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Gisella Muharukua and Catherine Vries
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Unit 1
Market mechanisms and price elasticity

When goods are scarce, prices rise, but when goods are plentiful, prices fall. In this unit, you will find out why this happens.

It is important to be able to distinguish between the different structures or types of markets. You will learn more about supply and demand, and you will see how these market forces cause prices to rise and fall. You will find out how the quantity of goods that are traded affects prices. Although it is very difficult to make accurate predictions of what will happen in the market, you will learn how to predict changes in market forces. You will also learn about the meaning and application of the concept of price elasticity of demand and supply, and how to illustrate the types of price elasticity by means of graphs.

In the real world, there are many influences that affect the market at any given time. You will learn how economists, in order to study one particular influence, assume that only one factor affects the market at any point in time, and focus on one factor at a time.

You will also examine the purpose and methods of advertising.

This unit is divided into four sections:

A	Types of markets (Ordinary/Higher)
B	Demand (Ordinary/Higher)
C	Supply (Ordinary/Higher)
D	What determines prices? (Ordinary/Higher)
E	Price elasticity – Price elasticity of demand (PED) (Ordinary/Higher) – Income elasticity of demand (YED) (**Higher level only**) – Cross elasticity of demand (XED) (**Higher level only**) – Price elasticity of supply (PES) (Ordinary/Higher)
F	Advertising (Ordinary/Higher)

At the end of this unit you should be able to:

- explain what a market is
- describe different types of markets
- define demand and supply
- discuss and illustrate the principle of equilibrium price
- analyse simple market situations with changes in supply and demand
- discuss the causes of changes in demand and supply conditions and analyse such changes to show effects on price.
- perform simple calculations of elasticity and inelasticity of demand and supply

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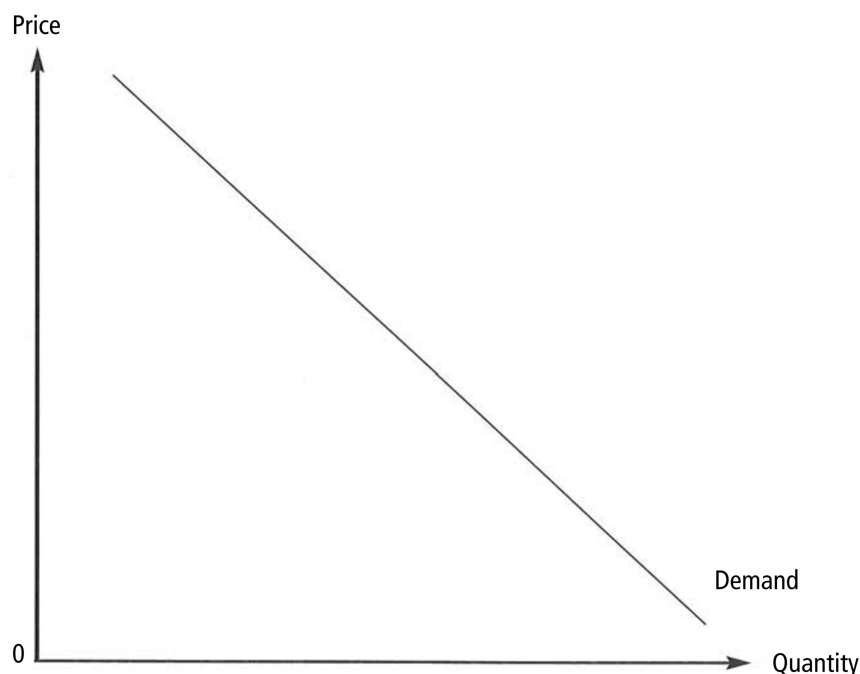
- discuss income- and cross-elasticity of demand and supply (Higher level only)
- demonstrate the usefulness of elasticity in particular situations, e.g. tax yields, turnover
- define advertising
- describe the purpose, methods and consequences of advertising.

The graphs in this unit

ln this module you will be introduced to various types of graphs. It helps if you can start to recognise them so that you know that if a graph slopes one way, it shows one thing and if it slopes another way, it shows something different. Remember that graphs are used to help you to understand the relationship between two things.

Some graphs slope downwards from left to right. Here is an example. It is a demand curve which we will analyse later in more detail. Here, as the price of mahangu cane rises, less is demanded. We say that this type of graph shows a negative relationship or has a negative slope.



Price and demand for mahangu

You are also going to look at graphs that show a positive relationship, like the one on the next page.

This graph slopes up from the vertical axis, and it shows things moving in the same direction. It shows the relationship between price and the quantity of mahangu. You see that, as the price of mahangu increases, the quantity supplied also increases. We say that the graph shows a positive relationship. All graphs that slope upwards show positive relationships.

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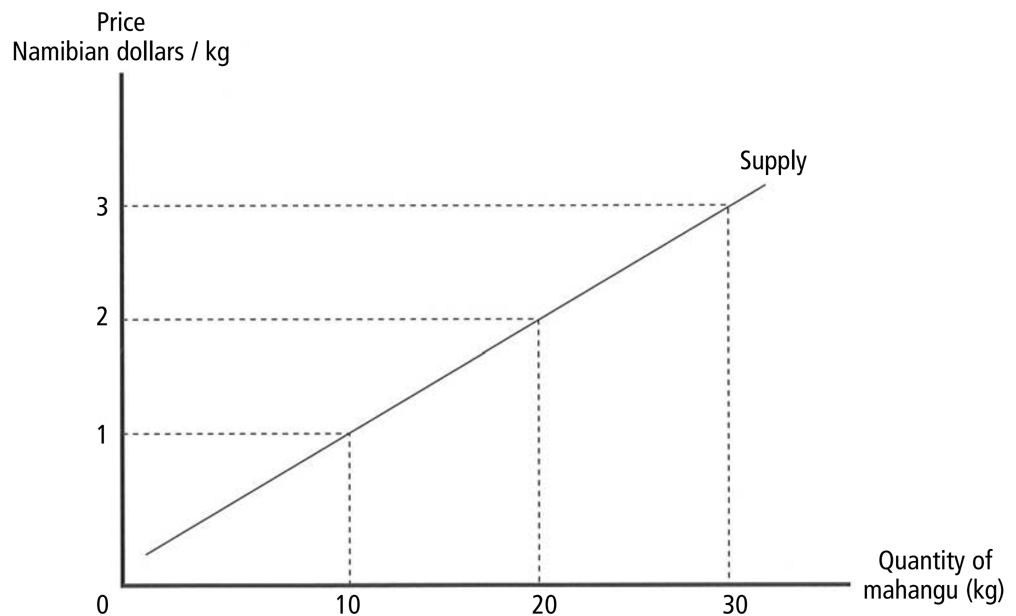

Price and supply of mahangu

> **Hint**
>
> It will be useful to remember that:
> - an industry is made up of firms producing the same products, for example, the vehicle industry, and
> - a firm is a single business selling products from a specific industry, for example, Pupkewitz Toyota, selling motorcars.

A Types of markets

What is a market?

A market exists where buyers (consumers) and sellers (suppliers/producers) come together to negotiate the price of a product. The sellers make the product available at a specific price and people must be willing to buy the product at that price. A market does not have to be an actual place – it does not need walls and a roof or shelves. It can be anyplace. For example, people can trade under a tree or in the open air, as long as there are people who are willing to buy and sell. Farmers can trade their cattle with each other without necessarily going to an auction.

Three of the main types of market structure in an economy are:
- perfect competition
- monopoly
- monopolistic competition.

Each of the market types that you will study are distinguished by the following characteristics:
- number of firms
- barriers to entry
- choice
- knowledge and information.

> **Hint**
>
> Barriers to entry refers to factors which would make it difficult to start a new business in the market for a certain product.

A **perfectly competitive** market structure consists of many firms, has no barriers to entry, sells identical products and has perfect information and knowledge. It has a perfectly elastic (horizontal) demand curve.

When firms sell homogenous (the same) products, though brand names differ, they are in perfect competition.

At the other extreme there are **monopoly markets** consisting of

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a single firm which have high barriers to entry. The monopoly usually sells one product and it usually has almost perfect information about its market and its costs. It has a downward sloping demand curve.

The other main kind of market is called **monopolistic competition**. These are markets in which there are many small firms competing, but where the products being sold are not identical. There is also a downward sloping demand curve in this market. An example of monopolistic competition is the furniture market. Firms like Nictus, Furn City and Lewis sell similar products, but each firm's products are differentiated from those of the competitors. Some are part of national or international chains while others are owned by individual entrepreneurs.

The labour market (factor) market is another type of market that you will find in an economy.

Number of firms

There are many different ways in which individuals and firms trade. Vegetable markets in Namibia consist of hundreds of hawkers selling their vegetables at pavement stalls all over the country as well as supermarkets which are part of a chain such as Pick 'n Pay.

Different types of market for vegetables

When consumers buy hamburgers they will be able to choose from one of many stores. They can buy burgers from a chain like Steers or McDonald's or Wimpy or they can buy a burger from a small outlet such as Joe's Pick'n Chick'n.

Different types of market for burgers

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On the other hand, when individuals buy electricity in Namibia, they have little choice about where they buy it from. Their electricity will be supplied by their local authority or municipality. If they choose not to buy electricity from the municipality, they will have to do without electricity and use coal or another form of energy. Remember local authorities buy electricity on a large scale from NAMPOWER, then they sell it to individuals, households and businesses.

Agricultural markets – such as the market for tomatoes or mealies or most kinds of vegetables – are often close to a perfectly competitive market structure because there are many producers (think of the thousands of farmers all growing mealies).

On the other hand, the sale of electricity is a monopoly because there is only one producer, while the sale of hamburgers is somewhere in between with many firms producing burgers but not as many as the number selling vegetables. Markets like this are called monopolistically competitive markets.

Barriers to entry

You saw that while there are thousands of firms producing and selling vegetables in Namibia, there is only one company that produces electricity and several that produce hamburgers. One of the most important reasons for this is that there are high barriers to entry in the electricity market, but virtually none in the vegetable market and limited barriers in the hamburger market.

There are several types of barriers to entry:

- capital barriers
- legal barriers/patents
- marketing barriers
- distribution barriers.

Capital barriers

To set up as a vegetable trader, virtually all that is needed is some stock and perhaps a table. To start producing hamburgers, you need slightly more equipment (a stove, seats and tables and premises). These require higher **capital costs** and will restrict entry to those who can afford these costs. Setting up a national electricity grid is very expensive. The costs are so high that in many cases, it is profitable for only one firm to operate in the whole country. If more than one firm operates, neither firm will be able to produce enough output to achieve economies of scale. Markets in which it is economically efficient for only one firm to operate are known as **natural monopolies**.

Legal barriers

Barriers to entry may also exist because of legal restrictions. In April 1995, the Namibian government granted a license to MTC, the only company to provide cellular telephone services in the country. Other firms were legally prevented from entering the market. As a

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result they had a control over the market for cellular phones. The government can grant monopolistic power to public corporations, for example NAMPOWER, NAMWATER, Air Namibia and Telkom Namibia.

Patents are another example of legal barriers to entry. A patent is a law which prevents any other firm from producing the good or service. An example of a patented product is Windows, the operating system which is used by most of the world's computers. Windows is patented by the Microsoft Corporation. No other firm is allowed to produce this system, which means that Microsoft has a legal monopoly in the market for Windows.

Marketing barriers

Marketing barriers may be equally important in restricting entry into a market. For example, a number of breweries have attempted to enter the Namibian market in the 1990s. South African breweries attempted to open a plant in the North of Namiba (Tsumeb) but did not succeed Namibian Breweries spends millions of rands on marketing and advertising its brands. It sponsors the national football, cricket and rugby teams and the national leagues in these sports and regularly advertises on television, radio and newspapers. In order to enter the market, breweries have to establish their brands and few have the resources to compete with already established brands.

Effective advertising can set up marketing barriers

Glossary

DISINVEST – to take investments out of a country. Many companies did this in the 1980s as a protest against apartheid

Getting around distribution barriers

Distribution barriers

Barriers may also prevent the distribution of goods. When sanctions were imposed on South Africa in the 1980s many international companies DISINVESTED from the country. Pepsi was one of them. Coca-Cola, Pepsi's major competitor in the cola market, did not disinvest. During the years in which Pepsi could not be bought in South Africa, Coca-Cola supplied fridges to shops. They did this on the condition that the shops stocked only Coca-Cola products. When Pepsi re-entered the market in 1993, it found a barrier to the distribution of its products because shops could stock only Coca-Cola products in their fridges.

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Choice

In the market for vegetables, all products are virtually identical. There may be some differences in quality, but usually consumers do not mind from whom they buy vegetables since each vegetable will be the same. In the beer market, however, there is far more choice. Consumers can choose between Tafel Lager, Windhoek Lager, Windhoek Export and other beers like Castle Lager, Holsten, Bavaria, etc. In countries like the USA, there is an even greater choice of beer.

Another market characteristic is the extent to which products are identical. Firms will attempt to make their product seem different from the products of their competitors through branding. **Branding** is when a product is given an image which will appeal to certain types of consumers. For example, Amstel Lager has been given an up-market image to make it appeal to rich people. Black Label, on the other hand, has been given a more working-class image.

Even if their product is not very different, by creating a brand image firms are able to reduce the elasticity of demand for their product and charge higher prices.

Knowledge and information

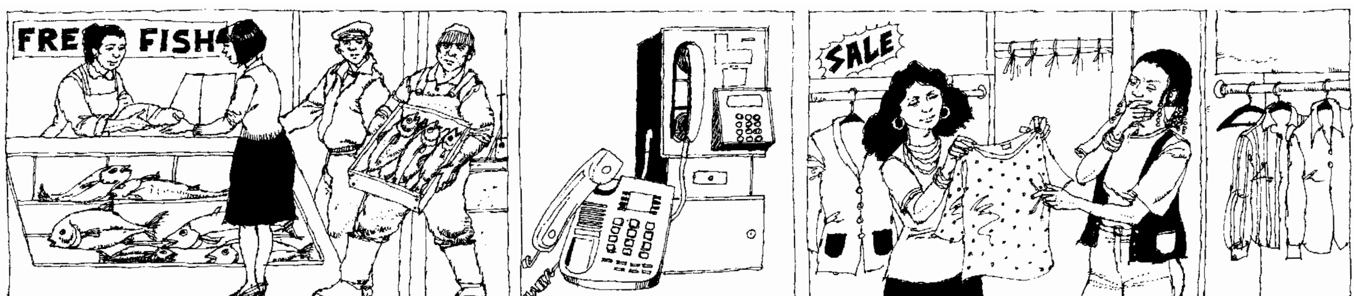
In markets in which information is freely available, firms know the supply and demand for their product as well as for their competitors. Consumers also have this information. In most markets, however, individuals and firms do not have perfect knowledge. For instance, workers in a firm may not know how much their managers earn or how much other workers in the industry earn. Consumers may not know where to buy goods for the cheapest price and firms may not know about the latest technology in their industry.

ACTIVITY 1

Study each of the pictures below and identify the characteristics of each of the markets in Namibia. Your answer should explain the following:

- the type of market
- the number of firms
- the barriers to entry into the market
- consumer choice
- free information available.

You should now be able to describe the features of different types of market.



1 Fresh fish market **2** Telephone **3** Clothing shop

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B Demand

Demand can be defined as the number of goods people are willing and able to buy at a specific price at a specific time: in other words, the number of goods people will buy from the supplier at the given price. Do not confuse demand with needs. A need can only become a demand when people are willing to pay for the product they need. **Individual demand** for an article refers to the willingness of an individual customer to pay the given price for the article. **Market demand** is the total amount of goods all people are willing to buy at the given price.

For example, if the price of beef is N$20 a kilogram and Mrs Njomu is willing to buy 10 kilograms a week at that price, we say that her **individual demand** for beef is 10 kilograms a week. The total **market demand** for beef is the amount that all individuals are willing to buy at that price.

Factors that cause a change in demand

Mrs Njomu buys more chicken and less beef

Prices

Hint

If price increases, then people demand less, meaning demand **contracts.** A fall in price increases demand, so it **expands.**

Mrs Njomu likes to cook beef for her family three times a week. One day Mrs Njomu goes to the shop to buy the weekly groceries and finds that the price of beef has risen by 20%. How will this affect the Njomu family's supper over the next week?

There are probably three ways in which Mrs Njomu could respond. She might simply shrug her shoulders and pay the extra money. However, as the price rose further, she would eventually probably respond as most families would – by buying less beef.

She could do this by buying smaller amounts of beef for each of the three meals. Instead of one kilogram of steak for the weekend braai, she might buy only 800 grams – or possibly even less. She might also decide to eat chicken or another cheaper cut of meat – such as mutton or pork – instead of the

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beef. Monday night's beef stew might become a chicken curry. If she did this we would say that she had SUBSTITUTED chicken for beef.

Glossary

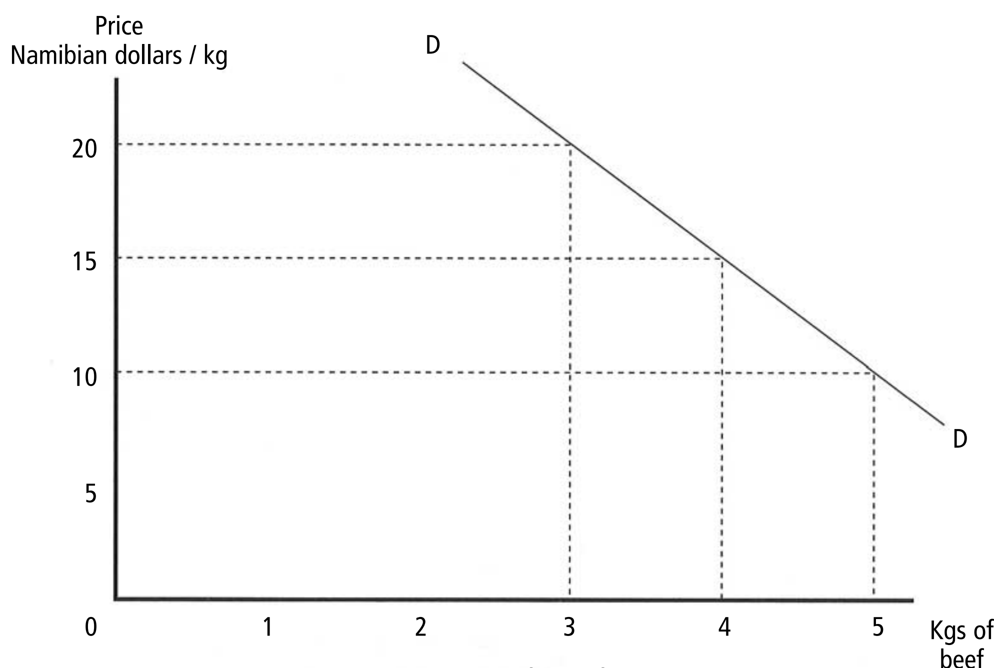
SUBSTITUTE – to put in the place of something

Almost everyone responds to an increase in the price of a good by buying less of it. Over a period of time, as the price of a good rises, the quantity demanded of that good will fall. Similarly, as the price of a good falls, the quantity demanded of that good will rise.

This occurs for two reasons. First, as a good becomes more expensive, individuals will substitute it with less expensive alternatives – like replacing beef with chicken curry, for example. This is called the **substitution effect**.

Second, as the price of a good rises, it will take up more and more of a person's income and so they will spend less on it. For instance, many people set aside a certain amount of their income for food each month. If the price of food increases, they have to make changes in order to keep within their monthly budget for food – just as there might be less steak at the Njomu's Sunday braai when the price of beef rises. This is called the **income effect**.

You can use a graph to describe this relationship between prices and quantity demanded. On a graph you plot the different quantities demanded of a good for the different prices of the good. This is called a **demand curve** and is shown below.



Demand curve showing Mrs Njomu's demand for beef

A **demand curve** shows the amount of goods and services people are willing and able to buy at a specific price.

Glossary

VERTICAL – upright

HORIZONTAL – going across from left to right

This demand (DD) curve illustrates Mrs Njomu's demand for beef. The price of beef is plotted on the VERTICAL axis and the quantity of beef that is bought is on the HORIZONTAL axis. This demand curve is drawn on the assumption that any other factors that affect Mrs Njomu's demand for beef are unchanged. The only change is in the price of beef.

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At a price of N$10 a kilogram, Mrs Njomu will demand five kilograms of beef each week. When the price rises to N$15 a kilogram, she will demand only four kilograms a week. When it rises even further to N$20 a kilogram, she will demand only three kilograms a week.

Normal demand curve

This curve is downward sloping to the right. Most demand curves are like this. It shows that people will buy more at lower prices and less at higher prices. Change in income as well as the availability of substitutes contribute to this move.

According to the law of demand, the relationship between price and quantities demanded is negative, because they always move in opposite directions, meaning an increase in price will result in a fall in demand. Your own experience of shopping will tell you this.

Although price may be the most important factor affecting how much beef Mrs Njomu buys each week, it's not the only thing which might influence her decision. The demand curve above was drawn on the assumption that all the factors which affect the demand for a good, only price was changed. If we change any of the other factors this will shift the whole demand curve, not simply cause a movement along it. Now let us see what other factors affect demand.

Demand is also affected by:

- income
- advertising
- tastes
- the prices of substitute goods
- expectations about the economy
- population sizes and structure
- the prices of COMPLEMENTARY goods.

Glossary

COMPLEMENTARY GOOD – a good that is usually used together with another good

RARE – unusual

Hint

Real income is the actual number of goods one can buy with money income, which is expressed in terms of a specific currency.

Consider how the following events would affect how much beef Mrs Njomu buys each week:

Income

Mrs Njomu's wages increase by 50%. With the extra income from her wage increase, Mrs Njomu might decide that the family can now afford to eat beef four days a week instead of only three. She might also decide that they will continue to eat only beef three days a week, but that they can now have bigger portions.

Demand is thus also determined by the level of income. If the income of consumers increases than people will demand more of a certain good and less of another. It is important to keep in mind that you must work with the real income of the consumer and not the money income.

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