td>
</tr>
<tr>
<td>5</td>
<td>Topic 5: Dynamics of markets</td>
<td>82</td>
</tr>
<tr>
<td>6</td>
<td>Topic 6: Production possibility curves</td>
<td>112</td>
</tr>
<tr>
<td>7</td>
<td>Topic 7: The public sector</td>
<td>136</td>
</tr>
<tr>
<td>8</td>
<td>Topic 8: Growth, development and globalisation</td>
<td>153</td>
</tr>
<tr>
<td>9</td>
<td>Topic 9: South African economic growth and development</td>
<td>176</td>
</tr>
<tr>
<td>10</td>
<td>Topic 10: The history of money and banking</td>
<td>203</td>
</tr>
<tr>
<td>11</td>
<td>Topic 11: Population and labour force</td>
<td>220</td>
</tr>
<tr>
<td>12</td>
<td>Topic 12: Unemployment</td>
<td>240</td>
</tr>
<tr>
<td>13</td>
<td>Topic 13: Labour relations</td>
<td>259</td>
</tr>
<tr>
<td>14</td>
<td>Topic 14: Economic redress</td>
<td>277</td>
</tr>
<tr>
<td></td>
<td>Index</td>
<td>298</td>
</tr>
<tr>
<td></td>
<td>Bibliography</td>
<td>300</td>
</tr>
</tbody>
</table>
Topic 1: Basic economic concepts

In this topic you will...

<table>
<thead>
<tr>
<th>Topic</th>
<th>✔</th>
</tr>
</thead>
<tbody>
<tr>
<td>unpack the description and elements of economics</td>
<td></td>
</tr>
<tr>
<td>unpack the branches of economics</td>
<td></td>
</tr>
<tr>
<td>unpack the approaches of economics</td>
<td></td>
</tr>
<tr>
<td>study the methods of economics</td>
<td></td>
</tr>
<tr>
<td>learn about the setting of economics within the field</td>
<td></td>
</tr>
<tr>
<td>explore the subject’s relationships to other sciences and career opportunities</td>
<td>✔</td>
</tr>
</tbody>
</table>

Description and elements

Economics
The study of how individuals, businesses and other organisations choose to use scarce resources to try to achieve the maximum satisfaction of their unlimited needs and wants.

Important words
1.1 Description of economics

What is economics?
You may answer: “Economics is money. You earn money when you work. You can pay for things like movies with your money. You can also save your money.”

Your parents may answer: “Economics is discussed at the end of the news bulletin. It is about the exchange rate, inflation and interest rates. It is concerned with businesses, governments and their policies.”

Your teacher may answer: “The word ‘economics’ is derived from the Greek words ‘okios’ which means ‘house’ and ‘nemien’ which means ‘to manage’. So, economics studies how individuals manage their households.”

All of these answers are partially correct and show the wide-ranging nature of economics. A more complete description for economics is: Economics is the study of how individuals, businesses and other organisations choose to use scarce resources to try to achieve the maximum satisfaction for their unlimited needs and wants.
How is Thandi going to use her scarce resources?

1.2 The elements of economics

a) Scarce resources

In economics, factors of production are also called resources. Why do we say that resources are scarce? Imagine you are stranded on a small desert island with crabs and a few palm trees. The only natural resources available to you are the crabs that you can eat and the palm trees that you can use for shelter. The capital will be limited to any money in your pocket and the labour will be limited to you alone.

The resources are scarce because you have fewer of them than you would like. The resources are not enough to provide for your needs and wants. Do rich people face the same dilemma of scarce resources? Remember that scarcity is not the same as poverty. For example, even for rich people, nature only provides limited water and oil supplies. If you look at time as a resource, we all receive the same limited number of hours each day. Even rich people only have twenty-four hours a day to use.

So, scarce resources confront all individuals and organisations. Resources are scarce because they are insufficient to meet all of our needs and wants.
b) Unlimited needs and wants

Needs are the necessities that we need to survive. We constantly need food, water, clothing and shelter. For example, if you are thirsty, you need water. After you drink a glass of water, you are satisfied. After a few hours, you will be thirsty and need water again. This example illustrates that needs keep on arising.

Wants are the desires for goods and services that are not essential for survival. Children’s wants are unlimited. For example, children in a shop often want toys even if they have toys at home. Some will even throw a tantrum to persuade their parents to buy a new toy.

Adults’ wants are also unlimited. For example, if an adult buys a new motor car, his or her wants will be satisfied for only a while. After a few years, he or she will want a better model.

We all want better, newer and more goods and services all the time. Needs and wants are infinite. So, individuals have unlimited needs and wants.

1.3 The economic problem and choices

The economic problem can be described as the fact that people have unlimited needs and wants, but there are only scarce resources available to satisfy these needs and wants. In other words, people’s needs and wants are far more than the available resources.

For example, if you have R7 and you are standing in the shop, what will you buy? You may want to buy a cool drink, a chocolate, an ice cream and a packet of chips. You might end up with only a cool drink. The reason is that R7 is your scarce resource, but you have unlimited needs and wants and have to choose what will satisfy you the most.

Producers also have scarce resources that they must use to try to satisfy people’s unlimited needs and wants. Producers have to choose what to produce, how to produce it, and for whom they are producing it. For example, if they use wood to manufacture paper, they cannot use the same wood for manufacturing furniture.

People need to make choices all the time. We all have to make choices to use the scarce resources available to us to create maximum satisfaction.
Classroom activity 1

1. Complete the following statements by inserting the omitted words:
   a) We say that resources are ............... because there are not enough resources to meet all our needs and wants. (1)
   b) We say that needs and wants are ............... because they are infinite and keep arising. (1)
   c) Economics is derived from the Greek words .......... and .......... . (1)

2. Indicate whether the following statements are true or false:
   a) Something is scarce if the need for it is greater than its availability. (1)
   b) If you are rich, the problem of scarce resources will no longer exist. (1)
   c) If we use a resource for one purpose, it is no longer available for other purposes. (1)

3. Define economics. (2)

4. Debate in the class the different ways in which the government can use the scarce resources to try to satisfy South Africans’ unlimited needs and wants. (10)

Branches of economics

Macroeconomics
The study of the sum total of economic activity. It includes regional, national and international study fields.

Microeconomics
The study of the behaviour and decisions of individual participants in the economy. It includes how prices are determined.
Economics is divided into two main branches: macroeconomics and microeconomics. An easy way to remember the difference is to think about ‘macro’ referring to something big and ‘micro’ referring to something small.

‘Where the telescope ends, the microscope begins.’

The two branches are different because economists use different ‘tools’ when they look at different aspects of the economy:

- In macroeconomics, economists use the ‘telescope’ to research the broader field of economics.
- In microeconomics, economists use the ‘microscope’ to research in-depth aspects of economics.

2.1 Macroeconomics

**Macroeconomics** studies the sum total of economic activity. It includes regional, national and international study fields. So, macroeconomics studies aggregated or total indicators such as statistics, the total income of the nation, inflation and unemployment rates.

2.2 Microeconomics

**Microeconomics** studies the behaviour and decisions of the individuals who participate in the economy to allocate limited resources. It includes how prices, quantity and quality are determined. So, microeconomics studies the demand and supply of goods and services: how consumers decide which product to buy and how producers decide which product to sell.
2.3 Smaller branches

Economics is further divided into smaller branches, for example:

a) Monetary economics
Monetary economics is the study of money and banking. It focuses on how the quantity of money is controlled and regulated by the Reserve Bank.

b) Public-sector economics
Public-sector economics considers the functioning of the government and its role in the economy. It includes studies of government income, expenditure and policies.

c) International economics
International economics studies the trade and finances between countries around the world.

d) Development economics
Development economics deals with policies that help low-income countries to develop and achieve sustainable economical growth.

e) Environmental economics
Environmental economics studies the effect of economic decisions on the environment. It includes issues such as pollution, scarcity of natural resources and global warming.

Classroom activity 2

1. Identify the economics branch to which the following newspaper headlines refer:
   a) Unemployment rate up by 5%. (1)
   b) Government plans to decrease value added tax (VAT). (1)
   c) Sugar suppliers announce major losses after fire destroys sugar cane plantations. (1)
   d) Reserve Bank announces plans to lower interest rates. (1)
   e) Green Party concerned about effects of pollution on global warming. (1)
There are several theories about, and approaches to, the economy and how it works. The two approaches to the economy that contrast the most are the monetarist and the Keynesian approaches.

The **monetarist approach** sees the economy as follows:
- The free-market economy is inherently stable. It can achieve desired macroeconomic objectives effectively.
- External factors, outside the market system, cause deviations (variations) in the economy. External factors include inappropriate government policy or intervention, changes in the money supply, climate changes and shocks such as wars or a drastic increase in the price of oil. This approach advocates restricting government intervention to a minimum.

The **Keynesian approach** sees the economy as follows:
- The free-market economy is inherently unstable. It cannot achieve the desired macroeconomic objectives.
• Internal factors, inside the market system, cause deviations in the economy. Government intervention is needed to stabilise the negative market forces of the economy.

Classroom activity 3

Complete the following statements by inserting the omitted words:

a) The monetarist approach sees the economy as inherently .......... so governments must not intervene. (2)

b) The Keynesian approach sees the economy as inherently .......... so governments must intervene. (2)

4 Methods of economics

Important words

Positive statement
An objective fact or announcement.

Normative statement
A statement involving a subjective value judgement.

4.1 Positive and normative statements

It is important to be able to distinguish between facts and value statements when you evaluate what is being said in economics. There are two types of statements you need to know about when you study economics: positive statements and normative statements.

a) Positive statements
A positive statement is an objective fact or announcement.
Positive statements are concerned with what was in the past, what is today or what will be in the future. You can test positive statements. They are either right or wrong. For example, the statement “The grass is purple” is false, but it is still a positive statement. This is because it does not include words like ‘should be’ or ‘ought to’. It just states something as that thing is observed.

An example of a positive statement about the economy is: “The rand appreciated 2% against the dollar.”

b) **Normative statements**

A **normative statement** involves a subjective value judgement.

Normative statements are concerned with value judgements, for example whether something is economically fair or what the economy ought to be like. You can debate a normative statement. For example, the statement “The grass ought to be green to be beautiful” is a normative statement, because it makes a judgement about what is seen as good and desirable.

An example of a normative statement about the economy is: “The rand ought to appreciate more than 2% against the dollar to save the importers of oil.”

Economics deals with people, their hopes and their futures. Economic policies always include judgements, because they give value to certain aspects of the economy.

### 4.2 The scientific method

Scientists use a systematic approach to uncover regular patterns by looking at actual past events.

Economics is a science because it uses scientific methods to uncover patterns. Economists use these patterns to explain what happened in the economy in the past, and to predict what will happen in the future.

For example, economists will study the price of bread for the past ten years. They will try uncover patterns. They will then try explain why the price of bread increased more in certain years than in other years.
They will use this information to predict what will happen to the price of bread in the future.

The scientific method includes the following steps:
- Observe what was, or is, happening. Ask questions about patterns that you observed.
- Develop a hypothesis, which is a possible answer for the questions asked.
- Plan and conduct an experiment, or research. Collect the necessary data from the results. Interpret the collected data.
- Provide an explanation of the results, and a conclusion.

4.3 Difficulties faced by the social sciences

Economics forms part of social sciences because it studies human behaviour. Other social sciences include social psychology, sociology and political sciences.

One difficulty faced by the social sciences is that almost everyone is personally concerned with the subject matter. Economics and economic policies are heavily debated and can be loaded with normative statements.

Another challenge facing social sciences is that human nature is not always predictable. People live in a constantly-changing environment that influences their feelings, values and actions. In contrast, tests in the natural sciences can be performed in controlled laboratories. For this reason, when laws are formulated in economics, they are conditional laws. For example, in microeconomics you will learn that demand increases if prices decrease. But this may only be true if all other things remain the same.
The last difficulty is that measurement is far less precise in economics than in the natural sciences. In macroeconomics, for example, economists have to calculate the total national income and expenditure of a country. It is impossible to account for every cent that is earned and spent, because many small transactions are never even recorded.

In conclusion, economists need to understand symbols, interpret statistics and be able to work with mathematical graphs and formulae. They need to understand all aspects of human nature and be able to explain human behaviour in words. They need to think in abstract and concrete terms simultaneously.

4.4 The use of models

Can you recall playing with toy cars when you were little? The toy car was a simplified model of a real car. The model had round wheels that could turn and a body with the shape of a real motor car. The model could be used to show certain cause-and-effect relationships. For example, if the wheels turned, the car moved.

However, the model didn’t have all of the details of a real car. A model focuses on only a few aspects of something at a time. So, a model is a simplified illustration of reality, with the purpose of reducing complex functions that are difficult to understand, to basic concepts and relationships that are easy to understand. Models may be in the form of words, illustrations, diagrams, graphs or equations.

In economics, we frequently use models to understand how the economy works. The circular flow diagram, which we will look at in Topic 3, is a good example of a model.

Classroom activity 4

1. Indicate whether the following are positive or normative statements:
   a) You are a Grade 10 learner. (1)
   b) South African taxes ought to be lower. (1)
We are used to thinking of a subject as being separate and isolated from other subjects. You have different textbooks and separate periods for every subject. However, there are not really clear divisions separating subjects.

Economics is part of the learning field of business, trade, management and service.

Economics has areas in common with the following subjects: Accounting, Business Studies, Commercial Law and Mathematics of Finance. The focus of these other subjects is as follows:

<table>
<thead>
<tr>
<th>Subject</th>
<th>Focus</th>
</tr>
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<tbody>
<tr>
<td>Accounting</td>
<td>Accounting involves recording financial transactions and interpreting their results.</td>
</tr>
<tr>
<td>Business Studies</td>
<td>Business Studies focuses on contemporary businesses and the role-players, legislation, issues and challenges that influence them.</td>
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</table>
Commercial Law is also known as business law. It deals with the legal aspects of commercial transactions, including corporate contracts and hiring practices.

Mathematics of Finance is applied mathematics for financial markets. It focuses on elements such as interest rates, values and payments.

Classroom activity 5

Indicate whether the following statements are true or false:

a) In economics, you will work with budgets. (1)
b) A subject has nothing in common with other subjects. (1)
c) Commercial Law teaches the legal aspects of running a business. (1)
d) Mathematics of Finance is about understanding businesses. (1)
e) A learning field is a study field of subjects that share knowledge. (1)

Career

The professions, jobs and positions you hold during your working life. It includes all life experiences, such as education, training, paid work and unpaid work.

Career paths

Paths that show workers how their futures could look in the working environment. They provide a road map for reaching your career goals.
A **career** does not only refer to a job. It involves the professions, jobs and positions you hold during your working life. It includes all life experiences, such as education, training, paid work and unpaid work.

### 6.1 Factors to consider when choosing a career

**a) Financial implications**

How important is money and financial wealth to you? For some people, the size of the salary is the most important consideration. High-paying jobs include auditors, actuaries, advocates, engineers, doctors and businessmen.

**b) Risk**

Are you willing to take a risk? Is it important for your work to be a challenge? Do you want to be independent? If you answered yes to these questions, do some research on starting your own business and working in a creative working environment. If you do not want to take risks but want to enjoy the security of a fixed monthly salary, then you might want to work for a well-established company or bank.

**c) Interests and skills**

Determine your interests. What do you like to do? What do you want to do for the rest of your life? Which activity do you like so much that you lose track of time doing it?

Know your own strengths and weaknesses. How good are your numerical skills, your communication and your mechanical and practical skills? Choose a career that complements your interests and your skills. Examine the different possibilities in the various fields.

### 6.2 Career path

**Career paths** show workers how their futures could look in the working environment and provide a road map for how to get there. A career path can be horizontal (moving to a position on the same level) or vertical (moving to a position on a higher level). Every career path is unique. In most cases, a career path has three elements: studies, training and employment.

You already started on your career path when you chose your subjects in Grade 10. In the ever-changing technological environment, it is
important to be a lifelong learner. Learning does not only refer to formal school education, but also to every opportunity that you use to broaden your skills and knowledge.

6.3 Relationships with other sciences and career opportunities

Here are some of the career opportunities you can consider if you take Economics in conjunction with other subjects.

a) Economics, Statistics and Mathematics

An economist serves as a consultant to businesses, individuals and government departments. An economist can also be a journalist.

A statistician compiles and processes data, indentifying patterns and making predictions. Statisticians can work for big companies such as the South African Reserve Bank or Statistics South Africa.

b) Economics and Information Technology

In the field of economics, computers are widely used. Careers in the IT field vary according to the level of complexity and the variety of skills required. These include programming, network management, web design and data capturing.

c) Economics and Law

A legal adviser provides legal advice and services to a company and its employees.

d) Economics and Politics

A political scientist studies different aspects of political behaviour, such as the origins, operations and interrelationships of political institutions. This knowledge is applied to formulate and develop political theories and policies. A political

What career will you choose?
scientist can work for research units attached to universities, market research companies or government departments.

e) **Economics, Sociology and Geography**
A sociologist studies human relationships, how people and groups behave towards each other, as well as socio-economic developments and changes. Sociologists can work in a variety of fields, including social psychology, clinical sociology, political sociology and economic sociology.

Geography studies different populations and their habitats. Population statistics are used both in Geography and Economics to draw certain conclusions. Therefore there is an overlap between these two subject areas.

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### Classroom activity 6

1. In class, discuss the differences between a job and a career. (4)
2. Discuss what being a lifelong learner means. (4)
3. How will taking Mathematics at school help you if you want to become an economist? (2)

### Extra activities

**Lesson 1: Description and elements**

1. List ten of your own needs and wants.
2. a) Evaluate which of these needs and wants are the most important. Rank your needs and wants with the most important one first and the least important one last. (2)
b) Assume you receive R200 as a scarce resource. What will you do with it? (2)
c) Explain why you need to make a choice about what to do with your R200, and why you cannot do everything on your list in Question a. (2)

Lesson 2: Branches of economics

1. Get hold of the financial news sections from a few newspapers.
2. a) Write down the different branches of the economy on a poster.
   b) Cut out the headlines from the financial news sections. Group them according to the branches of economics and paste them under the correct branches. (10)

Lesson 3: Approaches of economics

1. In groups, choose one of the following approaches of economics to research, and share your findings with the class: The approach that the capitalist, socialist or communist governments follow when they approach the economy. (6)
2. Conclude by discussing which approach the government of South Africa follows. (6)

Lesson 4: Methods of economics

1. Differentiate between positive and normative statements. (4)
2. Prepare a spider diagram to summarise the difficulties that the social sciences face. (10)

Lesson 5: Economics within the field

Define the other learning areas aside from the business, trade, management and service learning area. (12)
Lesson 6: Relationship with other sciences and career opportunities

1. Identify any career related to economics that interests you.
2. a) Find out more about what you will need to study to do this job.
   b) Find out about further career opportunities that exist in the field of economics.
Topic 2: The basic economic problem

<table>
<thead>
<tr>
<th>In this topic you will...</th>
</tr>
</thead>
<tbody>
<tr>
<td>identify and explain absolute and relative scarcity</td>
</tr>
<tr>
<td>differentiate between economic and free goods</td>
</tr>
<tr>
<td>learn about alternatives, choices and opportunity cost</td>
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<tr>
<td>look at the basic process of production</td>
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<tr>
<td>look at the basic processes of exchange and consumption</td>
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<tr>
<td>investigate the promotion or violation of human rights and the environment</td>
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Absolute and relative scarcity

Important words

Absolute scarcity
When there is nothing available of a specific good or service.

Relative scarcity
When a good or service is available, but you do not have the resources to acquire it.
You already know that resources are scarce because there are insufficient resources to meet all your needs and wants. Let’s look now at the difference between absolute and relative scarcity.

1.1 Absolute scarcity

When we say something is absolutely scarce, there is nothing available of that specific good or service.

If everything in a shop is sold out, the goods will be absolutely scarce even if you have lots of money in your pocket.

In Grade 9, you learned about the four factors of production (resources):

- **Capital** – the financial and capital goods that are used to produce other goods and services. Capital goods consist of man-made resources like buildings, machinery and vehicles. Financial capital consists of the money used to buy capital goods.

- **Labour** – the human resource. This refers to all human effort employed for remuneration.

- **Natural resources** – everything that nature provides. Examples are forestry, fishery, minerals and plant life.

- **Entrepreneurship** – the talent to begin a sustainable business by combining the other factors of production.

Any of these resources can be absolutely scarce, and therefore unavailable. Absolutely scarce resources mean that you will not be able to produce goods or services, or that you will be limited in the production of goods and services.
1.2 Relative scarcity

When we say that a good or service is relatively scarce, we mean that it is available, but we do not have the resources to get hold of it.

For example, you could be surrounded by the most beautiful brand-name shoes, but if you do not have money to buy them, the shoes are relatively scarce.

The following example of a gold mine explains relative scarcity of the factors of production. There can be gold under the surface of the earth, but if you do not have capital, you will not be able to extract the gold. So, we say that the gold is relatively scarce.

Classroom activity 1

Read the following scenario and answer the questions:

The Rich Country that is Poor

In Africa, there is a large country that is one of the poorest countries in the world. The irony is that this country has platinum and uranium deposits which are unexcavated, because the country has a scarcity of skilled labour and capital. Most of the country is covered by a desert.

a) Does the fact that there is no water available indicate absolute or relative scarcity? (1)
b) With no water available, can the country produce crops? (2)
c) Does the fact that there are mineral deposits, which cannot be excavated due to other scarce factors of production, indicate absolute or relative scarcity? (1)
d) Discuss briefly how absolute and relative scarcity affects the economy of developing countries. (8)
Scarcity is such a central element of economics that we use scarcity to classify goods as economic or free goods.

Let’s look more closely at the difference between economic and free goods.

### 2.1 Economic goods
Economic goods are scarce because they are produced from a scarce resource.

Economic goods have utility because they are used to satisfy needs or wants. Economic goods have exchange value and can be bought and sold. They also indicate how wealthy a person is. The more economic goods you have in your possession, the wealthier you are. Examples of economic goods are food, clothing, houses and equipment.

### 2.2 Free goods
Some gifts that nature provides are plentiful. There are so many of these goods available to everybody that we call them ‘free’.

Free goods have utility, but they have no exchange value. For example, the light of the sun is useful, but you cannot sell a piece...
of sunlight to your neighbour. So, free goods are all the goods that you cannot sell. Free goods do not indicate how wealthy a person is. Examples of free goods are sunshine, the air we breathe, sand in the desert and ice at the North and South Pole.

Classroom activity 2

Indicate whether the following are economic or free goods:

a) A cell phone. (2)
b) Ice that is packed and sold in a shop. (2)
c) Ice that lies on a driveway in Canada. (2)
d) Sand in the middle of a desert. (2)
e) Building sand that has been offloaded. (2)
f) Mineral water that has been bottled. (2)

3.1 Alternatives

Our lives have many dimensions, so alternatives are important. We know that people have unlimited needs and wants. For every want, an alternate want also exists. For example, you may want to go to the movies this afternoon, but you also may want to go swimming.

You can use one resource for alternative means. For example, you can drink a glass of water, or you can wash your hands with the water.
Producers of goods can also use resources for alternative means. For example, they can use wood to manufacture paper or to manufacture furniture.

### 3.2 Choices

Your day consists of millions of choices. For example, you choose what to wear, what to eat, when to go to school and whether you are going to do your homework.

Although you have many alternatives when you make these choices, the dilemma is that you can use a resource for only one purpose. In other words, you have to choose one alternative from the possible alternatives that will give you the maximum satisfaction, or the most happiness.

*When you choose something, you have to give up another choice.*

### 3.3 Opportunity cost

The moment you make a choice, you give up something else. The opportunity cost of a choice is the value of the opportunity you gave up when you made your choice. It is the next-best alternative that you did not choose.

In our multi-dimensional lives, we cannot have everything we want, or do everything we would like to do. We always have to give
something up. For example, you decide that you want to go swimming this afternoon because it will give you the most satisfaction. The opportunity cost is going to the movies, because that is what you had to give up to go swimming.

Another example is if a producer decided to manufacture paper with its wood. The opportunity cost is manufacturing furniture, because the producer will not be able to manufacture the furniture as well.

Classroom activity 3

1. Give possible alternative uses for R2 million available for the government to spend. (6)
2. How do you ensure that you make a good choice? (4)
3. Define opportunity cost. (2)

Economics centres around three basic processes, which are production (making a product), exchange (trading the product) and consumption (using the product). In this section, we look at production.

4.1 Production

The production process begins at the primary sector, continues at the secondary sector and ends at the tertiary sector. The businesses in the three sectors work together so that they can provide for people’s needs and wants.
Each business in each sector adds utility and value to the goods. For example, a wheat plant is of no use to most people. In the primary sector, the wheat is harvested and taken to the manufacturer in the secondary sector. The manufacturer transforms the wheat into bread. The bread is then made available to the consumer in the tertiary sector.

The following activities take place in the different sectors:

<table>
<thead>
<tr>
<th>Primary sector</th>
<th>Secondary sector</th>
<th>Tertiary sector</th>
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<tbody>
<tr>
<td>Raw materials or natural resources are extracted, cultivated and harvested.</td>
<td>Raw materials are manufactured and processed into a form fit for human consumption.</td>
<td>Services are rendered to make the product available to the consumer.</td>
</tr>
<tr>
<td>Industries include: • Mining • Forestry • Fishing • Farming</td>
<td>Industries include: • Textile • Food • Furniture • Chemical • Iron and steel</td>
<td>Services include: • Wholesale and retail • Transport • Storage • Financial • Medical • General • Public</td>
</tr>
</tbody>
</table>

Let’s look now at the difference between capital and consumer goods.

4.2 Capital goods
Capital goods are goods that individuals do not want directly. Capital goods are used in the production process to produce other goods and services. Capital goods include buildings, machinery and vehicles.

4.3 Consumer goods
Consumer goods are directly consumed (used) to satisfy people’s needs and wants. Consumer goods are classified according to their durability, or how long they last, as follows:
- **Non-durable consumer goods** – These goods can be used only once. Examples include food and drinks.

- **Semi-durable consumer goods** – These goods can be used more than once, but they last for only a limited period. Examples include clothing, shoes and linen.

- **Durable consumer goods** – These consumer goods can be used repeatedly and last the longest. Examples include furniture, refrigerators, televisions and washing machines.

---

**Classroom activity 4**

Match the correct description from Column B to the word in Column A in your workbook.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary sector</td>
<td>These goods are used in the production process to produce other goods and services.</td>
</tr>
<tr>
<td>Secondary sector</td>
<td>Services are rendered to make the product available to the consumer.</td>
</tr>
<tr>
<td>Tertiary sector</td>
<td>These consumer goods can be used repeatedly and last the longest.</td>
</tr>
<tr>
<td>Production</td>
<td>These goods are directly consumed (used) to satisfy people’s needs and wants.</td>
</tr>
<tr>
<td>Consumer goods</td>
<td>Raw materials or natural resources are extracted, cultivated and harvested.</td>
</tr>
<tr>
<td>Capital goods</td>
<td>Raw materials are manufactured and processed into a form fit for human consumption.</td>
</tr>
<tr>
<td>Non-durable goods</td>
<td>These goods can be used only once.</td>
</tr>
</tbody>
</table>
5.1 Specialisation and exchange

Long ago, households were self-sufficient and produced everything they needed themselves. This is no longer the case in the modern economy. One of the most prominent characteristics of the modern economy is specialisation. Specialisation is when businesses and individuals each specialise in a particular field in which they are competent.

- In *product specialisation*, a producer specialises in only one type of product. For example, one producer produces only clothing and another producer produces only bread.
- In *labour specialisation*, a person has a specific job in a specific field. For example, one person is a doctor and another is a farmer.

Because of specialisation, people no longer produce what they want to consume themselves. Specialisation has made an exchange mechanism necessary.
5.2 Exchange and markets

Exchange is the trading of products (goods, services and factors of production) for money. Exchange involves giving and receiving.

The exchange process takes place in markets. A market is a place where buyers and sellers meet, prices are fixed and quantities bought or sold are determined.

5.3 Consumption

Consumption is the last of the three basic processes in economics. Consumption is the use of goods and services that are eventually used up, or eliminated. For example, you eat the bread you buy, your shoes wear out and your television set will eventually break.

This elimination leads to the demand for new goods. So, the process of production, exchange and consumption is never-ending.

Classroom activity 5

1. Choose the correct alternative in brackets:
   a) The most prominent characteristic of the modern economy is (self-sufficiency/specialisation). (1)
   b) The exchange process takes place in (markets/the Internet). (1)
   c) Consumption refers to the goods and services being (created/used). (1)

2. Do you think that the goods and services produced in South Africa are consumed and divided equally among the country’s people? Discuss. (10)
6.1 Human rights

Human rights are the rights that every living person should have. Equal opportunities mean that nobody may discriminate against another person. The right to access to food and water, healthcare and social security makes the government responsible for caring for the people of South Africa.

The income gap in South Africa is large, with many people still living in poverty.
a) Violation of human rights
Adam Smith, an economist, once said, “No society can surely be flourishing and happy, of which by far the greater part of the numbers are poor and miserable.” In South Africa there are many poor people.

According to Statistics South Africa, the proportion of the population living under the poverty line, which is R322 per person per month, decreased from 45% in 2005 to 39% in 2008. However, 20 million citizens still live in poverty.

Despite the decrease in the number of poor South Africans between 2005 and 2008, the inequality gap in income-distribution widened. The Gini coefficient is a statistical measure that is used to measure the inequality of distribution. In economics it is used to determine how income is distributed between the very rich and extremely poor. In other words, it measures how big the gap is between people who earn the most money and people who earn the least amount of money in a country. The Gini coefficient rose from 0.66 in 2007 to 0.679 in 2009. (The Gini coefficient has a maximum value of 1, which represents perfect unequal income distribution and a minimum value of 0, which represents perfect equal distribution of income.)

b) Promotion of human rights
The South African government has implemented laws to promote human rights, such as the:

- **Broad-Based Black Economic Empowerment Act (No. 53 of 2003)** – BBBEE was implemented to promote ownership and management in existing and new businesses by previously-disadvantaged groups.
- **Employment Equity Act (No. 55 of 1998)** – This act ensures that there are equal opportunities for all people in the workplace. There may be no discrimination based upon race, gender or physical ability.

6.2 The environment
The environment refers to the physical environment and circumstances that affect people’s lives. It includes land, water (rivers, lakes, oceans) and the atmosphere. Environmental sustainability is the environment’s ability to function at an optimal and healthy level in spite of the economic activities happening in it.
a) Violation of the environment
Economic activities can violate the natural environment in two ways: through the depletion of natural resources and through the destruction of the natural environment by pollution.

b) Promotion of the environment
The National Environment Act outlines the principles of environmental promotion and protection. The following are examples of other steps that the government has taken to protect the environment:
- Consumers and producers are charged for the waste that they produce and dump in the environment. For example, emission charges are levied on industries and vehicle owners for gas waste. The new CO₂ emissions tax on new passenger vehicles was implemented on 1 September 2010. New passenger vehicles that emit over 120 g/km will have to pay this tax.
- Green taxes are charged on the production of products that are not biodegradable, for example tyres.

Classroom activity 6
1. Define the terms ‘human rights’ and ‘environment’. (4)
2. Develop your own questionnaire that you could use to conduct an informal survey to measure if businesses are violating or promoting human rights and the environment. (Read through the Bill of Rights to get ideas for questions.) (10)

Extra activities

Lesson 1: Absolute and relative scarcity
1. Define absolute and relative scarcity. (4)
2. Make your own list of five absolutely scarce, and five relatively scarce, products. (20)
Lesson 2: Economic and free goods

1. Define economic and free goods. (4)
2. Give examples of different situations to explain how it is possible that water can be both an economic good and a free good. (6)

Lesson 3: Alternatives, choices and opportunity costs

1. Summarise the process of alternatives, choices and opportunity costs using flow diagrams. (6)
2. Refer to the extra activity for Lesson 1, Topic 1 that required you to list your needs and wants. Identify which were your alternatives and your choices, and identify the opportunity costs related to these choices. (6)

Lesson 4: Production

1. Describe the process that wood follows through the primary, secondary and tertiary sectors. Explain what happens to the wood in each sector. (6)
2. Draw this table in your workbook. Classify the following goods by making a tick in the appropriate block: (11)

<table>
<thead>
<tr>
<th></th>
<th>Capital goods</th>
<th>Non-durable consumer goods</th>
<th>Semi-durable consumer goods</th>
<th>Durable consumer goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell phone</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Apples</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saws</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bed</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Lesson 5: Exchange and consumption

1. Draw a table with two columns. Write the following words in one column and a definition for each one in the other column:
   - Product specialisation (2)
   - Labour specialisation (2)
   - Exchange (2)
   - Markets (2)
   - Consumption (2)

2. Illustrate the basic economic processes by using a flow diagram. (6)

Lesson 6: Human rights and the environment

1. Obtain a copy of the Bill of Rights. Identify at least six rights that are also important in economics. (6)

2. Summarise the acts that this topic discussed under promotion of human rights and protection of the environment. Indicate which problems these acts address. (6)
Topic 3: Circular flow and quantitative elements

In this topic you will...

| Study the circular flow diagram and its interactions | ✓ |
| Discuss the participants of the circular flow | ✓ |
| Reflect on the markets and the flows in the economy | ✓ |
| Discuss the leakages and injections in the economy | ✓ |
| Derive, define and discuss the importance of GDP | ✓ |
| Derive, define and discuss the importance of GNI | ✓ |

Circular flow diagram and interactions

Important words

Circular flow diagram
A diagram showing the flow of goods, services, factors of production, income and expenditure, and the relationship between the participants in the economy.
Macroeconomics attempts to understand how the total economy functions. In this section, we stand back and look through the ‘telescope’ at the South African economy. We look at the circular flow of the economy and the interactions that take place inside it. With this information, we build an economic model called the **circular flow diagram** and explore it by expanding it step by step.

### 1.1 The circular flow diagram between households and business enterprises

Figure 3.1 shows the circular flow between households and business enterprises:
- blocks indicate the participants (also called sectors)
- circles indicate the markets
- solid arrows indicate the flow of goods, services and factors of production
- dotted arrows indicate the money flow.

![Circular flow diagram](image)

**Figure 3.1: Circular flow between households and business enterprises**
To understand Figure 3.1, start at the households and follow the flow to the factor market. Think about your parents who leave the house to go to work and receive a salary from a business enterprise. Households offer their factors of production (capital, labour, natural resources and entrepreneurship) for sale on the factor market. This flow is clockwise on the outside, as you can see from the solid arrow. The business enterprises purchase these factors of production on the factor market and pay for them. The households receive this payment in the form of income (interest, wages, rent, profit). This flow is anti-clockwise on the inside, as you can see from the dotted arrow.

Now look at the business enterprises. The business is the place where products are made and sold. Business enterprises combine the factors of production to produce goods and services. These goods and services are for sale on the product market where households purchase them. This flow is clockwise on the outside, as you can see from the solid arrow. Households pay for the goods and services. This payment is an income for the business enterprises. This flow is anti-clockwise on the inside, as you can see from the dotted arrow.

### 1.2 The government introduced to the circular flow diagram

The government also forms part of the circular flow. In Figure 3.2, you can see two different flows – between the government and households and between the government and business enterprises.

![Figure 3.2: The government, business enterprises and households](image)

The government receives income in the form of taxes paid by households and business enterprises. The government provides households and business enterprises with public goods, such as infrastructure (roads, bridges and dams), and also with public services, such as education, health and security.
1.3 The foreign sector introduced to the circular flow diagram

The circular flow diagram would be incomplete if it only included regional households, business enterprises and the government as participants in the economy. This is because the international market also has a role to play in the economy. South Africa has an open economy because it trades with other countries and involves the foreign sector. (A closed economy excludes the foreign sector and exists independently.)

Through imports and exports, the foreign sector forms part of the open-economy circular flow diagram in Figure 3.3. When South Africa exports, goods and services leave the country, but payment for these goods and services flows into the country. When South Africa imports, the goods and services are added to the economy, but payment for these goods and services flows out of the country. These transactions take place through the product market.
The foreign sector also trades on the factor market, for example the export and import of raw materials, the emigration and immigration of workers and international capital investments.

1.4 The interaction

Figure 3.3 shows the cycle of goods and money that flow through the entire economy. It also shows the interaction and interdependence of the various sectors.

The four sectors, namely households, business enterprises, the government and the foreign sector, are joined through the product and factor markets. It is important to note that all economic activities are linked and that all the sectors influence one another and the entire economy. For example, if a person from a household loses his or her job, he or she will not receive an income. The business enterprises will then receive less income, because the person cannot buy their products. The government will also receive less income, because the person will not have to pay taxes.

Classroom activity 1

1. Choose one word or a phrase from the box to complete the following sentences:

   interaction, taxes, macro, factor market, foreign sector, goods and services, factors of production, exports

a) The circular flow diagram is part of ........ economics. (1)
b) The four sectors of the open economy are households, business enterprises, the government and ............ . (1)
c) The transactions take place in the ................. and the product market. (1)
d) Households sell their ........ on the factor market and receive income for it. (1)
e) Business enterprises sell their ........ on the product market and receive payment for it. (1)
f) The government provides public goods and services to households and business enterprises that pay \ldots\ldots\text{ to the government.} 

(1)

g) The foreign sector is part of the circular flow diagram through imports and \ldots\ldots\ldots .

(1)

h) \ldots\ldots\text{ takes place among all four sectors and indicates the sectors’ interdependence.}

(1)

2. Explain how business enterprises and households interact.

(4)

3. Assume that a new job has been created. Indicate the effect that it will have on the other participants in the economy.

(8)

2. The participants

Important words

**Household**
An individual or a group, consisting of a family or any group of people, who live together, have a joint income and make decisions together.

**Business enterprises**
Enterprises that combine and transform factors of production to produce goods and services.

**Government**
Local, provincial and national government, as well as state-owned enterprises.

**Foreign sector**
All the international transactions that take place over political borders.

You already know that the participants in the economy all contribute towards total production, they all earn an income and they all spend their incomes. We look now at the primary functions and motives of each of the participants.
2.1 Households/consumers

A household can consist of an individual, a family or any group of people that live together, have a joint income and take decisions together. Households are also referred to as consumers.

a) Primary function
Households are the basic decision-making sector in the economy because they determine, mainly, what should be produced. People within a household have unlimited needs and wants. They consume goods and services to try to satisfy their needs and wants. So, they determine what producers should be producing.

It is easy to reason that households are the owners of labour and entrepreneurship. Households are actually the owners of all four factors of production, namely capital, labour, natural resources and entrepreneurship.

b) Motives
People always want more and better economic circumstances for themselves. Households want to maximise their prosperity. So, households sell their factors of production on the factor market to earn an income.

The income that households receive is very important. They can use it to buy goods and services to satisfy their needs. They can also use it to increase their prosperity levels.

2.2 Business enterprises

Business enterprises combine and transform factors of production to produce goods and services.
a) Primary function
Business enterprises are the basic productive sector in the economy. They buy factors of production on the factor market, and after production they sell the final goods and services on the product market.

b) Motives
The motive of business enterprises is to create maximum profit. Profit is the difference between income and expenses. So, business enterprises strive to keep their income as high as possible and their expenses as low as possible.

2.3 The government
The government consists of the local, provincial and national government, as well as state-owned enterprises. We also use the term ‘public sector’ when we refer to the government.

a) Primary function
The primary function of the government is to:

• supply public goods that are not provided sufficiently by the private sector
• take care of public resources
• achieve economic goals.

The government has various economic goals that it wants to achieve, and has different ways of addressing them. The five most important economic goals are:

<table>
<thead>
<tr>
<th>Economic goals</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic growth</td>
<td>Economic growth is an increase in the real gross domestic product (GDP). For an economy to grow, production of goods and services must exceed the growth rate of the population.</td>
</tr>
<tr>
<td><strong>Full employment</strong></td>
<td>Full employment means that all persons who want to work and are looking for work can find employment or work for themselves. The promotion of labour-intensive businesses is important for creating jobs. The greater demand and consumption of goods and services increase production, which in turn increases job opportunities.</td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Reasonable division of income (economic equity)</strong></td>
<td>Reasonable division of income is achieved through redistribution of income and wealth. To promote economic equity, the government charges progressive taxation (higher income groups pay higher taxation) and also finances social services like education and primary health care.</td>
</tr>
<tr>
<td><strong>Price stability (low inflation)</strong></td>
<td>The inflation rate must be between 3% and 6% for markets to function optimally.</td>
</tr>
<tr>
<td><strong>Balance of payment and exchange rate stability</strong></td>
<td>Shortages in the balance of payment and an unstable exchange rate cause uncertainty and further economic problems. The government must ensure stability to ensure that the country’s international trade can flourish.</td>
</tr>
</tbody>
</table>

**b) Motives**
The motive of the government is to serve the larger community. The government aims to meet South Africans’ basic needs. It also provides the framework within which the economy operates.

The government pursues its objectives by spending money on goods and services and by raising taxes.

**2.4 Foreign sector**
Have you ever noticed the small print on the products that you use every day? On your breakfast cereal it may say ‘Manufactured in the Philippines’. On your shaving cream it may say ‘Made in Germany’. On your face cream it may say ‘Made in Poland’. Without always being aware of it, we are surrounded by products from other countries.
The foreign sector refers to all the international transactions that take place over political borders. It is all the transactions that take place between different countries.

a) Primary function
We know that almost no country can exist in isolation because few, if any, are totally self-supporting. The foreign sector exists so that countries can trade with each other.

b) Motives
Countries will trade because they have a shortage of natural resources or goods and services that they cannot provide themselves. So, they import these goods and services.

Countries also trade because they have a surplus of natural resources or goods and services that they have produced. So, they export these goods and services. The flows between South Africa and the rest of the world are summarised in the balance of payments account.

Classroom activity 2

1. Why can we say that households are owners of all four factors of production? Provide examples. (8)
2. Discuss the motives of business enterprises. (4)
3. List and discuss the five economic goals of the government. (10)
4. South Africa exports gold and imports oil. Identify two reasons why South Africa has an open economy and includes the foreign sector. (6)
3.1 Factor and product markets

You have already learnt that the exchange process takes place in markets. You know that a market is a place where buyers and sellers meet, prices are decided upon and quantities bought or sold are determined.

There are many different markets in which transactions take place every day.

As you saw in the circular flow diagram in Figure 3.1 on page 37, all of these different markets are grouped under the factor market and the product market. Remember, these were the markets indicated by circles.

a) Factor market
  - Factors of production are sold on the factor market. Each factor of production receives a different type income or remuneration:
capital receives interest; labour receives wages; natural resources receive rent; and entrepreneurship receives profit.

- Households present their factors of production to business enterprises on the factor market and receive an income.
- The government purchases factors of production (mostly labour) on the factor market and pays salaries.
- The foreign sector is responsible for imports and exports of raw materials; is liable for the emigration and immigration of workers; and channels international capital investments on the factor market.

b) Product market

- Goods and services are sold on the **product market**.
- Business enterprises sell their goods and services on the product market and receive the spending from the households in return.
- The government provides public goods and services to households and businesses on the product market.
- The foreign sector imports and exports final products on the product market.

3.2 Real and money flows

When you buy a product, you receive the product with one hand and you pay with the other. So, each transaction is an exchange process with two parts. This principle also applies to the circular flow.

The circular flow diagram in Figure 3.1 shows the two flows. On the outside of the diagram, clockwise, is the real flow; on the inside of the diagram, anti-clockwise, is the money flow. These flows happen
simultaneously, but in opposite directions. So, the value of the real flow will be equal to the value of the money flow.

**a) Real flow**

The **real flow** is the movement of goods, services and factors of production among the participants in the economy. Households sell their factors of production to business enterprises. Business enterprises combine and transform these factors of production into goods and services. They then sell these goods and services to households.

**b) Money flow**

The **money flow** is the movement of money in the form of income and expenditure among the participants in the economy. Business enterprises purchase the factors of production, and this is the income of the households. Households spend this income to purchase goods and services, and this is the income of the business enterprises.

The money flow also follows another route through financial institutions. These institutions consist of banks, insurance companies and pension fund investors. They serve as links between the participants that have surplus funds and those that need funds.

Households and business enterprises do not always spend all their income. Households and business enterprises then deposit this money (surplus funds) into the financial institutions. This is called savings.

Business enterprises that have a lack of money (deficit funds), and that want to expand, can borrow money from the financial institutions. These are called loans. Business enterprises use the borrowed money to buy capital goods (property, machinery and equipment). This is called investment.
So, financial institutions make the savings of some households, businesses and the government available as loans to others. Financial institutions ensure that savings can be channelled back into the circular flow.

### 3.3 Flows through the markets

The flow of money, goods, services and factors of production takes place through the factor and product markets.

The three most important flow elements in the economy are the:
- income flow
- production flow
- expenditure flow.

This is shown in Figure 3.4.

![Figure 3.4: Production, income and expenditure flow](image)

*Income* is earned when factors of production are sold. Through *production*, goods and services are manufactured. Through *expenditure*, goods and services are purchased. (This is financed by the income and the sequence starts again.)

So, there is a continuous flow of production, income and expenditure through the economy. Although all three flows happen at the same time, the one is financed by the other. It is important to note that the South African Reserve Bank (SARB) measures the flows quarterly. The three flows must be equal:

\[
\text{income flow} = \text{production flow} = \text{expenditure flow}
\]
Classroom activity 3

1. Indicate whether the following statements are true (T) or false (F):
   a) The money and real flows happen simultaneously and in the same direction. (1)
   b) The real flow is the movement of goods, services and factors of production among the participants in the economy. (1)
   c) The money flow is the movement of money from the business enterprises to households, and back to the business enterprises. (1)
   d) Business enterprises that need money and want to expand will have surplus funds and save money in the financial institutions. (1)
   e) The expenditure on capital goods with borrowed money is called investments. (1)

2. Indicate whether the following activities will flow through the factor or the product market:
   a) A shop sells bread to a consumer. (2)
   b) A business enterprise pays salaries to its workers. (2)
   c) A consumer buys a new television set. (2)
   d) A business enterprise pays for a natural resource, wood, that it is going to transform in the production process. (2)

Leakages and injections

Important words

Leakages
Withdrawals of money from the circular flow, which reduce the amount of money in the flow.

Injections
Occur when money is added to the circular flow and increase the amount of money in the flow.
So far, we have focused on the continuous flow of money through the circular flow. However, conditions are not static in the economy. While money circulates through the economy, leakages and injections of money can take place.

We use the following abbreviations when we describe leakages and injections:

\[
\begin{align*}
L &= \text{Leakages} \\
S &= \text{Savings} \\
T &= \text{Taxes} \\
M &= \text{Imports} \\
J &= \text{Injections} \\
I &= \text{Investment} \\
G &= \text{Government expenditure} \\
X &= \text{Exports}
\end{align*}
\]

The following model indicates the leakages and injections that occur:

\[
\text{Figure 3.5: Circular flow indicating leakages and injections}
\]

### 4.1 Leakages

**Leakages** are withdrawals of money from the circular flow which reduce the quantity of money in the flow. Leakages happen as a result of savings, taxes and import expenditure.

**a) Savings (S)**

Savings is the income that participants choose not to spend but to set aside for future use (through deposits into the financial institutions). So, savings are a leakage of money from the circular flow to the financial institutions.
b) **Taxes (T)**
The government levies compulsory taxes that households and businesses must pay. These are a leakage of income from the circular flow to the government.

c) **Import expenditure (M)**
When goods and services are imported, they enter the country. Payment for these goods and services flows to the foreign sector. This is then a leakage of income (withdrawal) from the circular flow to the foreign sector.

Total leakages can thus be calculated as follows: \( L = S + T + M \)

(Leakages = Savings + Taxes + Imports)

### 4.2 Injections

**Injections** occur when money is added to the circular flow, which increases the quantity of money in the flow. Injections happen as a result of investment, government expenditure and export income.

a) **Investments (I)**
Investments occur when business enterprises use borrowed money from the financial institutions to buy capital goods (property, machinery and equipment). Investments are injections of money into the circular flow.

b) **Government expenditure (G)**
The government spends money on public goods and services, over and above the free economy. So, the government’s expenditure is an injection into the circular flow.

c) **Export income (X)**
When goods and services are exported, they leave the country. Payments for these goods and services flow into the country and are an injection (additional income) into the circular flow.

Total injections can thus be calculated as follows: \( J = I + G + X \)

(Injections = Investment + Government expenditure = Exports)
South Africans are bombarded with a lot of economic data on a daily basis. At the same time, modern technology enables analysts to

**Classroom activity 4**

1. Define leakages and injections. (2)
2. Write down the formula for calculating leakages and injections and state what the parts of the formula are. (4)
3. Describe how injections take place. (8)
4. How would an increase in government spending of R10 million influence the circular flow? (4)

**Gross domestic product (GDP)**

**Important words**

**GDP**
Gross domestic product: the total value of final goods and services produced within the geographic boundaries of a country during a specified period.

**Double counting**
When national figures are inflated by counting all market values together.

**Nominal GDP**
Also referred to as GDP at current prices, nominal GDP gives the current value of the price (the figures just as they are).

**Real GDP**
Also referred to as GDP at constant prices, real GDP is calculated by removing the effect of inflation from the figures.
process a mass of economic data in a fraction of a second. This data must still be interpreted, however. To interpret economic data, you need to understand it, know which data to use for which conclusions, and grasp the limitations of the data. In economics, we use the word ‘indicators’ to refer to data that has been processed.

Just as a business keeps track of its transactions, a country keeps track of all of its transactions. This information is summarised in the national accounts. The national accounts of South Africa are compiled by Statistics South Africa and the SARB. They are published quarterly in the *Quarterly Bulletin*.

### 5.1 Definition of gross domestic product (GDP)

In the **gross domestic product**, the word gross indicates that nothing has been deducted and domestic tells you that we are dealing with all the production activities that occurred within the borders of South Africa (on South African soil).

![Goods and services produced in South Africa by a foreign company are included in the GDP.](image)

So, GDP includes production by foreign businesses in South Africa, for example the production of motor cars by a German business in South Africa.

**GDP**, therefore, is the total value of final goods and services produced within the geographic boundaries of a country during a specific period.