# Tutorial letter 102/3/2018

# Foundation Economics

# FEC1501

## Semester 1 and 2

## Department of Economics

**IMPORTANT INFORMATION:**

This tutorial letter contains the activities for the learning units 1-8.

BAR CODE

**Activities for learning units**

## Activities for learning unit 01

### ✍ Activity 1.1

What are the four factors of production?

### ✍ Activity 1.2

1. Define the GDP and explain why GDP figures are important for policy makers.
2. Describe and compare the three ways of measuring a country's GDP.
3. Why is the GDP not a sufficient indicator of macroeconomic performance? What other indicators are important and why?

## Activities for learning unit 02

### ✍ Activity 2.1

Indicate whether the following statements are true or false:

a. For perfect competition to exist there must be many sellers and a few large buyers.
b. Being a price taker implies that a producer has no market power over the market price of the product.
c. Under perfect competition it is possible for the individual producer to decide what the price of a product must be.
d. Under perfect competition producers collude with one another in order to influence the market price.
e. It is easy for new firms to enter a perfectly competitive market.

### ✍ Activity 2.2

Why is allocative and technical efficiency important for the economy?

### ✍ Activity 3.1

Explain what a model is and what it is used for in economics.

## ✍ Activity 3.2

1. Based on the circular flow model in figure 3.4, indicate which of the following statements are true and which are false:
   a. Y - T = C + S
   b. TS – G = C + I
   c. C + S + T = Y

2. Indicate which variable in column B represents the income of the factor of production in column A:

| **Column A** | **Column B** |
|---|---|
| Labour | Rent |
| Natural resources | Profit |
| Investment goods | Wages and salaries |
| Entrepreneurship | Interest |

3. Describe the concept of **aggregation** and explain why we do this when developing a model.

## ✍ Activity 3.3

1. Complete the following table by calculating the **change** in nominal GDP and the **change** in real GDP for each of the years from 2004 to 2012. We show the change from 2002 to 2003. The changes for 2003 are calculated as follows:

**Change in GDP at market prices from 2002 to 2003**

$$= \text{Nominal GDP}_{2003} - \text{Nominal GDP}_{2002}$$
$$= \text{R1 272 537 000 000} - \text{R1 171 086 000 000}$$
$$= \text{R101 451 000 000}$$

**Change in GDP at constant 2005 prices from 2002 to 2003**

$$= \text{Real GDP}_{2003} - \text{Real GDP}_{2002}$$
$$= \text{R1 427 322 000 000} - \text{R1 386 435 000 000}$$
$$= \text{R101 451 000 000}$$

| Year | A<br>Gross domestic product at market prices (nominal GDP)<br>R | B<br>Change in GDP at market prices<br>R | C<br>Gross domestic product at constant 2005 prices (real GDP)<br>R | D<br>Change in GDP at constant 2005 prices<br>R |
|---|---|---|---|---|
| **2002** | 1 171 086 000 000 | | 1 386 435 000 000 | |
| **2003** | 1 272 537 000 000 | 101 451 000 000 | 1 427 322 000 000 | 40 887 000 000 |
| **2004** | 1 415 273 000 000 | | 1 492 330 000 000 | |
| **2005** | 1 571 082 000 000 | | 1 571 082 000 000 | |
| **2006** | 1 767 422 000 000 | | 1 659 121 000 000 | |
| **2007** | 2 016 185 000 000 | | 1 751 165 000 000 | |
| **2008** | 2 256 485 000 000 | | 1 814 594 000 000 | |
| **2009** | 2 406 401 000 000 | | 1 786 897 000 000 | |
| **2010** | 2 659 366 000 000 | | 1 842 052 000 000 | |
| **2011** | 2 917 539 000 000 | | 1 905 736 000 000 | |
| **2012** | 3 155 195 000 000 | | 1 954 303 000 000 | |

2. Explain why the change in real GDP from 2002 to 2003 is smaller than the change in nominal GDP for the same years.

3. Did **nominal GDP** increase from 2008 to 2009? Explain your answer using the figures from the table that you calculated.

4. Did **real GDP** increase from 2008 to 2009? Explain your answer using the figures from the table that you calculated.

5. Complete the following table by calculating the **percentage change** in nominal GDP and the **percentage change** in real GDP for each of the years from 2004 to 2012. We show the calculation for the percentage **changes** from 2002 to 2003.

   **Percentage change in nominal GDP for 2003**

$$= \frac{\text{Change in nominal GDP}_{2003}}{\text{Nominal GDP}_{2002}} \times \frac{100}{1}$$

$$= \frac{\text{R101 451 000 000}}{\text{R1 171 086 000 000}} \times \frac{100}{1}$$

$$= 8{,}66298\%$$

   We round this figure to two decimals after the decimal comma. As the third decimal after the decimal comma is less than 5 the answer is now 8,66%.

**Percentage change in real GDP for 2003**

$$= \frac{\text{Change in real GDP}_{2003}}{\text{Real GDP}_{2002}} \times \frac{100}{1}$$

$$= \frac{\text{R40 887 000 000}}{\text{R1 386 535 000 000}} \times \frac{100}{1}$$

$$= 2{,}94907\%$$

We round this figure to two decimals after the decimal comma. As the third decimal after the decimal comma is more than 5 the answer is now 2,95%.

| Year | A<br>Gross domestic product at market prices (nominal GDP)<br>R | B<br>Percentage change in GDP at market prices | C<br>Gross domestic product at constant 2005 prices (real GDP)R | D<br>Percentage change in GDP at constant 2005 prices<br>R |
|---|---|---|---|---|
| **2002** | 1 171 086 000 000 | | 1 386 435 000 000 | |
| **2003** | 1 272 537 000 000 | 8,66 | 1 427 322 000 000 | 2,94 |
| **2004** | 1 415 273 000 000 | | 1 492 330 000 000 | |
| **2005** | 1 571 082 000 000 | | 1 571 082 000 000 | |
| **2006** | 1 767 422 000 000 | | 1 659 121 000 000 | |
| **2007** | 2 016 185 000 000 | | 1 751 165 000 000 | |
| **2008** | 2 256 485 000 000 | | 1 814 594 000 000 | |
| **2009** | 2 406 401 000 000 | | 1 786 897 000 000 | |
| **2010** | 2 659 366 000 000 | | 1 842 052 000 000 | |
| **2011** | 2 917 539 000 000 | | 1 905 736 000 000 | |
| **2012** | 3 155 195 000 000 | | 1 954 303 000 000 | |

6. In which year from 2003 to 2012 was real economic growth in South Africa the highest?

7. Did the South African economy grow every year from 2003 to 2012? Explain your answer using figures from the table.

## Activity 3.4

Use the flow of funds model to explain how the economy will be affected if firms decide to increase their investment expenditure (I).

## ✍ Activity 3.5

Decide whether the circular flow model represented in figure 3.4 can be used to explain each of the following scenarios. You have to explain how it can be used or why it is not appropriate to explain that particular scenario.

a. The effect of an increase in government expenditure on the economy.
b. The effect of a recession in Europe which leads to a decrease in demand for goods imported from South Africa to Europe.
c. The effect of an increase in the price of oil.
d. The effect of an increase in saving by households.
e. The government introduces a carbon tax that is paid on every unit of electricity consumed that is generated through the use of coal.

## ✍ Activity 3.6

1. Do you think that the flow of funds model as represented in figure 3.4 is a useful model? Provide reasons for your answer.
2. How could the flow of funds model be adjusted to be more representative of the real world economy?
3. In the box where a model is defined we find the following sentence that forms part of the definition:

   A model can be a **verbal description**, a **graphical explanation,** a **mathematical account** or a **physical representation** of an aspect of reality.

   Which of the above descriptions (indicated in bold) are applicable to the flow of funds model you learnt about in this study unit? Explain why you say so.

4. Match the description in column B to the concept in column A:

| **Column A** | **Column B** |
|---|---|
| (a) Production | (1) Rent + wages and salaries + interest + profit. |
| (b) Income | (2) C + I + G |
| (c) Expenditure | (3) Combines natural resources, labour, capital and entrepreneurship |

## Activities for learning unit 04

### ✍ Activity 4.1

1. List five things you want in the first column. If you can afford the thing write “yes” next to it in the second column; it you cannot afford it write “no”. In the last column decide whether you are part of the demand for the thing by writing “yes” or “no”.

| Things I want | Can I pay for these things? | Am I part of the demand for these things? |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

2. Indicate whether you agree or disagree with the following statements.

| | Statements | Agree | Disagree |
|---|---|---|---|
| a. | Because people need food to survive it means there is a high demand for food. | | |
| b. | Because people want computers there is a high demand for computers. | | |
| c. | Many people would like to travel in space. It is, however, very expensive and only a very few people can afford space travel. The demand for space travel is therefore very low. | | |
| d. | There are many people who want cell phones and have the willingness and ability to pay for cell phones. The demand for cell phones is therefore high. | | |
| e. | Demand is simply another term for wants; in other words, if a consumer demands a good it simply means that he or she wants the good. | | |
| f. | The demand for a product refers to the quantities of the product that potential buyers are willing and able to buy. | | |

Video clip activity:

1. Watch the following video clip to help you answer the answer the questions:
   Meaning of demand

   a. What is the symbol for the demand for goods and services?
   b. Is the following statement true or false? If you intend to buy a good or service you are a potential buyer.
   c. If you have the necessary income to buy an Aston Martin but you are not willing to pay for it are you part of the demand for Aston Martins?
   d. If you do not have the necessary income to purchase an Aston Martin are you part of the demand for it?
   e. Explain why wanting and longing for a good or service is not enough to make you part of the demand for it?

## ✍ Activity 4.2

1. List five factors that will influence the demand for fried chicken pieces.
2. Indicate whether you agree or disagree with the following statements:

| | Statements | Agree | Disagree |
|---|---|---|---|
| a. | The factors that determine the demand for fried chicken pieces are similar to the factors that determine the demand for cold drinks or any other product. | | |
| b. | The quantity demanded of a product depends on a range of factors, including the price of the product, the prices of other products and the income of households. | | |

## ✍ Activity 4.3

1. Complete the following:

The law of demand states that:

Given that all other things remain the ____, if the price of a good or service increases, the quantity demanded thereof will _____ and if the price of a good or service decreases the quantity demanded thereof will _____. This indicates that between the price of the good or service and the quantity demanded a _____ or _____ relationship exists.

2. What is meant by "given that all other things remain the same"?

## ✍ Activity 4.4

1. Study table 4.1 and answer the following questions:

   a. What is the quantity demanded at a price of R6?
   b. What is the quantity demanded at a price of R2?
   c. Does the quantity demanded increase or decrease as the price declines from R6 to R2?
   d. By how much does the quantity demanded change if the price changes from R6 to R2?
   e. What happens to the quantity demanded if the price increases from R2 to R5?

## ✍ Activity 4.5

1. Use the following demand schedule to draw a graph showing Peter's demand for cold drinks.

Table 4.2: Demand schedule

| | Price | Quantity demanded |
|---|---|---|
| A | 6 | 6 |
| B | 5 | 8 |
| C | 4 | 10 |
| D | 3 | 12 |
| E | 2 | 14 |
| F | 1 | 16 |

a) What does the demand curve (DD) look like?
b) Indicate on the graph how many cold drinks Peter demands at a price of R5 per can.
c) Indicate on the graph how many cold drinks Peter demands at a price of R2 per can.
d) In which direction does the demand curve go to indicate the impact of a decrease in the price of cold drinks?
e) Why does Peter demand more cold drinks when the price of cold drinks decreases?
f) Why does Peter demand fewer cold drinks when the price of cold drinks increases?

## ✍ Activity 4.6

1. Using a graph and the information in the following demand schedule, show what happens to demand if the income of households decreases.

Table 4.4 Change in demand

| Price | Quantity demanded | Quantity demanded after a decrease in income |
|---|---|---|
| 5 | 4 | 2 |
| 4 | 8 | 6 |
| 3 | 12 | 8 |
| 2 | 16 | 10 |
| 1 | 20 | 12 |

## ✍ Activity 4.7

1. Indicate whether the following examples involve a change in demand (shift in the position of the demand curve) or a change in quantity demanded (movement along the demand curve).

| Example | | Change in demand (shift in the position of the demand curve) | Change in quantity demanded (movement along the demand curve) |
|---|---|---|---|
| a. | An increase in the price of fried chicken pieces | | |
| b. | An increase in the income of households which is used by them to buy more cell phones | | |
| c. | An increase in the number of people with HIV/Aids which causes an increase in the demand for medication | | |
| d. | A severe drought that causes the price of beef to increase which, in turn, causes households to consume less meat. | | |
| e. | A decrease in the number of schoolgoing children. As result of this the sales of textbooks decreases. | | |

2. Explain why the following statement is incorrect:

A decrease in the price of fried chicken pieces causes an increase in the quantity demanded and the demand curve shifts to the right.

## ✍ Activity 4.8

Businesses spend billions of rand on advertising to influence the tastes and preferences of consumers in order to ensure that there is a high demand for their products.

a. Use a demand curve for chocolate bars to show what would happen if, as a result of a major advertising campaign, the demand for chocolate bars increases.

b. What can you say about the quantity demanded at each price after the increase in the demand for chocolate bars.

## ✍ Activity 4.9

1. Identify two more substitute goods that apply to you.
2. Read the following and answer the questions that follows:

If you plan to supply a product to the market it is important to take into account what substitutes are available in the market for your product. Not only do you need to know what the substitutes are but, importantly, what the prices of the substitutes are and what will happen to the demand for your product if the prices of the substitute goods change.

Take for instance Derrick and Thandi who are vendors at the station. Derrick sells tea and Thandi coffee. They usually sell these drinks at R3 per cup. However, it is a cold Monday morning and Thandi decides to decrease the price of coffee to R2 a cup.

a. What do you think will happen to the demand for tea?
b. What will happen to the demand curve for tea?
c. Will Thandi sell more cups of coffee than before?
d. What will happen to the demand curve for coffee? Will a shift in the position or a movement along the demand curve take place?
c. What advice would you give Derrick about the price of his product?

## ✍ Activity 4.10

When the Dlamini family buys fried chicken pieces they also buy chips. Fried chicken pieces and chips are therefore complements.

1. What would happen to the quantity of fried chicken pieces demanded by the Dlamini family if the price of fried chicken pieces increases?
2. What would happen to the demand for chips if the price of fried chicken pieces increases?
3. What then happens to the demand curve for chips? Does its position shift or is there a movement along the demand curve.

## ✍ Activity 4.11

Complete the following table by indicating what happens to the demand curve:

- You must say whether there is an upward movement along, a downward movement along, a rightward shift or leftward shift of the demand curve.
- You must also give a correct description of the effect. You must say whether there is a decrease in the quantity demanded, an increase in the quantity demanded, an increase in demand or a decrease in demand.

| Determinant | Change | Effect on market demand curve | Ccorrect description of effect |
|---|---|---|---|
| Price of the good | Increase | | |
| | Decrease | | |
| Price of related goods | | | |
| Substitutes | Increase | | |
| | Decrease | | |
| Complements | Increase | | |
| | Decrease | | |
| Income | Increase | | |
| | Decrease | | |
| Taste/ preferences | An increased desire to buy | | |
| | A reduced desire to buy | | |
| Potential buyers | Increase | | |
| | Decrease | | |
| Expected future price of the Good | Price is expected to increase | | |
| | Price is expected to fall | | |

## ✍ Activity 4.12

| | | Agree | Disagree |
|---|---|---|---|
| a. | Suppliers supply products to the market because they like to do good deeds. | | |
| b. | If there is a demand for a product it will be supplied. | | |
| c. | Supply refers to the quantity of a good that is available in a shop. | | |
| d. | Supply refers to the quantities of a good or service that producers plan to sell at different prices. | | |

2. Give examples of factors that will influence the decision to supply fried chicken pieces to the market.

## ✍ Activity 4.13

1. Complete the following:

The law of supply states that:

Given that all other things remain the ____, if the price of a good or service increases, the quantity supplied will _____ and if the price of a good or service decreases, the quantity supplied will _____. This indicates that a _____ relationship exists between the price of a good or service and the quantity supplied.

2. Which of the following represents the law of supply in symbols:

a. $P\uparrow \rightarrow Q_s\uparrow$
b. $Px\uparrow \rightarrow Qd\downarrow$
c. $Px\downarrow \rightarrow Qd\uparrow$
d. $P\downarrow \rightarrow Qs\downarrow$

1. All of the them
2. Only a, and b
3. Only b and c
4. Only a
5. None of them

## ✍ Activity 4.14

Study table 4.4 in learning unit 4 which represents a supply schedule for fried chicken pieces and answer the following questions.

1. How many pieces of fried chicken will suppliers be willing to supply at a price of R6?
2. How many pieces of fried chicken will suppliers be willing to supply at a price of R2?
3. How many pieces of fried chicken will suppliers be willing to supply at a price of R1?
4. If the price of fried chicken increases from R3 to R5, how many more pieces of fried chicken will be supplied?
5. If the price of fried chicken decreases from R6 to R1, how many fewer pieces of fried chicken will be supplied?
6. As the price of fried chicken pieces increases, what happens to the quantity supplied?

## ✍ Activity 4.15

Use the following supply schedule to draw the supply curve for cold drinks and then answer the questions that follow.

**Price of a can of cold drink and quantity supplied**

Table 4.7: Supply of cold drinks

| Price of a can of cold drink (rand) | Quantity of cold drinks supplied (per week) |
|---|---|
| 6 | 14 |
| 5 | 12 |
| 4 | 10 |
| 3 | 8 |
| 2 | 6 |

1. What does the supply curve look like?
2. Indicate on your diagram how many cold drinks suppliers are willing to supply at a price of R5?
3. Indicate on your diagram how many cold drinks suppliers are willing to supply at a price of R2?

4. Show that an increase in the price of cold drinks causes an upward movement along the supply curve.
5. Show that a decrease in the price of cold drinks causes a downward movement along the supply curve.

## ✍ Activity 4.16

1. Study table 4.5 which represents the supply schedule of fried chicken pieces before and after an increase in the price of inputs. Then answer the following questions.

   a. How many fried chicken pieces are suppliers prepared to supply at a price of R4?
   b. How many fried chicken pieces are they prepared to supply at a price of R3?
   c. How many fried chicken pieces are they prepared to supply at a price of R2?
   d. How many fried chicken pieces are they prepared to supply at a price of R1?

e. Are the suppliers prepared to supply more fried chicken pieces at each and every price?

2. Indicate whether the following will cause a rightward or a leftward shift in the supply curve for fried chicken pieces.

   a. An increase in the cost of chicken feed, which increases the price of chickens.
   b. An increase in labour costs due to trade union pressure.
   c. A decrease in the rent that must be paid.

## ✍ Activity 4.17

1. Decide whether the supplier, given the following information about the profits to be made from selling either fried chicken pieces or chicken burgers or fried fish, should sell fried chicken pieces, chicken burgers or fried fish?

| | |
|---|---|
| Profits from selling fried chicken pieces | R10 000 per month |
| Profits from selling chicken burgers | R12 000 per month |
| Profits from selling fried fish | R8 000 per month. |

2. What do you think will happen to the supply of fried chicken pieces if the price of chicken burgers rises and suppliers decide to switch some of their production to the production of chicken burgers?

3. What do you think will happen to the supply curve for fried chicken pieces if suppliers decide to produce more chicken burgers and fewer fried chicken pieces?
4. Will the supply curve for fried chicken pieces shift to the left or to the right if suppliers decide to produce more chicken burgers and fewer fried chicken pieces?

## ✍ Activity 4.18

1 Which of the following will not be an equilibrium position in a market?

a. If the price the buyers are willing to pay is R10 and the price the supplier wants is R12.
b. If the price the buyer is willing to pay is R10 and the price the supplier wants is R10.
c. If the price the buyer is willing to pay is R11 and the price the supplier wants is R11.

## ✍ Activity 4.19

1 Indicate whether the following represents an excess demand (shortage), an excess supply (surplus) or equilibrium and what will happen to the price in this situation.

Table 4.9: Market situation

| | Excess demand/excess supply/equilibrium | Price increase/price decrease/price unchanged |
|---|---|---|
| Buyers are frustrated | | |
| Suppliers are frustrated | | |
| Both buyers and suppliers are satisfied | | |

## ✍ Activity 4.20

1 Indicate whether the following represents an excess demand (shortage), an excess supply (surplus) or equilibrium and what will happen to the price in this situation.

Table 4.11: Market sitution

| Price | Quantity demanded | Quantity supplied | Excess demand/excess supply/equilibrium | Upward pressure/downward pressure/neutral |
|---|---|---|---|---|
| 5 | 200 | 1800 | | |
| 4 | 600 | 1400 | | |
| 3 | 1000 | 1000 | | |
| 2 | 1400 | 600 | | |
| 1 | 1800 | 200 | | |

## ✍ Activity 4.21

1. Use the information in the following table to show with the help of a diagram:

   a. the equilibrium position
   b. excess demand
   c. excess supply
   d. pressure on price

Table 4.10: Market

| Price | Quantity demanded | Quantity supplied |
|---|---|---|
| 5 | 200 | 1800 |
| 4 | 600 | 1400 |
| 3 | 1000 | 1000 |
| 2 | 1400 | 600 |
| 1 | 1800 | 200 |

## Activities for learning unit 05

### Pre-knowledge activity 5.1

1. A change in demand occurs when any of the non-price determinants of demand change.

Complete the following table by listing the factors that cause an increase in demand and factors that cause a decrease in demand.

| Factors that cause an increase in demand (rightward shift of the demand curve) | Factors that cause a decrease in demand (leftward shift of the demand curve) |
|---|---|
| | |
| | |
| | |
| | |
| | |

If you are unsure about these factors revise learning unit 4.2.

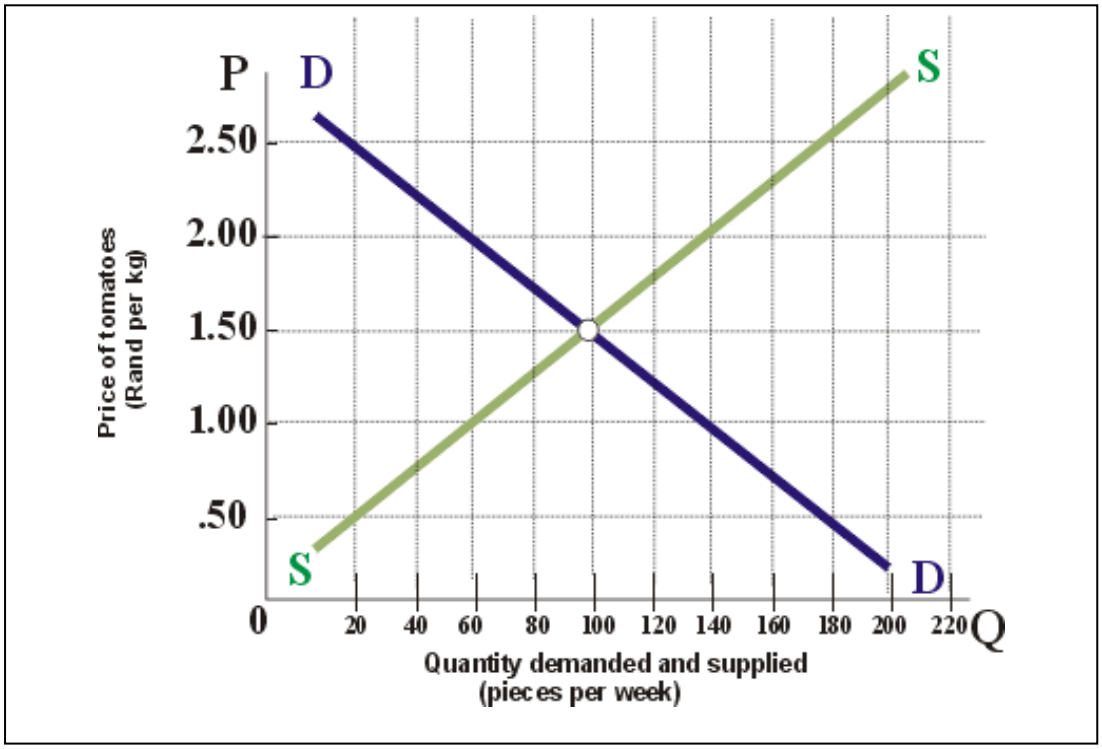
2. A change in supply occurs when any of the non-price determinants of demand change.

Complete the following table by listing the factors that cause an increase in supply and factors that cause a decrease in supply.

| Factors that cause an increase in supply | Factors that cause a decrease in supply |
|---|---|
| | |
| | |
| | |
| | |
| | |

If you are unsure about these factors revise learning unit 4.3.

3. Study the following diagram and answer the questions that follow.

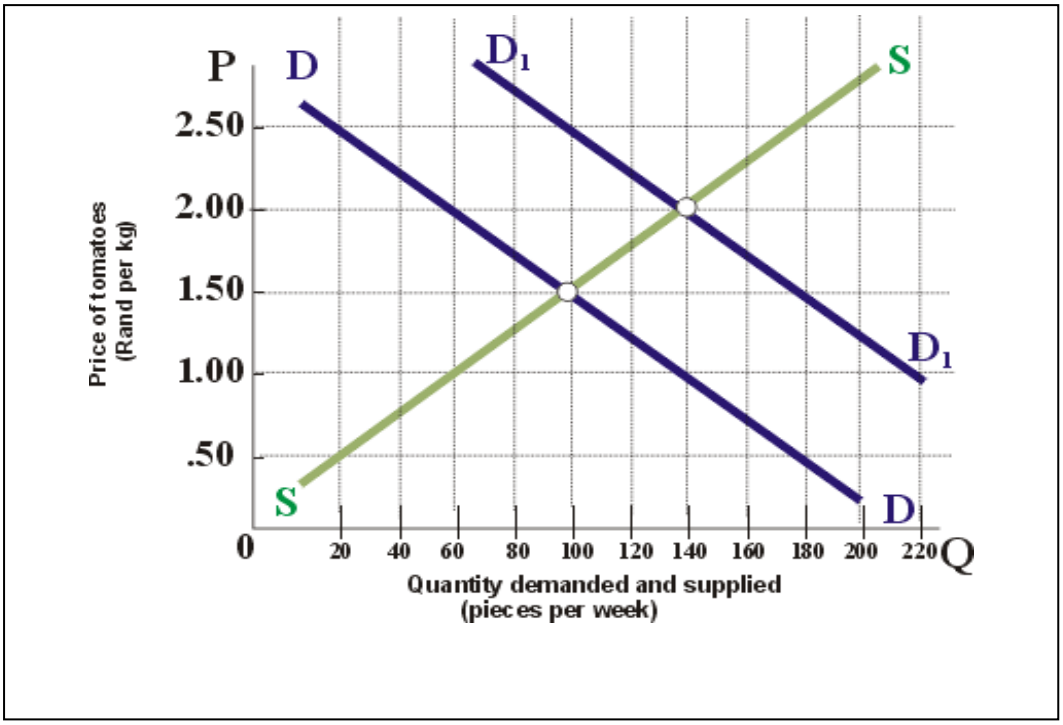



a. What is the equilibrium price?
b. How much is being demanded and supplied at the equilibrium price?
c. Briefly describe what happens in the market if the price is R2,00.
d. Briefly describe what happens in the market if the price is R1,00.

## ✍ Activity 5.1

**Activity 5.1**

1. Given that the demand for tomatoes increases, as illustrated in this diagram, answer the questions that follow.




1. What is the quantity demanded at a price of R1,50?
2. What is the quantity supplied at a price of R1,50?
3. Is there an excess demand or an excess supply?
4. How much is the excess demand or the excess supply?
5. Will the price rise or fall?
6. What will happen to the quantity demanded and quantity supplied as the price changes?
7. What is the new equilibrium price after the increase in demand?
8. Is the new equilibrium price higher or lower than the equilibrium price before the increase in demand?
9. What is the new equilibrium quantity demanded and supplied?
10. Is the new equilibrium quantity demanded and supplied higher or lower than before the increase in demand?

2. Over the last few years, Cape Town has become a very popular tourist destination and the average price of a restaurant meal has increased dramatically.
   a. Has the supply or demand been affected?
   b. Which determinant of supply or demand has changed?
   c. Draw a demand and supply curve for restaurant meals and show how the change in the determinant identified in previous question changed the price and the quantity demanded and supplied.

## Activity 5.2

Use a demand and supply curve to demonstrate what will happen to the equilibrium price and equilibrium quantity of cold drinks if cold weather causes people to demand fewer cold drinks.

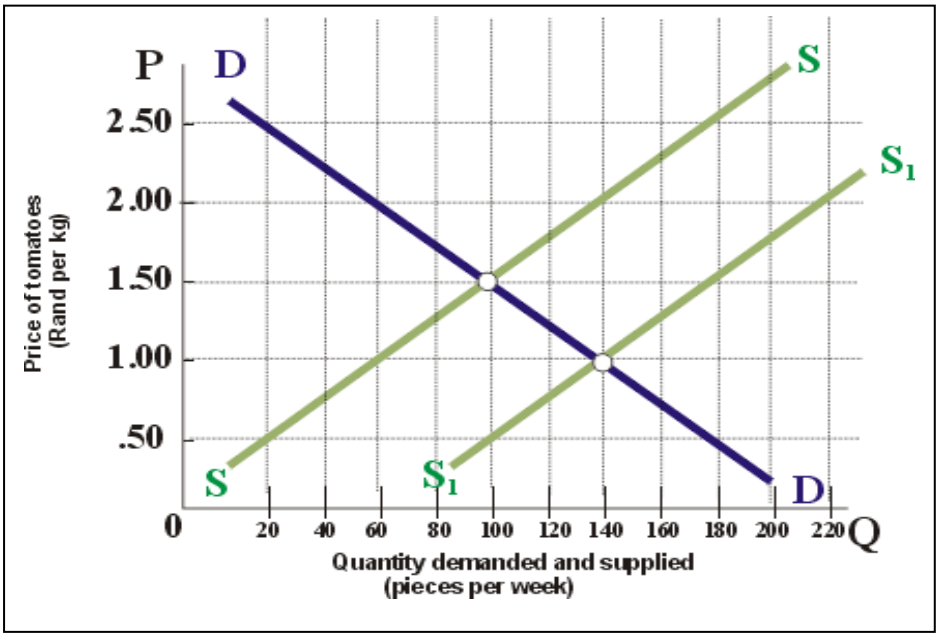
## Activity 5.3

Explain, with the aid of a graph, how the following will affect the equilibrium price and equilibrium quantity for maize:

a. a severe drought
b. an increase in the cost of producing maize

## Activity 5.4

1. Given an increase in the supply of tomatoes, as illustrated in this diagram, answer the questions that follow.




   a. What is the quantity demanded at a price of R1,50?
   b. What is the quantity supplied at a price of R1,50?
   c. Is there an excess demand or an excess supply?

d. What is the excess demand or the excess supply?
e. Will the price rise or fall?
f. What will happen to the quantity demanded and quantity supplied as the price changes?
g. What is the new equilibrium price after the increase in supply?
h. Is the new equilibrium price higher or lower than the equilibrium price before the increase in supply?
i. What is the new equilibrium quantity demanded and supplied?
j. Is the new equilibrium quantity demanded and supplied higher or lower than before the increase in supply?

2. More and more guest houses have opened in Cape Town over the last few years. Use demand and supply curves to show what happens in the market for accommodation as more guest houses open.

3. Complete the following table by indicating what happens with the demand curve, supply curve, equilibrium price, equilibrium quantity demanded and equilibrium quantity supplied.

| Event | Demand curve | Supply curve | Price | Quantity demanded | Quantity supplied |
|---|---|---|---|---|---|
| Decrease in income of households | | | | | |
| Increase in the price of a substitute | | | | | |
| Decrease in the cost of production | | | | | |
| Increase in the number of suppliers | | | | | |
| | | | | | |

## Activities for learning unit 06

### ✍ Activity 6.1

Indicate which function of money in list B is described in each of the sentences in list A.

| List A | List B |
|---|---|
| 1. Themba draws up a balance sheet of everything that he owns and owes and calculates that he owns assets with a value of R50 000 and owes R5 000 to the bank for a study loan that has to be repaid in the future. | A. Medium of exchange function |
| 2. Ellie receives R500 from her grandfather as a gift for her birthday and puts it into her saving box to use later in the year when she goes on holiday. | B. Accounting unit function |
| 3. Mr Buys buys meat from the butcher worth R100 and pays for it using two R50 notes. | C. Store of value function |

### ✍ Activity 6.2

1. Is a deposit held in a six-month fixed deposit account money? Refer to the functions of money to explain your answer.
2. Is a credit card money? Refer to the functions of money to explain your answer.
3. If you hold 10 US dollars in your hand, does this qualify as money? Refer to the functions of money to explain your answer.
4. Visit a bank or a bank's website and find out the current interest rates offered on fixed deposit accounts of different periods. Try to draw a diagram similar to the one in figure 6.2. Compare it to the rates in figure 6.2 and discuss whether interest rates increased or decreased since 1 August 2013, the date on which figure 6.2 was drawn.

### ✍ Activity 6.3

Use the following data to construct a diagram that shows what percentages cash and demand deposits formed of M1 at the end of 2011. Compare the percentages with those at the end of 2012 as shown in the example above.

| Component of M1 | R |
|---|---|
| Banknotes and coins in circulation | 75 396 000 000 |
| Demand deposits | 895 081 000 000 |

## ✍ Activity 6.4.

1. Use the information above to construct a pie chart showing the different components of M3 at the end of 2012.
2. Complete the following table according to the example:

$$\text{Annual change in M3}_{2009} = \text{M3}_{2009} - \text{M3}_{2008}$$
$$= \text{R1 948 200 million} - \text{R1 914 200}$$
$$= \text{R34 000 million}$$
$$\text{Percentage change in M3}_{2009} = \frac{\text{Annual change in M3}_{2009}}{\text{M3}_{2008}}$$
$$= \frac{\text{R34 000 million}}{\text{R1 914 200 million}} \times \frac{100}{1}$$
$$= 1{,}78\%$$

| Year | M3 at the end of the year (R million) | Annual change in M3 (R million) | Percentage annual change in M3 |
|---|---|---|---|
| 2008 | 1 914 200 | - | - |
| 2009 | 1 948 200 | 34 000 | 1,78 |
| 2010 | 2 083 114 | | |
| 2011 | 2 255 567 | | |
| 2012 | 2 372 194 | | |

3. Use the data in the table in question 2 to construct a diagram showing the percentage annual change in M3 from 2008 to 2012.

## ✍ Activity 6.5

Which of the following statements are true and which are false?

a. A long-term fixed deposit held with a bank is more liquid than a demand deposit held with a bank.
b. M1 + M2 = M3.
c. A long-term fixed deposit held with a bank is a better store of value than a demand deposit held with a bank.
d. If you hold R50,00 under your pillow, this amount forms part of the M1 money supply.
e. If you hold R50,00 under your pillow, this amount does not form part of the M3 money supply.
f. Cash forms the largest part of the M1 money supply.
g. Demand deposits formed the largest part of the M3 money supply at the end of 2012.

## ✍ Activity 6.6

1. The following table shows the M1 money supply in South Africa at the end of each year and the nominal GDP from 2002 to 2012. Calculate the velocity of money for each of these years according to the example:

$$V_{2002} = \frac{PT_{2002}}{M_{2002}} = \frac{\text{Nominal GDP}_{2002}}{\text{M1 money supply}_{2002}} = \frac{\text{R 1 171 086 000 000}}{\text{R358 788 000 000}} = 3{,}2688 \approx 3{,}27$$

The ≈-sign means that the number after the sign is **about** equal to the number before the sign. This is to indicate that we have rounded the number before the sign to two decimals.

| Year | M1 money supply | Nominal GDP | Velocity |
|---|---|---|---|
| 2002 | 358 251 000 000 | 1 171 086 000 000 | 3,27 |
| 2003 | 387 788 000 000 | 1 272 537 000 000 | |
| 2004 | 421 494 000 000 | 1 415 273 000 000 | |
| 2005 | 503 053 000 000 | 1 571 082 000 000 | |
| 2006 | 605 679 000 000 | 1 767 422 000 000 | |
| 2007 | 738 317 000 000 | 2 016 185 000 000 | |
| 2008 | 753 628 000 000 | 2 256 485 000 000 | |
| 2009 | 806 261 000 000 | 2 406 401 000 000 | |
| 2010 | 862 788 000 000 | 2 659 366 000 000 | |
| 2011 | 947 174 000 000 | 2 917 539 000 000 | |
| 2012 | 1 035 036 000 000 | 3 155 195 000 000 | |

2. Use the information in the table above to discuss whether you think the assumption that V is constant in the short term is a realistic assumption.
3. Explain the purpose of economic theory.

## ✍ Activity 6.7

1. Explain the following concepts clearly, using your own words:

   a. direct financing
   b. indirect financing
   c. information asymmetry
   d. monetary policy
   e. micro-finance institutions

2. Explain why financial intermediaries exist in the economy.

## ✍ Activity 6.8

1. Explain why the level of the repo rate is important in the economy.
2. Explain how a **decrease** in the repo rate will affect the economy.
3. Find out what the current repo rate is and discuss the significance of this level of the repo rate.

## Activities for learning unit 07

### ✍ Activity 7.1 (a)

Indicate whether the following statements are true (T) or false (F):

(1) The more open a country's economy is, the more vulnerable it is to changes in economic conditions in other countries.
(2) A country is said to have an open economy if a significant percentage of GDP is exported and a significant part of domestic spending is on imported goods and services.
(3) One of the basic reasons for international trade is that not all countries have the same factors of production (for example, natural resources).
(4) The law of relative (or comparative) advantage states that two countries will benefit from trade if the opportunity costs of production (or relative prices) differ between the two countries.
(5) Absolute advantage is a prerequisite for trade.
(6) Equal advantage is a prerequisite for trade.
(7) Comparative (or relative) advantage is a prerequisite for trade.

Statements (8) to (13) are based on the following information: Susan can knit four jerseys or sew eight dresses per week, while Jackie can knit three jerseys or sew four dresses per week.

(8) Susan has an absolute advantage in knitting jerseys.
(9) Susan has an absolute advantage in sewing dresses.
(10) Susan has a relative (or comparative) advantage in knitting jerseys.
(11) Susan has a relative (or comparative) advantage in sewing dresses.
(12) Jackie has a relative (or comparative) advantage in knitting jerseys.
(13) Jackie should specialise in knitting jerseys while Susan should specialise in sewing dresses.
(14) If country A can produce 2 400 tractors or 3 million tons of maize per year and country B can produce 1 500 tractors or 3 million tons of maize per year, then A should specialise in producing tractors, while B should specialise in producing maize.

### ✍ Activity 7.1 (b)

(1) Make use of the following information to illustrate the law of comparative advantage:

| | Guns | Roses |
|---|---|---|
| Country A | 20 | 80 |
| Country B | 10 | 20 |

## ✍ Activity 7.2 (a)

Indicate whether the following statements are true (T) or false (F):

(1) Exports create a supply of foreign exchange, while imports constitute a demand for foreign exchange.
(2) An exchange rate is the price of one currency in terms of another currency.
(3) An increase in South African imports from the United States will give rise to an appreciation of the rand against the US dollar.
(4) A fall in the value of the rand against the Japanese yen is described as a depreciation of the rand against the yen.
(5) One possible source of the demand for dollars in the South African foreign exchange market is American investors wishing to invest in South Africa.
(6) If American importers purchase more South African goods, the supply of dollars in the South African foreign exchange market increases.
(7) An increase in the supply of dollars in the South African foreign exchange market will result in an appreciation of the rand against the dollar.
(8) A depreciation of the rand against the US dollar will reduce the competitiveness of American goods and services in South Africa.
(9) If the demand for US dollars in the South African foreign exchange market falls, the rand will depreciate against the US dollar.

## ✍ Activity 7.2 (b)

(1) Mention two possible sources of:

    (a) the demand for dollars in South Africa
    (b) the supply of dollars in South Africa

(2) Use a numerical example to distinguish between an appreciation and a depreciation of the rand against the dollar.

## ✍ Activity 7.3 (a)

Indicate whether the following statements are true (T) or false (F):

(1) All economic activities taking place within the borders of a country are recorded in the balance of payments.
(2) The balance of payments is a summary record of a country's transactions with the rest of the world during a particular period.
(3) The flow of goods between South Africa and the rest of the world is recorded in the current account of the South African balance of payments, while the flow of services is recorded in the financial account.

(4) A deficit on the current account of the balance of payments indicates that the country exported more than it imported during the period in question.
(5) When a German company invests in a vehicle manufacturing operation in South Africa, the amount concerned is entered as an inflow in the financial account of the South African balance of payments.
(6) A country can afford to run current account deficits as long as they are matched by financial account surpluses.
(7) The SARB holds a portion of South Africa's gold production as part of the country's foreign reserves.

## ✍ Activity 7.3 (b)

(1) Define the balance of payments.
(2) What are the two main sub-accounts of the balance of payments and what type of transaction is recorded in each sub-account?
(3) What is the difference between the current account and the financial account of the balance of payments?

## Activities for learning unit 08

### ✍ Activity 8.1 (a)

Indicate whether the following statements are true (T) or false (F):

(1) The CPI is an inflation rate.
(2) The rate of change in the CPI is one of the possible measures of inflation.
(3) The CPI is an index of the cost of living.
(4) The consumer price index measures the cost of living, while the production price index measures the cost of production.
(5) The PPI excludes the prices of imported goods.
(6) The PPI excludes the prices of services ─ only goods are included in the PPI basket.
(7) The PPI includes the prices of capital goods.

### ✍ Activity 8.1 (b)

(1) Differentiate between nominal and real values.
(2) Describe the CPI.

### ✍ Activity 8.2 (a)

Indicate whether the following statements are true (T) or false (F):

(1) It is easy to define and measure unemployment.
(2) The unemployed include those people who are not willing to work.
(3) The unemployment rate is obtained by expressing the number of unemployed people as a percentage of the labour force.
(4) There will always be some frictional unemployment and this type of unemployment is not regarded as a serious problem.
(5) Cyclical unemployment occurs when there is a recession as a result of a temporary lack of sufficient aggregate demand in the economy.
(6) Cyclical unemployment is associated with recessions.
(7) Structural unemployment is a serious problem since it cannot be remedied by simply increasing the aggregate demand for goods and services.
(8) Workers who are replaced by labour-saving machines become structurally (or technologically) unemployed.
(9) Structural unemployment is usually limited to specific industries, sectors or categories of workers.

## ✍ Activity 8.2 (b)

(a) Define the unemployment rate.

## ✍ Activity 8.3

Indicate whether the following statements are true (T) or false (F):

(1) Economic growth is a smooth process.
(2) The expansion phase of the business cycle comes to an end at the peak of the cycle.
(3) The expansion phases of the business cycle (upswings) always last exactly as long as the recession phases (downswings).

## ✍ Activity 8.4

(1) The table below shows the GDP at current prices of country A for the years 1 and 2.

| Year | GDP at current prices |
|---|---|
| 1 | 100 |
| 2 | 110 |

Given the information in the table, explain why it is impossible to tell whether the 10% increase in GDP from year 1 to year 2 represents economic growth.

(2) Use the information in the following table to calculate the increase in real GDP between 2001and 2003.

| Year | Nominal GDP | Real GDP |
|---|---|---|
| 2001 | 280 | 280 |
| 2002 | 315 | 260 |
| 2003 | 305 | 300 |