

Course name:

ECS1601

Prepared and Presented by:

TAMMY PIKE

**NOTE REGARDING TEXTBOOKS:**

Please be aware that this set of notes is based on Philip Mohr and Associates 4<sup>th</sup> edition of *Economics for South African students* and not the newer 5<sup>th</sup> edition.

**Where possible attempts have been made to reference the new textbook as well. Please pay careful attention to the "NOTES RE CHANGES" in the text boxes.**

**While every care has been taken to include all relevant facts, the author cannot be held responsible for any omissions or errors in the notes provided.**

**Students are also reminded that any notes are not a substitute for the prescribed material.**

These notes serve only to provide a summarized version of the material that should be covered by students in the prescribed textbook. They are not intended to replace either the study guide provided by UNISA nor the textbook that has been prescribed.

LEARNING UNIT 1:  
 TEXTBOOK: CHAPTER 3  
 INTERDEPENDENCE OF THE MAJOR SECTORS, MARKETS AND FLOWS IN A MIXED ECONOMY.  
 [New textbook also Chapter 3: Production, income and spending in a mixed economy]

**NOTE RE CHANGES:**  
 While the content for this LU is still the same, in the new textbook it has been rearranged and some of the section headings have been changed. At the end of this LU there is a text box briefly summarising the information as it appears in the new textbook.

Some of the critical concepts in this LU:

Main participants in a modern, open economy are:

- Households
- Firms
- Governments
- Foreign Sector

The two main markets are:

- Markets for goods and services
  - Factor markets
- A third market:
- Financial markets

The three major flows are:

- Production
- Income
- Spending

1.1 Production, Income and Spending (Major Flows)

Production is of central importance to economists. Production does not take place for the sake of production alone. The goal of production is to satisfy consumers' demands.

The economic process is as follows:

- Households own the factors of production
- Firms use factors of production (scarce resources) to produce goods and services
- Firms pay income (returns on factors of production) to the households for the factors of production
- Households use the income to spend on goods and services.

}

MAKE SURE YOU CAN DESCRIBE ALL OF THESE.

*Be clear on leathers & Injection*

The participants/agents/spenders in a modern mixed economy are – households, firms, government and the foreign sector. They all spend and, therefore, they all earn an income. Exchange is the term economists use to explain what basically happens in the market place, either in the goods and services market or the factor market.

1.2 The Interdependence Between Households and Firms

Simple model, tell the story:

**Households:** people who live together and who make joint decisions or are subject to the economic decisions of others. Every person in the economy is deemed to be part of a household. It is the household that is the basic decision making unit in an economy. The members of the household are called consumers, since they engage in the consumption of goods and/or services produced by the firms. It is assumed that all factors of production are owned by individuals (members of households). The households (individuals) sell their factors of production (for example labour) to the firms. They then receive an income and use this to engage in consumption.

**Firms:** make the goods and services that consumers demand. They do this by employing or utilising the factors of production in a transformation process. Firms are the productive units in an economy. Firms will decide how goods and services are produced, via the pricing mechanism. A firm operates with the sole intention of realising a profit. One of the factors of production purchased by firms is capital. This includes items such as machinery and equipment. In fact any goods that are used to produce goods or services. The act of purchasing capital goods is call investment or capital formation.

**Markets:**

**Goods Market:** The goods market is a single market which represents markets for all goods and services. Firms sell the goods and services to households through the goods market.

**Factor Market/s:** The scarce resources required by the firms to produce the goods and services are purchased from the households on the factor markets. The incomes earned by the owners of the factors of production are as follows:

- Land / Natural Resources Rent
- Labour / Human Resources wages
- Capital interest
- Entrepreneurship profit

**Financial Market (Financial Sector):** acts as a link between households and firms with surplus funds and other participants who need funds. SAVINGS is a leakage from the economic circular flow, while INVESTMENT is an injection.

Financial institutions fit into the circular flow as links between the firms and households. Any surplus funds can be deposited at a bank and the bank will then lend this money out to those firms requiring additional funds. Financial institutions are nothing more than intermediaries (middle-men) between sectors of the economy with surplus units and those with a shortage of units – a deficit.

Use the space below to describe the main functions of the financial sector in the circular flow. Helps with flow of saved from savers to borrowers.

1.3 Government in the circular flow

The term "government" is a very broad term used to indicate ALL aspects of government – from national to regional and local. Often referred to as the "public sector" which is a term used to indicate anything government owned.

Government's economic activities involve three important (government) flows:

- \* Government expenditure on goods and services (G)
- \* taxes levied on households and firms (T)
- \* transfer payments which are payments made to individuals for which no productive service is rendered, e.g. pension payments, grants, etc.

Transfer payments DO NOT directly affect the overall size of production, income and expenditure flows.

look for what flows into for

1.4 Introducing the Foreign Sector

The fourth major sector to consider is the rest of the world. This is commonly referred to as the foreign sector. The South African economy has had strong links with the rest of the world in terms of trade. The South African economy is considered an open economy and as such, large quantities of foreign goods are consumed by South Africans (imports) while large quantities of South African goods are consumed in foreign countries (exports). The various flows between South Africa and the rest of the world are recorded in the balance of payments.

EXPORTS = INJECTION INTO THE CIRCULAR FLOW  
IMPORTS = LEAKAGE OR WITHDRAWAL FROM THE CIRCULAR FLOW

**NOTE RE DIAGRAMS:** Please note that all the diagrams are important. However, it is far more important that you **UNDERSTAND** them rather than learn them by rote. It is quite likely that these diagrams will simply be used as representations and can therefore appear very different in the exam. You must be able to work out what is being illustrated. See a simple example at the end of this learning unit.

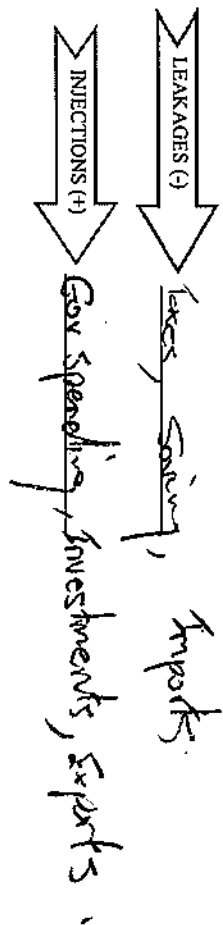
1.6 Total Production, Income and Spending revisited

The following symbols can be used to represent total spending or aggregate expenditure in any economy:

$C + I + G + (X - Z)$

This aggregate expenditure is comprised of:

- C - Consumption Spending
- I - Investment Spending
- G - Government Spending
- X - Spending on Exports (by foreigners)
- Z - Spending on Imports

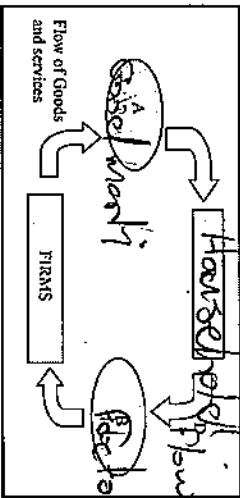


**NOTE RE CHANGES:** Section in the New Textbook:

- 3.3 Sources of production: the factors of production. This section describes each of the factors of production. This is the same content you studied in ECS1501.
- 3.4 Sources of income: the remuneration of the factors of production. This has been covered above. *new text*
- 3.5 Sources of spending: the four spending entities. This section deals with the introduction of Government, Foreign Sector and Financial Institutions into the economic circular flow. This has been covered above.
- 3.6 Putting things together: a simple diagram.
- 3.7 Illustrating interdependence: circular flows of production, income and spending.

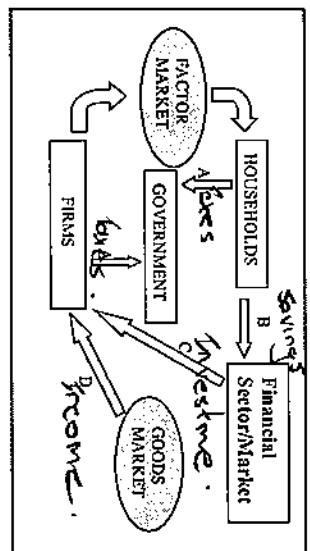
**Understanding the circular flow model:**

1. Complete the diagram below by giving the correct labels for A, B, C and D in the diagram below.



*Flow of Factor of production*

2. Label the flows A, B, C and D in the diagram below.



**LEARNING UNIT 2: THE MONETARY SECTOR**

**2.1 The Functions of Money**

- **Money as a Medium of Exchange**  
Money is a vital part of our lives. In earlier years (when money did not exist), people had to make use of the barter system which required a double coincidence of wants. The use of money means there no longer has to be a double coincidence of wants.
- **What is money?** Money is anything that is commonly accepted as payment for goods and services, or that is accepted in settlement of debts.
- **The first and most basic function of money is as a medium of exchange.**
- **Money as Unit of Account**  
Money allows us to state (and measure) the prices of goods and services. It helps consumers to determine what they can and cannot afford given their available means (money). Money is therefore a unit of account.
- **In a money economy all prices are expressed in monetary terms, e.g. in SA in rands and cents.**
- **Money as a Store of Value**  
A large portion of wealth is held in the form of money. The reason for this is that it is easy to exchange it for goods and services at some future date. Wealth can also be held in the form of fixed property, real assets, stocks and shares.

The benefit of holding wealth in money is that it has an immediate value, it is said to be the most liquid form of wealth.

*When can it be a disadvantage to hold money as a store of value?*

Money also acts as a standard of deferred payment. What this means is that it acts as a measure of the value of future payments. If you buy a house the future repayments will be given in rands and cents per month.

• **What Money is Not**  
 Money is not income or wealth.

- Income is the reward earned in the process of producing goods and services.
- Land earns an income of rent, labour earns wages, capital earns interest and entrepreneurship earns profit. This reward income is paid money.

Note: Income is a flow variable as it is always measured over a period of time; Wealth on the other hand is a collection of assets and is a stock variable.

**2.2 Different Kinds of Money**

Notice that money itself has no intrinsic value. The value of money (both coins and notes) is based on confidence. What this means is that a R50.00 note is worth R50.00 for no other reason than you (and the rest of South Africa's consumers) believe it has a value of R50.00. You have confidence that somebody else will take that R50.00 note from you for payment for goods and services to the value of R50.00! The paper it is printed on is not worth R50.00. If we all decided not to accept R50.00 notes what would happen? The R50.00 note would become worthless! Why? Because nobody would have confidence in it even if it is legal tender.

*What are the properties that a commodity needs to be useful as money?*

Uniformity; durability; divisibility; portability

You must know what is meant by:

Fiduciary money; credit money; legal tender

NOTE: Box 15-1 (new textbook 14-1): Cheques, Debit Cards, Credit Cards

**2.3 Money in South Africa**

Money is fairly easy to define, but difficult to measure. The South African Reserve Bank, which is in charge of the money matters in South Africa, uses three different measures of money - M1, M2 and M3.

*Money aggregates . 7 of 57*

Make sure you are able to define/describe/recognise each of these monetary aggregates.

M1 is defined solely on the basis of the function of money as a medium of exchange. The definition of money (M1) can be expressed with the following symbols in the form of an equation:

- $M_1 = C + D$
- M1 - Quantity of money
- C - Cash
- D - Demand deposits

*must do the rest M2, M3.*

**EXERCISE:**

Use the following tables showing monetary aggregates to answer questions 1-5

End of:	Coins and banknotes (Rm)	Demand Deposits (Rm)	M1 (Rm)	M2 (Rm)	M3 (Rm)
2004	(a) 39 059	382 414	421 494	818 740	914 150

a. Calculate the value of coins and banknotes in circulation at the end of 2004.

*M1 - Demand Deposits*

b. What was the value of short- and medium-term deposits at the end of 2004?

*M2 - M1*

c. What was the value of long-term deposits at the end of 2004?

*M3 - M2*

d. Which function of money is most closely linked to:

M1 .. *Medium of Exchange*

M3 .. *Store of Value*

**2.4 Financial Intermediaries**

As money grew in popularity so certain institutions developed which specialised in financial transactions. The goldsmiths of earlier days were the first bankers. They would take deposits (of gold sovereigns for example) from people for safe keeping and issue IOUs. It is these IOUs that became the first form of money as we know it today.

Refer to Box 15-2 in the prescribed textbook and see examples of financial intermediaries in SA: Banks; Central Monetary Authority; Insurance companies; Finance companies; Unit trusts. [This information is slightly different in the new textbook. Refer Box 14-2]

Financial institutions act as middlemen between those participants (households and firms) who have surplus funds and those who need, or have, a deficit of funds.

Notice the difference between direct and indirect financing. In the case of direct financing lenders deal directly with borrowers, no financial intermediary is involved. Indirect financing refers to the situation where financial intermediaries act between lenders and borrowers.

Students must also be able to differentiate between:

Real transactions:

*Buying and selling Goods & Services & Factors of production*

Financial transactions:

*Issuing and selling Bonds, Buying & selling Shares & for Bonds*

2.5 The South African Reserve Bank

The central bank is the most important financial institution in any modern economy. In South Africa we have the South African Reserve Bank or SARB. The SARB is the monetary authority in South Africa and its current functions can be grouped into the following four major areas of responsibility:

- formulation and implementation of monetary policy
- service to the government
- provision of economic and statistical services
- maintaining financial stability

Make sure you are able to describe each of the above functions briefly.

Are you able to describe each of the following terms?

*Refinancing system; clearing bank; lender of last resort; national payment systems;*

The constitution (supposedly) guarantees the independence of the SARB. This means that the government should not be able to dictate how the SARB uses its tools of monetary policy.

FUNCTIONING OF THE MONEY MARKET

NOTE RE CHANGES: In the new textbook the order has been changed in this section. Demand for money is covered first (14.6) and then money supply (stock of money, 14.7). The demand for money has remained the same but the section dealing with money stock and money creation has changed. The credit multiplier has been removed from the syllabus.

*Remember Not to Study*

2.6 The Supply of Money [Also referred to as the Stock of money]

M1, M2 and M3 (discussed previously) are used to determine the quantity of money. Please note that the quantity of money is a stock variable as it is possible to measure the stock of money in an economy at a point in time.

In order to examine the quantity of money or supply of money the following assumptions are made:

- We only use the definition of money - M1. Thus  $M = C + D$  ONLY!

*assumptions are very important.*

We assume that only banks are authorized to hold demand deposits. We assume that there is a central bank that exercises control over other banks.

The Role of Banks in the Money Creation Process

Refer to the prescribed textbook and complete the following:

*Who creates money? Bank only not central.*

What are demand deposits? *Money that is held by banks not used to be available immediately.*

- Briefly explain how demand deposits can be created (only in old textbook).
- 1) Passive creation of money: when a person deposits cash with a bank. The bank now has additional stock of money to lend out. [Money supply does not change immediately]

2) Active creation of money: when the bank extends a loan (credit) to a person (who did not have the cash) and then creates a deposit account for the client to access the loan. [Money supply increases immediately]

Under our current system, the creation of demand deposits is determined by the demand for credit which is, in turn, influenced by the interest rate. The central bank is therefore able to regulate the amount of money that is created by banks through interest rates. The money supply is, therefore, said to be demand driven.

Other Factors that can Influence the Money Supply:

- Transactions with foreign countries: when the gold and foreign exchange reserves increase so does the money supply.
- Government transactions: when the government deposits money directly with the central bank the money supply decreases.

2.7 The Demand for Money

Holders of wealth must decide how to hold their wealth. In this case they are given only TWO choices:

- Money (which does not earn the holder interest) and
- Bonds (which do earn interest)

The demand for money can best be explained as the amount of money that participants in the economy plan to hold in the form of money balances. The opportunity cost of holding money is the interest that could have been earned had the money been used to purchase interest bearing bonds.

Money will be held if, and ONLY if, the value of the things it can do for you exceed the cost of holding the money! The demand for money is, therefore, directly related to the functions it can perform for you (money is what money does).

Components of the demand for money:

**TRANSACTIONS DEMAND  
DEMAND FOR MONEY AS AN ASSET**

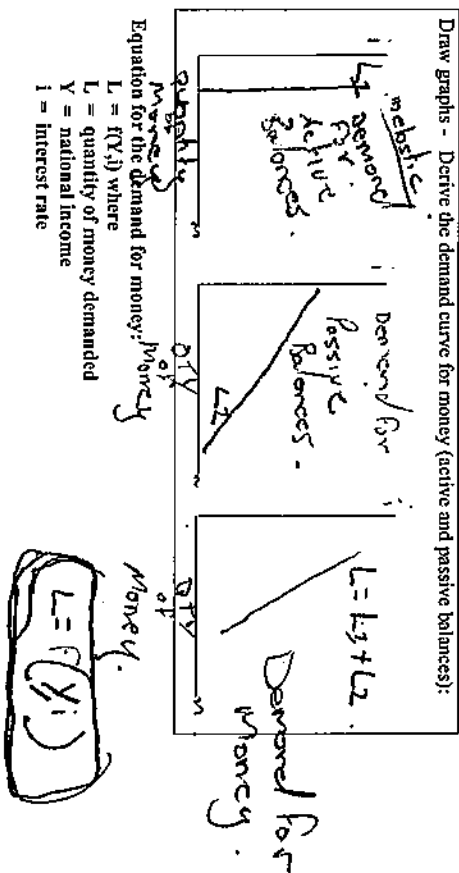
Why hold money – *the liquidity preference theory* – John Maynard Keynes.

- Transaction motive – Without money, no transactions are possible. Consider the time between paydays. Transaction demand for money is a function of national income. [ACTIVE BALANCE; determined by income]
- Precautionary motive – This is very similar to transaction motive, but it simply allows for unforeseen expenditure or unpredictable expenditure. Precautionary demand for money is, therefore, also a function of national income. [ACTIVE BALANCE; determined by income]
- Speculative motive – There is a negative relationship between the quantity of money demanded for speculative purposes and the level of interest. Thus the higher the prevailing interest rate, the lower the speculative demand for money. [PASSIVE BALANCE; determined by interest rate]

[NOTE RE CHANGES: in the new textbook this section only deals with Transaction and Speculative motives. It ignores the precautionary motive.]

Refer to Fig 15-1 (New textbook: Figure 14-1) in the prescribed textbook and use the space below to draw and label the graphs which illustrate the demand for active and passive balances.

Draw graphs - Derive the demand curve for money (active and passive balances):



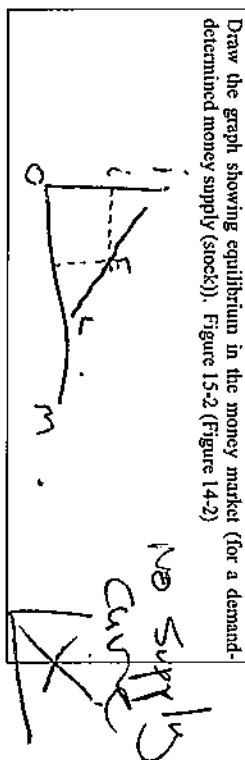
**2.8 Equilibrium in the Money Market**

There is no Independent Money Supply Curve: money supply is determined by the interaction of demand for money and the interest rate level. This is why we refer to the STOCK of money and no longer the SUPPLY of money.

Refer to Figure 15-2 (New textbook 14-2) and note the following:

- If interest rate is  $i_0$  then quantity of money is  $M_0$
- When interest is reduced to  $i_1$  then money (quantity demanded) will increase to  $M_1$ .
- This is then called a **demand – determined money supply (stock)**

Draw the graph showing equilibrium in the money market (for a demand-determined money supply (stock)). Figure 15-2 (Figure 14-2)



- What happens to equilibrium in the money market when national income increases? [New textbook: what happens to the money stock?] *Shift*
- What happens to equilibrium in the money market when the interest rate changes? [New textbook: what happens to the money stock?] *movement along*
- A key relationship in the financial market is the inverse relationship between interest rates and bond prices. Make sure you are able to apply the rules: when the price of bonds decreases, the interest rate increases. When the price of bonds increases, the interest rate decreases. Refer to Box 15-9 (New textbook: 14-4). *R ↓ P ↑, R ↑ P ↓*

**2.9 Instruments of Monetary Policy**

Monetary policy can be defined as the steps that the monetary authority takes to try and influence the money supply and interest rate. This is done with the view to achieving the macro-economic goals discussed earlier.

**Monetary Policy Framework**

Policy approaches have changed from mainly direct interventions, to a more market-orientated approach.

- Direct intervention: during 1960's – quantitative restrictions were placed on the creation of credit. Examples are credit ceilings and deposit rate controls.
- Market-orientated approach: this approach entails guiding the banks to take certain actions. Examples are the liquid-asset based system, cash reserves, monetary growth targets, and inflation targeting.

The following are the main **MONETARY POLICY** instruments used by SARB. Make sure that you are able to give explanations as this section is frequently asked in the examinations:

Bank **Buyer** Accommodation Policy - Interbank rate and repo rate. Accommodation policy from SARB . . . the SARB comprises changes in interest rate (repo rate) and other conditions on which cash is made available to banks. The main tool (variable) whereby the SARB can regulate the quantity of money created in the economy is the cost of credit (repo rate). Changes in the repo rate lead to changes in interest rates at which credit is made available. Also known as **depository tender system** / **market instruments** / **collateral** / **PAWS**

Open-Market Operations Policy - SARB can buy and sell government bonds. This is carried out in order to exert a specific influence on interest rates and the quantity of money available (money supply/stock).

Practice Questions:

- If the SARB follows an open-market policy by purchasing government bonds what will happen to:
  - the price of bonds and  $\rightarrow \uparrow$  Demand/Incentive  $\rightarrow \uparrow$   $\rightarrow \uparrow$
  - the interest rate on bonds.

- Explain how SARB uses open market operations to decrease the money supply in the economy. What happens to the interest rate.
- Use a graph to illustrate the inverse relationship between the demand for money and interest rates. **Look at Page 12.**
- Explain how the stock of money changes when the level of income in the economy decreases. **Photo**

### LEARNING UNIT 3: TEXTBOOK: CHAPTER 16: THE PUBLIC SECTOR [New textbook: Chapter 15]

#### 3.1 Role of government in the economy

All economies can nowadays be classified as mixed economies in which the government, the private sector and market forces all play an important role. Private initiative and market forces are generally more efficient than any other system in finding solutions to the basic economic problems of what, how, and for whom to produce?

Government should not get involved in the production of goods and services that can be produced much more efficiently by the private sector.

The free market system is basically very efficient. This means that for a given distribution of income, it allocates the resources in the best possible way. When markets do not function perfectly, the market outcome may not be efficient.

The role of the government can be summed up as follows:

- The allocative function: the role of government in correcting market failure and achieving a more efficient allocation of resources.
  - The distribution function: the steps government takes to achieve a more equitable or socially acceptable distribution of income than that generated by market forces.
  - The stabilisation function: measures taken by government to promote macroeconomic stability.
- Efficiency must not be confused with equity (fair). Market outcomes that are considered efficient need not be fair (equitable). The implications of this for deciding on the appropriate mix of government and free market are referred to as the reasons for government intervention:
- Private initiative and market forces are generally more efficient than any other possible solution.
  - Generally free markets cannot function properly without government enforcement of the rules, e.g. well-define property rights.
  - It is recognised that markets do not always produce efficient outcomes.
  - Sometimes they fail = market failure.
  - Market systems produce relatively efficient outcomes but they often do not produce equitable outcomes.

#### 3.2 How does government intervene? Not fiscal policy

The instruments which government can use to achieve its objectives:

- Public Provision of goods and services, e.g. national defence.
- Role as market participant, e.g. as an employer of labour. Government as the largest employer of labour in the economy can try and set an example for the rest of the economy through its wage policies and other employment practices.
- Government spending: the level and composition of government spending can have a powerful impact on the economy. Apart from spending on goods and services, government also makes transfer payments.
- Taxation: through taxation the government can finance expenditure and use the structure of taxation to achieve various objectives. It can be used to redistribute income, promote desirable activities (tax incentives) and to penalise other socially undesirable activities (tax penalties).
- Regulation can also be used by government to intervene in the economy. Example is labour laws.

#### 3.3 Government failure

Government intervention in markets to help solve the problems of market failure, are not guaranteed to be successful. Governments and government action can also fail.

The three main sources of government failure are:

- o Behaviour of politicians who are more interested in getting re-elected than considering the long-term effects of their actions. They tend to favour actions that give short-term positive effects and help to make them popular.
- o Bureaucratic failure: this arises because of lack of competition and the fact governments are not driven by profit (bottom-line constraints).
- o Rent-seeking behaviour: interest groups use their political influence to seek economic rents from government. Economic rent is the part of remuneration of owners of factors of production over and above the payment that the resource would receive in the best possible alternative employment. This can be achieved through favourable regulations, subsidies, negotiating restrictions that will limit competition, wasteful use of society's scarce resources.

3.4 Nationalisation and privatisation

Nationalisation refers to the situation where government takes over the ownership or management of private enterprise (with or without compensation).

Privatisation refers to the sale of public assets to the private sector. Private enterprise takes over ownership of assets from the public sector.

The arguments for privatisation include the following:

- o State-owned enterprises are bureaucratic, inefficient and unresponsive to consumer's wishes. They are often a burden to the taxpayer.
- o Privatisation can attract foreign direct investment
- o Privatisation can broaden the tax base.
- o Privatised enterprises have greater access to investment capital and are able to adapt more easily to changing economic conditions.
- o Proceeds from privatisation can be used for example housing, education, health
- o Privatisation will increase share ownership in the economy.

The arguments against privatisation include the following:

- o Privatised firms may not necessarily be more efficient.
- o Privately owned firms do not necessarily take account of externalities.
- o Private firms may not take a broader view of public interest and unprofitable services may be suspended, e.g. telephone services to outer lying areas.
- o Organisations such as Cosatu have opposed privatisation because of argued job losses.

3.5 Fiscal Policy and the Budget

All governments spend money on goods and services. In order to pay for their spending, they need to raise taxes and or engage in borrowing. Governments,

therefore, regularly decide what their spending is going to be – announced in the annual budget. They also indicate how they will finance their spending. All governments have a policy in terms of level and composition of government spending, taxation and borrowing. This is commonly called Fiscal policy.

The main instrument of fiscal policy is the BUDGET and the main policy variables (tools) are:

- (1) Gov Spending
- (2) TAXES

The budget is presented to Parliament by the Minister of Finance, usually in February.

Some important points regarding the budget:

- It is a reflection of political decisions
- The size and composition of spending can have a significant impact on aggregate production, income and employment.
- The budget (i.e. the income and expenditure) is often used to deal with specific economic problems, for example, to stimulate economic growth, to encourage employment.

*Why is fiscal policy regarded as an instrument of demand management?*

Gov spending an increase in

Name another important instrument of demand management:

• Monetary Policy

Explain the difference between an expansionary fiscal policy and a restrictive or contractionary approach:

Expansion GNTV  
Restrictive GNTV

3.6 Government Spending

Remember  $C + I + G + (X - Z) = GDP$ . It is clear that government spending is a very important part of total spending in the economy. Government spending in the South African economy has generally been on the increase since the 1950s.

Some reasons for an increase in Government Spending (G):

- Change in consumer preferences: Income increases so a consumer's demand for services tends to increase more than his/her demand for goods. The government provides some of these services.



- Political and other shocks. South Africa's involvement in wars in SWA, Angola and Mozambique. Growing domestic unrest. Sanctions.
- Redistribution of income. Government can use social spending to move the focus from the wealthy sector to the poorer sector.
- Misconceptions and entitlement. Large burdens are placed on the shoulders of government by people's belief that they are entitled to certain things – for free, or that they are, indeed, free – in the absolute sense.
- Population growth and entitlement. Urbanisation leads to a large increase in demand for basic services.
- Population growth and urbanization. Government must spend in order to supply these services.

### 3.7 Financing of Government Expenditure

There are three ways of financing government spending:

- **Income from property** – includes interest and dividend income derived from governments full or part ownership of certain enterprises – Eskom, Telkom, Transnet.
- **Taxes** – the main source of government income. But taxation alone is insufficient to cover government spending.
- **Borrowing** – the difference between income (tax) and spending by the government is the budget deficit. Borrowing finances this deficit. The government can borrow from domestic or international capital markets (by issuing bonds), as well as the SARB. Borrowing from the SARB can be inflationary as it increases the money supply; as a result, this is called inflationary financing. Government borrowing increases public debt.

Describe the following terms:

Budget deficit:

Gov spending more than income (taxes).

Public debt:

what Gov borrows to cover the deficit

### 3.8 Taxation

Tax is a compulsory payment to the government and is the largest single contribution to funding government spending. Tax is a rather emotive issue! People do not like paying tax and each person feels as though they are personally bearing the brunt of the tax burden.

#### Criteria for a Good Tax

J B Say, the French economist wrote, "the best of all taxes is that which is the least in amount." Three basic criteria for ensuring that taxes are "good" have been developed.

The main criteria for a good tax:

**NEUTRALITY:** in a market based system the economic problem is solved by the market mechanism in which price play a key role. Taxes can distort the operation of the market and therefore distort the allocation of resources and make society worse off. For this reason every effort is made to keep taxes as NEUTRAL as possible, i.e. any tax should have as little possible effect on relative prices.

**EQUITY:** tax burden should be spread as fairly as possible among taxpayers. Two basic principles are applied:

- The ability to pay principle which includes:
  - vertical equity = rich people should pay more tax than poor people.
  - horizontal equity = people in the same position should pay the same tax.
- The benefit principle. According to this principle beneficiaries should make some sort of payment for the benefits they receive. Such payments are called user charges.

**ADMINISTRATIVE SIMPLICITY:** compliance costs and administration costs must be kept as low as possible. Differentiate between:

- Tax avoidance
- Tax evasion

#### Different types of Tax

**Direct** – levied on persons – income tax and estate duty among others.  
**Indirect** – levied on transactions – vat and customs duties among others.  
**General** – Vat is a general tax as it is levied on most goods and services.  
**Selective** – Excise tax is a selective tax as it is applied only to alcohol, tobacco, fuel and a number of luxury goods in South Africa.  
**Progressive** – As your income rises so the % payable to tax rises – income tax.  
**Proportional** – The tax rate remains the same at all levels of income – basic company tax in South Africa.  
**Regressive** – As your income increases so the % payable decreases – Vat.

### 3.9 Taxation In South Africa

Distinguish between each of the following:

% on each additional Rand earned

Marginal Tax rates:

Average Tax Rate:

of 1k as a % of income

Concern has been expressed regarding government's increasing share of GDP in the economy. The argument has been raised that this increases government spending is crowding out private investment spending.

### 3.10 Tax Incidence: Who Really Pays the Tax?

[This section has been removed from the syllabus]

**LEARNING UNIT 4:  
TEXTBOOK: CHAPTER 17 : THE FOREIGN SECTOR  
[New textbook: Chapter 16]**

The process of globalization: trade is expanding, capital markets have developed, tourism is increasing and new technologies are linking citizens from different parts of the world. By opening new markets, sharing knowledge and increasing the efficiency of resources, globalization can expand opportunities for people and reduce poverty. There are also risks: increased vulnerability to external shocks, which have their origin in the foreign sector. (The sub-prime lending crisis in the USA in the latter part of 2008 is a case in point). Increased competition creates losers as well as winners.

The extent to which a country is involved in the international community through the process of trade is called their degree of openness or integration. The South African economic is described as an open economy.

**4.1 Why Countries Trade**

In reality it is better for people (and countries) to specialise in what they do best and then trade. This was a central principle addressed by Adam Smith in his book "The Wealth of Nations". The idea is that countries must do what they do best and then trade with other countries for those goods and services that they do not have skills to produce efficiently. What countries are good at doing is directly related to their factor endowments.

**NOTE RE CHANGES:**  
The story in the section for absolute advantage has been "Africanised" in that the example used in the new textbook deals with South Africa and Zimbabwe. The outcome is still the same as the old textbook scenario that deals with Japan and Australia. In the case of comparative advantage the example is still the same although the format has changed.

**Absolute Advantage**

Consider table 17-2 (new textbook: no table refer text box above) in the prescribed textbook. When analyzing the concept of absolute advantage, note the following:

- This example deals with two countries and two products.
- Without trade, one worker in Australia produces 100kg of wool OR 5 digital cameras; one worker in Japan produces 50kg of wool OR 10 digital cameras.
- Australia has an absolute advantage in the production of wool while Japan has an absolute advantage in the production of digital cameras.



**Comparative Advantage**

Note that absolute advantage is not a prerequisite for trade: Trade can (and does) take place even when one country has an absolute advantage in the production of both goods; that is to say, when it is more efficient in the production of both goods. David Ricardo identified this situation which is called the principle of comparative advantage. According to this theory, both countries can (and will) benefit from trade if the opportunity costs of production differ in each country.

**Equal Advantage**

.....

Sources of Comparative Advantage [Has been removed from the new textbook?]

- Technology – technology invariably means cost savings and greater efficiency.
- Resource endowments – Heckscher-Ohlin's theory states that "each country will tend to export those goods that most intensively use the countries relatively abundant resources."
- Differences in tastes or demand. Note the commentary in the prescribed textbook.

**APPLICATION EXERCISE:**

Use the table showing the number of shirts and jackets that Country A and Country B are able to produce per day, to answer the question below:

	Shirts (per day)	Jackets (per day)
Country A	20	10
Country B	60	20

Explain whether trade will take place between these two countries.

Country B has an ABSOLUTE ADVANTAGE in both products.

**4.2 Trade Policy [Protectionism]**

This section has been removed from the syllabus. The following is a summarized version just in case!!

By specialising and trading, the world economies enjoy greater benefits and a greater production level in all goods and services. Economists consider this a welfare improvement. As a direct result, many students feel that free trade is the norm. In reality, nothing can be further from the truth! All governments take steps to protect local firms and industry from foreign competition. In order to implement a policy of trade protection governments make use of import tariffs, quotas, subsidies, and other controls.

**Import Tariffs (one form of protection)**  
 Import tariffs are duties or taxes on the value of goods imported from foreign countries. They can be used to protect domestic firms against competition from imports (protective tariff). Import tariffs may also be used as simple revenue generators for the government (revenue tariffs). They are grouped into two categories:

- Specific taxes – A fixed amount that is levied on each unit of the imported item.
- Ad valorem – A tariff that is levied as a % of the value of the imported item.

Revenue tariffs are normally imposed on goods that are not manufactured in the domestic (local) market. Thus there can be no argument that the tariff has been levied for reasons of protection!

Protective tariffs are normally imposed to protect local industry from competition from foreign countries.

**Other Measures for Protection [BARRIERS TO TRADE]:**

- Import quotas – this is a quantity-based restriction on imports. A quota aims at physically limiting the quantity of incoming goods.
- Subsidies – Subsidies granted to domestic manufacturers have the same impact as a tax on the imported good. Instead of raising the price of the foreign good, you are simply lowering the price of the domestically-produced good.
- Other non-tariff barriers – Voluntary export restraints, channelling of government contracts to local firms, even when they are not as competitive as a foreign tender. Domestic content rules.
- Exchange controls – An alternative to restricting the flow of goods between countries is to consider limiting the availability of foreign exchange to pay for the goods in question.
- Exchange rate policy – Movements in the exchange rates can affect the flow of goods and services between countries. If the rand weakened substantially this would mean that imports would become significantly more costly while exports would become significantly more attractive to foreign buyers. Exchange rate movements can often be far more effective in curbing imports than any of the other measures we have discussed so far.

**NOTE RE CHANGES:**  
 Please note that the section on the Balance of Payments appears in chapter 13 in the new textbook, 13.6!! The content has essentially remained the same.

**4.3 The Balance of Payments (BOP)**

The BOP is an account that records the economic transactions between the residents of one country and the rest of the world. The BOP relates to a certain period and is made up of the following: current account, capital transfer account, financial account, unrecorded transactions and the net change in the gold and other foreign exchange reserves.

Table 17-3 (new textbook: 13-6) in the prescribed textbook (this table must be studied in detail)

- ① Current Account  
 Students must know all the sub-accounts in the current account and be able to give examples of what would appear in each:
- Merchandise exports and Merchandise imports
  - Net gold exports (in SA)
  - Service receipts and service payments
  - Income receipts and payments
  - Current transfers (net receipts/payments)

*How is the trade balance calculated, and what is its significance?*

*Merchandise Ex + Net Gold Ex*  
*Imports*

② Financial Account  
 This account records transactions in assets and liabilities. The financial account has three main components:

- Direct investment – purpose is to gain control of, or have considerable influence over, the management of an enterprise. This can be either via the acquisition of an existing operation or starting a new operation.
- Portfolio investment – purchase of assets such as shares and/or bonds.
- Other investments – all financial transactions not included in the above two categories. These include loans, currency and deposits. Short term trade credit falls in this category.

③ The unrecorded transactions are the next entry on the BOP. Since the double entry system is used to record transactions on the BOP, the net sum of all credit and debit entries, should equal the change in the countries net gold and other foreign reserves. In reality this does not happen. All mistakes and omissions are recorded in the "unrecorded transactions".

④ Gold and other Foreign Reserves

A country receives foreign exchange (forex) for exports and also has to pay forex (for imports). If the income (receipts) of forex exceeds forex payments, then the country's forex reserves will rise. If the country has to pay out more forex than it receives, then the forex reserves will fall. The sum of all the accounts we have discussed thus far will, therefore, be reflected in the change in foreign reserves. A part of South Africa's gold production is held by the SARB as part of foreign reserves. If necessary, the government can sell their gold holding on the foreign market to secure more foreign exchange (forex) reserves.

The following are the reasons why the gold and foreign reserves are the most important totals on the South African balance of payments:

- They show the overall position of the BOP.
- They ensure smooth flow – they act as a buffer or reservoir
- Forex reserves prevent large movements in the exchange rate
- They are a measure of how successful the government has been in stimulating economic growth without running into BOP difficulties.

4.4 Exchange Rates

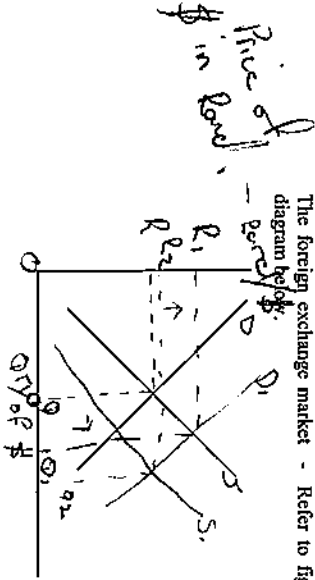
Definition: The rate at which currencies are exchanged is known as the rate of exchange or the exchange rate.

Foreign Exchange Market

Foreign exchange (Forex) is traded on the foreign exchange market.

Figure 17-3 (new textbook: 16-2) in the prescribed textbook illustrates the forex market for SA Rands and US Dollars. As you can see, it is very similar to the demand and supply graphs studied in microeconomics. The real difference is not in the actual demand and supply curves, but in the value measured on the vertical axis.

The foreign exchange market - Refer to figure 17-3 (16-2) and label the diagram below:



Rand has depreciated against \$

Demand for Foreign Exchange (Dollars)

What transactions are likely to lead to an increase the demand for a foreign currency in a country?  
 more exports

Supply of Foreign Exchange (Dollars)

What transactions are likely to lead to an increase in the supply of foreign currency in a country?  
 more tourists + more imports

Equilibrium Exchange Rate – refer again to Figure 17-3 (new textbook: 16-2) in the prescribed textbook. Notice how the market forces determine the exchange rate. At equilibrium \$1 = R8. Briefly explain how this equilibrium is reached:

Changes in supply, demand and equilibrium: Appreciation and Depreciation  
 Figure 17-4 (new textbook: 16-3) in the textbook illustrates a decrease in the supply of US Dollars relative to a constant demand for US Dollars. As you would expect for any other good, if the supply decreases and demand stays the same, the price of the good in question will rise (the rand has depreciated against the dollar).

Complete the following:  
 When the supply of foreign currency on the South African foreign exchange market increases we will say that the rand has appreciated against that specific currency. Why?

Show, by means of a graph, how an increase in the demand for USSs on the South African forex market will lead to a depreciation of the rand against the USS:

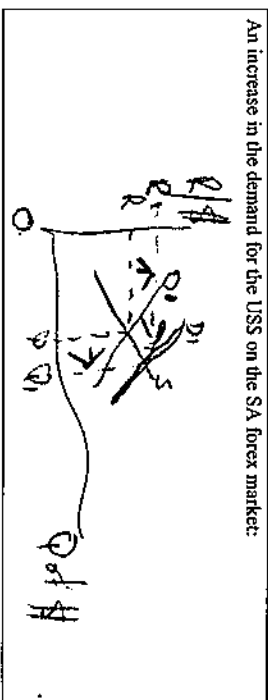


Table 17-4: changes in supply and demand - a summary.  
 [New textbook: Table 16-1]

Table 17-5: Impact of changes in rand/dollar exchange rate for South Africa.  
 [New textbook: Table 16-2]  
 COMPLETE THE TABLE BELOW AND LEARN IT

(X-2)

Changes in R\$ exchange rate	Export prices	Import prices	Current account	Domestic prices
Rand depreciates against dollar	Ext ↑	Ext ↓	↑	↑
Rand appreciates against dollar	Ext ↓	Ext ↑	↓	↓

**Exchange Rate Policy**

Exchange rates can be one of the most important prices in an economy. What can be done if the rates are particularly volatile? If you have a floating exchange rate (open to influences from changes in demand and supply in the forex market), then there are three choices:

- Do nothing – leave the market forces to run their course.
- Intervene in the forex market – buy or sell forex on the forex market to influence the market, often called managed floating.
- Use interest rates – if the SARB wants to avoid the Rand depreciating, it can raise the interest rates relative to the rest of the world and thus attract an inflow of portfolio investment (capital). The result will be an increase in the demand for Rands relative to other currencies and, as a result the rand will appreciate or worst case scenario, remains unchanged.

**4.5. The Terms of Trade (17.5)**

"It may be said that a country exports so that it can import." Read through section 17-5 in the prescribed textbook and explain what this statement means:

Terms of trade is the ratio of export price to the import price.

Terms of Trade = (Export Price Index / Import Price Index) x (100/1)

Terms of Trade increase = Improvement in the welfare of the country

**EXERCISE**

Use the information in the table below to answer questions 1 and 2.

Country A	50 TVs	or	100 Pairs of jeans
Country B	75 TVs	or	300 Pairs of jeans

- The opportunity cost of producing one television (TV) in Country A is.....
  - 1/2 a pair of jeans
  - 2 pairs of jeans
  - 100 pairs of jeans
  - 1 1/2 pairs of jeans

- Which one of the following statements is correct regarding the trade between Country A and Country B?
  - Country B has an absolute advantage in the production of jeans and a comparative advantage in the production of televisions (TVs).
  - Country A has an absolute advantage in the production of televisions and jeans.
  - Country A has a comparative advantage in the production of televisions (TVs).

- Assume that in one week South Africa is able to produce 15 units of coal or 30 units of apples. Zimbabwe is able to produce 20 units of coal or 120 units of apples. Which one of the following statements is **incorrect**?
  - Zimbabwe has a comparative advantage in the production of coal.
  - Zimbabwe has a comparative advantage in the production of apples.
  - South Africa has a comparative advantage in the production of coal.
  - Zimbabwe has an absolute advantage in the production of both goods.

- Identify the main account and the sub-account in which each of the following transactions would appear:
  - Woolworths in South Africa purchases biscuits from Holland.
  - Mr Peters, a British citizen, has recently invested in Standard Bank shares, which are listed on the JSE.
  - Mercedes Benz has expanded its manufacturing plant in the Eastern Cape.
  - Susan Albright, a South African citizen, receives dividends on her investment on the NY stock exchange.
  - Karabo, from SA, is taking a gap year and is travelling through Europe. Her parents send her an extra R5000 to help her.

LEARNING UNIT 5:  
TEXTBOOK: CHAPTER 4  
New textbook: Chapter 131

**MEASURING THE PERFORMANCE OF THE ECONOMY**

**NOTE RE CHANGES:**  
The content in this chapter has remained the same in the new textbook except for the inclusion of the Balance of Payments.

- Macroeconomic Objectives  
The following macroeconomic objectives are used to assess the performance of the economy:
  - Macroeconomic Objectives

- Economic Growth – An increase in total production of goods and services. Not an easy task, especially under the additional pressures of a rapidly growing population.
- Full Employment – In the ideal situation a country's resources (particularly labour) should be fully utilised. In reality, the situation can be very different. Unemployment leads to social problems. was implemented by Botswana.
- Price Stability – Keeping inflation under control. CPI, PPI.
- Balance of Payments Stability – Ensuring that the balance of payments does not run a prolonged deficit OR surplus. Exchange rates.
- Equitable Distribution of Income – This relates to a socially acceptable distribution of income.

5.2 Measuring the Level of Economic Activity: GDP

To measure economic growth, it is necessary to determine the total production of all final goods and services in a country in a specific period. In South Africa this task is carried out by Statistics SA and the South African Reserve Bank. One of the most important concepts for measuring economic activity is Gross Domestic Product (GDP).

**Define GDP:** The total value of all final goods and services produced within the boundaries of a country in a specified period of time.

- The above definition contains some key elements, these are:
- Value – use the price of the goods and services produced to obtain the total value of production.
  - Final – One of the biggest problems with calculating GDP is the care that must be exercised in avoiding double counting. It is very easy to overestimate the value of GDP by counting things more than once.
  - Domestic – refers to all participants operating within the borders of a country.

How to overcome the problem of double counting in GDP:

- Only count the value added at each stage. Table 4-1 (new textbook: table 13-1) in the prescribed textbook illustrates this scenario very clearly.
- A second way to avoid double counting is to use the expenditure method. That is to say you ONLY count the values of goods and services which reach their final destination; in other words, exclude intermediate goods and services.
- The third and final way of avoiding double counting is by using the income method. The income that is earned by producing a good or service is equal to the value that is added at that stage.

The three methods that may be used to measure GDP are:

- Income method uses Factor Cost
- Expenditure method uses Market prices
- Production method (value added) uses Basic prices

These three methods essentially measure the same thing, just at different points in the circular flow. Please note that in the real world, calculation of the value of GDP is infinitely more complex than we have just made it out to be.

**Further Aspects of the Definition of GDP**

GDP is a geographic concept. The definition clearly states "within the borders of a country". This is signified by the term domestic in the title Gross Domestic Product. Also note that, GDP relates to a particular period. GDP is concerned with the production of NEW goods and services in the current period under consideration. Goods and services produced in an earlier period are not taken into consideration. The resale of existing goods (for example houses, cars, furniture etc.) is not part of GDP. GDP ONLY reflects production that took place in the year in question. GDP is, therefore, a flow variable. Take note that production and income are in fact 2 sides of the same coin – in GDP "income" can be substituted for "product".

**KNOW THE DIFFERENT PRICES:**

Measurement at Market Prices, Basic Prices and Factor Cost (or Income)

The three ways of calculating GDP will only give the same result if the same sets of prices are used in all three calculations. There are three sets of prices that may be used:

- Market Prices – used when calculating GDP according to the expenditure method. Final stage
- Basic Prices – used when calculating GDP according to the production or value added method. uses Basic Price the Difference
- Factor Income – used when calculating GDP according to the income method. First stage

Thus different valuations will yield different results and one should always check at what prices GDP has been calculated and expressed.

The difference between these three prices is the result of various taxes and subsidies.

- (1) GDP @ Market prices  
Less Taxes on products  
Plus Subsidies on products  
= GDP @ Basic Prices
- (2) GDP @ Basic Prices  
Less other taxes on production  
Plus other subsidies on production  
= GDP @ Factor cost

*What happens if you reverse the process shown above: starting with GDP at factor cost moving to GDP at basic prices and then ending with GDP at market prices?*

*GVA is Gross Value added*

**EXAMPLES OF different subsidies and indirect taxes:**

- Taxes on products include vat and duties.
- Taxes on production include payroll taxes, business and professional licenses.
- Subsidies on products include per unit export subsidies.
- Subsidies on production include subsidies on production or payroll.

**Measurement at Current Prices and at Constant Prices**  
 It is important to understand the difference between current and constant prices:

[The following is a simplified version of the explanation which might help your understanding]

- GDP at current prices is the same as **nominal GDP**. In this case goods and services are measured at current prices. It is, therefore, difficult to identify whether any increases are caused by price increases or an increase in the goods and services produced.
- GDP at constant prices is the same as **real GDP**. In this case goods and services produced in a year are valued in terms of the ruling prices in a specific base year. This eliminates the effects of price increases and allows for the measurement of economic growth.

**5.3 Other measures of Production, Income and Expenditure(4.3)**

While **GDP** is the most commonly used measure of economic activity, it is not the only one.

**Gross National Income**

In calculating GDP, it did not matter who owned the factors of production or who produced the goods and/or services. All that mattered was that they were made within the boundaries of South Africa!

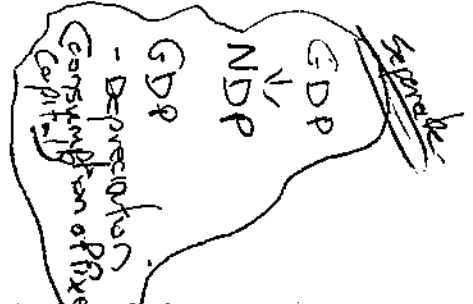
In terms of GNI (or GNP), economists are trying to calculate the income earned by South African citizens or permanent residents of South Africa.

Show how GDP is converted to GNI:

$$\text{GDP} + \text{Primary Income Receipts} - \text{Primary Income Payments} = \text{GNI}$$

Note that **Primary income receipts** include all profits, interest and any other income from investments abroad which accrue to South African residents. These include all wages and salaries earned by permanent residents outside South Africa.

**Primary income payments** include all profits, interest and any other income from domestic investments which accrue to residents of other countries. These include all wages and salaries earned by foreign workers engaged in domestic production, that is to say, within South Africa.



**NOTICE** that GDP is used to indicate the level of economic growth, while GNI is used to indicate the standard of living of South African citizens.

Differentiate between:

Expenditure on GDP

$$\text{GDP} = \text{Expenditure on GDP} = C + I + G + X - Z$$

C = Consumption Spending

I = Investment Spending

G = Government Spending

X = Exports

Z = Imports

and

$$\text{Gross Domestic Expenditure: } \text{GDE} = C + I + G$$

This calculation is used by economists when they are interested in establishing the expenditure within the borders of South Africa.  
 GDE includes imports (as the spending originates in South Africa) but excludes exports (as the spending originates in the rest of the world).

**INVESTMENT SPENDING BY FIRMS:**

In the national accounts, gross capital formation has two components: gross fixed capital formation and change in inventories.

Fixed capital formation refers to the purchase of capital goods (e.g. buildings), while changes in inventories reflect goods produced during the period that have not been sold, or goods produced in an earlier period but only sold in the current period.

[Note that the above is what is commonly referred to as I (Investment) in the GDP identity above.]

**5.4 Measuring Employment and Unemployment**

In order to assess whether macroeconomic objective of Full Employment is being achieved, it is necessary to measure employment and unemployment.

While in principle it appears easy to measure employment or unemployment, in practice it is somewhat more difficult. It becomes necessary to define unemployment clearly and to determine what exactly constitutes employment.

EAP = Economically Active Population (People 15-65 who are able to work)

Unemployment Rate = Number of unemployed people as a percentage of the total number of people who are willing and able to work.

42  
- 12  
= 30

**EXERCISE:**  
If the population of a country is 42m; the number of people who are employed is 12m; the number of people who are officially unemployed is 2.85m and the number of children between the ages of 1 and 15 is 20m. Calculate the unemployment rate in this economy.

$$\frac{2.85/14}{42} \times 100 = 19.9\%$$

**5.5 Measuring Prices: the CPI**

How is the macroeconomic objective of price stability assessed?  
The relative rise and fall in the inflation rate is an indication of whether or not there is price stability.

Inflation may be defined as the constant increase in prices over a prolonged period of time. Economists want to know what is happening to the consumer's buying power over time. To understand this, they have to be able to determine what is happening to prices in general. As prices rise so the consumer's buying power falls. It is prohibitive (by way of sheer volume) to focus on the price of each good or service in the economy, so economists make use of the CPI. The CPI is a general price measurement of a basket of goods and service (used by the average South African family).

**The Consumer Price Index (CPI)**

The CPI represents the cost of the "shopping basket" of goods and services of a typical South African family. STATSSA is responsible for:

- Selecting the goods and services to be included in the basket
- Weighing the goods and services selected for inclusion in the basket
- Deciding on the base year for calculating the CPI
- Collecting prices each month for the goods and services in the basket.

What is a Price Index: a numerical value obtained by dividing the cost of a basket of goods/services in the current period by the cost of the basket in the base period

**5.6 Measuring the links with the rest of the world: the BOP**

In order to achieve the macroeconomic objective of balance of payments stability, economists make use of the Balance of Payments to monitor the transactions a country makes with the rest of the world.

- The balance of payments consists of five sections. Two important sections are:
- the Current account and the
  - Financial account

The current account deals with the import and export of goods and services (trade), as well as the primary income receipts and payments. The capital or financial account tracks the funds flowing into, and out of, the country for the purchase of assets, such as bonds and shares.

A surplus on the current account means that the value of exports was greater than the value of imports. A deficit indicates that the value of imports exceeded the value of exports.

**5.7 Measuring Inequality: the Distribution of Income**

The final macroeconomic objective refers to an equitable distribution of income across the participants (consumers or households) in the economy. There are, in essence, three measures that an economist can use to determine the level of inequality in an economy.

You must be able to draw and explain Figure 4-1 (new textbook: 13-1) in the textbook.

- The Lorenz Curve – The Lorenz Curve highlights the difference between the line of perfect equality and the actual distribution in the economy.

- The Gini Coefficient – Uses the Lorenz curve and calculates the ratio of the area created by the Lorenz curve and the line of perfect equality relative to the entire right angle triangle.

Divide the AREA of INEQUALITY by the area of the RIGHT-ANGLE TRIANGLE formed by the axes and the LINE OF EQUALITY

- The Quantile Ratio – This is the ratio of income received by the highest X% of the population relative to the income received by the lowest Y% of the population. The higher the ratio the greater the degree of inequality.

**LEARNING UNIT 6**

**TEXTBOOK: CHAPTER 18: INCOME DETERMINATION IN A SIMPLE KEYNESIAN MACROECONOMIC MODEL**  
[New textbook: Chapter 17]

**6.1 Production, Income and Spending**

In the national accounts, total spending during a certain period is always equal to total production and income during that specific period. Remember changes in total inventories are seen as changes in investment spending – capital formation.

Note the following:

- National accounts are concerned with the measurement of total production, income and spending in the economy. Total income = Total production = Total income.
- Macroeconomic theory is concerned with the explanation of these flows and they are not always equal. All the income earned from production need not be spent.
- There are three possible outcomes:



- Spending may equal production and income – no tendency for change, at equilibrium. Known as the **equilibrium condition**.  $A = Y$
- Spending is greater than production and income – no equilibrium; in this case income and production will tend to increase.  $A > Y$  *Excess Demand*
- Spending is less than production and income – no equilibrium; in this case production and income will tend to fall.  $A < Y$  *Excess Supply*

The symbols used in macroeconomics:

“Y” is used to denote total income, total production and output.  
 “A” is used to denote total or aggregate spending.

The relationships explained above can be represented as follows:

- $A = Y$  (Equilibrium)
- $A > Y$  (Disequilibrium in terms of which production and income will increase).
- $A < Y$  (Disequilibrium in terms of which production and income will decrease).

Some economists believed that total spending (A) would always equal total production or output (Y) and that this will take place at the point of full employment. Yf denotes full employment. These economists, therefore, believed that there was only one point of equilibrium – Yf. This was based on the belief that supply creates its own demand – Say’s Law.

The Great Depression of 1929 to 1933 made it clear that this law was not realistic. As a result John Maynard Keynes developed a theory called “The General Theory of Employment, Interest and Money”. He said that the level of income (Y) is determined by the level of aggregate spending or demand (A). He also offered several reasons as to why spending might be insufficient to achieve full employment.

The different approaches to studying the flows can be summed up as follows:

Say’s Law – “Y” creates “A”  
 Keynes – “A” creates “Y”

The rest of this chapter is based on the assumption that the level of economic activity (Y) is determined by aggregate spending or demand (A), hence the name – the Keynesian model. In the Keynesian model there is sometimes need for government intervention either to dampen or to stimulate the economy from time to time. Say’s law, on the other hand, does not need any government intervention.

6.2 BASIC ASSUMPTIONS OF THE MODEL (Keynesian)

ASSUMPTIONS (Box 18-2/17-2)	IMPLICATION
The economy consists of households and firms only	
There is no government	
There is no foreign sector	

Prices are given	
Wages are given	
The money supply and interest rates are given	
Spending (demand) is the driving force that determines the level of economic activity	

An important point to note:

Macroeconomics deals with plans and intentions (future based), not with things that have already taken place. The national accounts deal with what actually happened in the economy.

6.3 CONSUMPTION SPENDING (C)

The relationship between a household’s consumption and income is called the consumption function. This function has three important characteristics:

- Consumption rises as income rises – positive relationship
- Consumption is positive even if income is zero – even if you are not earning an income you will still consume, financed out of savings – AUTONOMOUS CONSUMPTION.
- When income increases, consumption increases, but the increase in consumption is less than the increase in income – part of the extra income is saved – INDUCED CONSUMPTION.

**NON-INCOME DETERMINANTS of Consumption:**  
 STUDY BOX 18-3/17-3  
 Shift the Consumption function.

Figure 18-1 in the prescribed textbook illustrates the consumption function. Use the space below to draw the consumption function indicating both Autonomous consumption and Induced consumption:  $C = C + cY$

CONSUMPTION FUNCTION

From the graph it is clear that total consumption spending is made up of two parts:

- Autonomous consumption spending – shown by the intercept of the consumption function on the vertical axis. It is that part of consumption that will take place even if income is nil. This portion of consumption is independent of income and is shown as a capital C with a bar (–) above it.

- Induced consumption spending – spending that is induced or encouraged based on your level of income.

The slope of the consumption function illustrates the marginal propensity to consume.

*Explain the position of the consumption function, using a graph.*

Students must study Box 18-4 (new textbook 17-4): Savings Function:

LEARN the rules:

$$S = -C + (1 - c)Y, \text{ so for example if } C = 50 + \frac{1}{2}Y \text{ then}$$

$$S = -50 + (1 - \frac{1}{2})Y \text{ or}$$

$$S = -50 + \frac{1}{2}Y$$

**6.4 INVESTMENT SPENDING**

In our simple model there are two types of spending – consumption spending by the households (C) and investment spending by the firms (I). Investment spending is the most “volatile” of all the components of aggregate demand or aggregate spending. Investment spending is very closely linked to capital as one of the factors of production. In fact, investment is the process of capital formation.

Investment does not respond to changes in income, therefore it is called **AUTONOMOUS**.

Note: Investment spending is a determinant of income, but income is not a determinant of investment spending.

**What are the factors that affect the Investment decision?**

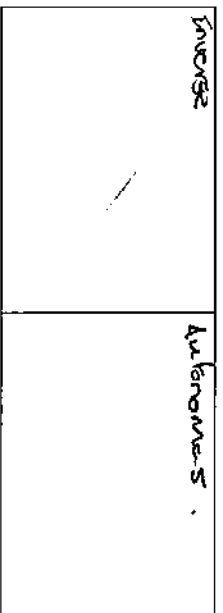
**The Investment Decision**

Why do firms invest? Simply put, to make a profit. The greater the anticipated profit, the greater the level of investment will be. Thus there are three basic considerations

- Cost of capital acquisition (investment)
- Expected revenue that will result from investment (profit)
- Rate of interest – the vast majority of investment is financed by borrowing so the level of interest is an important consideration.

There is an inverse or negative relationship between the interest rate and the expected returns on investment – ceteris paribus. In other words as the interest rate rises so the demand for investment funds declines – as the cost of borrowing those funds is increasing.

**DRAW** graphs showing (i) the inverse relationship between investment spending and the interest rate and (ii) the autonomous relationship between investment and the level of income.



**6.5 SIMPLE KEYNESIAN MODEL IN A CLOSED ECONOMY WITHOUT GOVERNMENT**

Putting C and I together:

Total Spending (aggregate demand)

$$\text{Aggregate or total spending} = C + I. \text{ What is the significance of this?}$$

Aggregate spending or aggregate demand must be considered in relation to a point of equilibrium.

**The 45-Degree Line**

The 45-degree line is needed to work out when an economy is in equilibrium.

Equilibrium is where:

$$A = Y, \text{ and}$$

$$A = C + I, \text{ therefore } Y = C + I$$

The unique fact about the 45-degree line is that ALL points along the 45-degree line represent points where the value on the horizontal axis (total production, income) is equal to the value on the vertical axis (aggregate spending or demand). Thus at any point along the 45-degree line  $A = Y$ .

When  $A > Y$ , then there is excess demand.  
When  $A < Y$ , then there is excess supply.

**NOW PUT IT ALL TOGETHER:** Show where the Aggregate Spending line (A) intersects the 45° line: where  $A = Y$

**SHOW WHERE AN ECONOMY IS IN EQUILIBRIUM**

**The Equilibrium Level of Income**

Refer to the graph above and note the following: Income (Y) is at its equilibrium level when it is equal to the level of aggregate spending (A). When "A" is greater than "Y", firms experience an unplanned or unintended decrease in stock levels (excess demand) and when "A" is less than "Y", then firms experience an unplanned increase in stock level (excess supply).

**6.6 ALGEBRAIC VERSION of the KEYNESIAN MODEL**

[Please replace the bars above the relevant letters!]

$$C = C + cY$$

$$I = I$$

$$Y = A \quad [\text{At equilibrium}]$$

$$A = C + I$$

$$A = C + cY + I$$

$$\text{ALSO: } Y = C + cY + I$$

SOLVE FOR Y:  $Y = C + cY + I$

$$Y - cY = C + I$$

$$(1 - c)Y = C + I$$

$$Y = (1/(1 - c)) \times (C + I)$$

ALSO WRITTEN AS:  $Y = \alpha(\bar{A})$

$$Y = \frac{1}{1-c} (C + I)$$

**NB: MAKE SURE YOU ARE ABLE TO DO ALL THE CALCULATIONS.****6.7 THE MULTIPLIER**

- The ratio between the change in income and the change in autonomous spending is called the multiplier. The multiplier is represented as:
  - $\alpha = 1/(1 - c)$  [simple, closed economy with no government]
- The size of the multiplier depends on the fraction of the additional income generated in each round that is spent in the next round – that is the marginal propensity to consume (c)

**NOTE:**

*If autonomous spending changes how would you work out the effect on income?*

Multiply the change in autonomous spending (autonomous C or I) by  $1/(1 - c)$  (the multiplier), where c is the marginal propensity to consume.

**MAKE SURE YOU ARE ABLE TO DO ALL THE CALCULATIONS****Describe the MULTIPLIER EFFECT:**

It is the mechanism identified as being responsible for an increase in national income that is greater than the initial increase in Autonomous spending.

**EXAMPLE :** Let mpc = 0,6 and the increase in Investment is R12m:

$$\Delta Y = 1/(1 - 0,6) \times (R12 \text{ million})$$

$$\Delta Y = 2,5 \times R12 \text{ m} = R30 \text{ million.}$$

Draw a graph to illustrate the multiplier effect of an increase in autonomous spending on the equilibrium level of income.

**EXERCISES**

- Calculate the multiplier in each of the following cases:
  - mpc = 0,75
  - slope of the consumption function is 80/100.
  - the savings function is:  $S = 400 + 0,4Y$ .
- Calculate total consumption spending in an economy if the consumption function for this economy is  $C = R570m + 0,5Y$  and the level of income is R2500m.
- Given the answer you obtained in Q2 above. Calculate the equilibrium level of income for the economy if investment spending is given as R350m.
- Make sure you are able to complete Activity 6.8 in the Urison study guide.

**LEARNING UNIT 7****CHAPTER 19: KEYNESIAN MODELS INCLUDING THE GOVERNMENT AND FOREIGN SECTORS**

[New textbook: Chapter 18]

In this chapter the government sector and the foreign sector are introduced into the model.

Government spending (G) and Taxation (T)  
Exports (X) and Imports (Z)

7.1 Introducing the Government into our Model

What will the effect of government spending (G) and taxes (T) be on the following?

- "A" – the level of aggregate spending
- The multiplier
- Equilibrium level of national income

**Government Spending (G)**

There is no systematic relationship between G and Y! Therefore:  
 $G = \bar{G}$

Government spending is therefore autonomous. It is determined independently of the level of national income.  
 Study figure 19-2 (new textbook: figure 18-2) in the prescribed textbook. It illustrates the effect of government spending on aggregate spending or aggregate demand?

$$A = C + I + G$$

The A-curve shifts parallel. The slope of the A-curve is not affected by a change in G, but the intercept is affected.

Use the equation:

$$Y = A$$

$$A = C + I + \bar{G}$$

$$C = C + cY$$

$$\text{Thus } Y = C + I + \bar{G}$$

$$\text{Then } Y = (C + cY) + I + \bar{G}$$

$$\text{Solve for } Y: Y = 1/(1-c) \times (C + I + \bar{G})$$

$$Y = \alpha(A)$$

Y is the equilibrium level of income  
 α is the multiplier  
 A is autonomous spending

By changing G or T it is possible to influence the level of production and income in the economy. This is called **FISCAL POLICY**.

**Taxes**

The taxes that need to be raised in order to finance government spending are a leakage or withdrawal from the circular flow. Tax reduces households' disposable income. By lowering the level of disposable income, taxes reduce the consumption spending of households.

What determines the level of taxes? As consumers earn more income so they pay more income tax. As consumers spend more so they pay more VAT. This simple example shows a clear link between the amount of tax that is paid, and the level of income or spending.

Taxes are clearly NOT autonomous of income. Indeed, we assume that taxes are a portion of income.  
 $T = cY$

Figure 19-3(18-3) in the prescribed textbook illustrates this relationship. Make sure you know what the TAX FUNCTION looks like.

The following represents the effects of taxes on Y:

$$Y_d = Y - T, \text{ but since } T = cY$$

$$Y_d = Y - cY, \text{ or by taking out a common factor,}$$

$$Y_d = (1-c)Y$$

A consumer's disposable income is a fraction (1) of his total income (Y). If the tax rate (t) was 20%, then the consumer would have 80% to spend on personal consumption and the remaining 20% would be paid to the government in settlement of the consumer's tax burden. Given the difference between total income (Y) and disposable income (Yd) the original consumption function must be adjusted.  $C = C + cY_d$

*How do Taxes affect the Consumption Function?*

$$C = C + c(1 - t) Y$$

The slope of the curve is now given by  $c(1-t)$  which is clearly smaller than c. Since taxes are a leakage, the introduction of such taxes will lead to a smaller portion of any additional aggregate spending being available to be passed on to the next round. Therefore, the introduction of taxes reduces the value of the multiplier.

Without taxes the multiplier =  $1/(1-c)$   
 With taxes the multiplier =  $1/(1-c(1-t))$

Figure 19-4 (18-4) in the prescribed textbook illustrates the effect that the introduction of taxes has on the consumption function. It is clear that the slope of the consumption function is flatter in the presence of taxation. The introduction of a tax has the following effects:

- Leaves autonomous spending (A) unchanged
- Reduces the multiplier
- Reduces equilibrium level of income.

**The Equilibrium Level of Income in an Economy with a Government Sector**  
 We are now ready to determine the equilibrium level of national income in an economy with a government sector. Government spending (G) in an economy is an injection, BUT taxation (T) is a leakage. Figure 19-5 on page 495 of the prescribed textbook illustrates the full effect of introducing government into the simple Keynesian model.

**UNDERSTANDING FISCAL POLICY:**

**Fiscal Policy** = use of government spending (G) and taxes (T) to affect important macroeconomic variables such as aggregate production or income (Y).

Assume that government wants to raise the equilibrium level of national income. It can achieve this through expansionary fiscal policy:

- increasing government spending ( $G$ ), or
- decreasing the tax rate ( $t$ ).

If government wants to decrease the equilibrium level of national income, it can do so through contractionary fiscal policy:

- decreasing ( $G$ ), or
- increasing the tax rate ( $t$ ).

Use the space below to draw a graph illustrating the impact of a contractionary fiscal policy on equilibrium level of income in the Keynesian model of a closed economy. Draw two graphs to illustrate the effects of the two different tools/variables of fiscal policy.

--	--

**7.2 The Simple Keynesian Model of an Open Economy with a government**  
What changes when an economy is said to be OPEN?

Part of domestic product is exported. Exports represent an injection into the economy. Part of domestic expenditure is on imported goods and services. Imports are a leakage. How will exports and imports affect:

- Level of aggregate spending ( $A$ )?
- The multiplier ( $k$ )?
- Equilibrium level of national income ( $Y$ )?

#### Exports ( $X$ )

Exports depend on the economic conditions in the rest of the world, international competitiveness, and exchange rates. Therefore, export levels are determined independently of national income levels within South Africa. Exports are autonomous.

$$X = \bar{X}$$

Figure 19-7 (18-7) in the prescribed textbook illustrates the autonomous relationship between income and exports. Please note that, like any other injection into the circular

flow, exports will be subject to the multiplier but they do not affect the size of it. Thus an increase in exports will raise aggregate spending. The multiplier will be set in motion and the ultimate effect will be a change in the equilibrium level of national income that is greater than the initial change in exports. Study Figure 19-8 (18-8).

#### Imports ( $Z$ )

What determines imports? The level of national income! The positive relationship between domestic economic activity and imports is one of the strongest relationships in the South African Economy. Imports are therefore dependent on the level of national income. The textbook first considers what would happen if imports WERE autonomous, and then turns to the more realistic scenario of imports being closely linked to the level of income in the economy.

#### Autonomous Imports

Imports are a leakage from the circular flow of income and spending. Thus:

$$A = C + I + \bar{G} + \bar{X} - \bar{Z}$$

Since exports ( $X$ ) and imports ( $Z$ ) are both linked to the countries trade with the rest of the world they are often given in brackets. Thus:

$$A = C + I + \bar{G} + (\bar{X} - \bar{Z})$$

This may well result in only one figure being given – called the net exports value. When exports and imports are both assumed to be autonomous then:

$$Z = \bar{Z} \quad \text{and} \quad A = C + I + \bar{G} + (\bar{X} - \bar{Z})$$

#### Induced Imports

When the level of income in the domestic economy increases, it almost automatically leads to an increase in imports. The extent to which imports increase for a given increase in income is referred to as the marginal propensity to import and is shown by ( $m$ ). The level of imports therefore has two components: autonomous imports ( $Z$ ) and induced imports  $mY$ .  $\{Z = \bar{Z} + mY\}$ .

NOTE: Except if it is otherwise stated, imports are treated as a function of income in this module.

#### THE MULTIPLIER IN AN OPEN ECONOMY: \_\_\_\_\_

#### EXERCISES:

1. Calculate the multiplier in each of the following cases:

- $c = 0.6$ ;  $t = 0.1$
- $mpe = 0.75$  and  $t = 0.15$
- $mpe = 0.8$
- $mpe = 0.64$  and the tax rate is 10%

2. List the three important characteristics of the consumption function in the Keynesian model.

3. Use the information in the box to answer the questions that follow:  
**FOCUS IS NOW ON GRAPHS AND THEORY RATHER THAN CALCULATIONS**

Consumption function: $300 + 3/4Y_d$
Investment spending = 100;
Government spending = 300
Net exports = -80
$c = 1/9$
$Y_f = 2160$

- 3.1 Calculate the value of the multiplier.
- 3.1 Calculate the value of autonomous spending.
- 3.2 Calculate the equilibrium level of income
- 3.3 Calculate the change in government spending required to reach the full employment income level.
4. Make sure you are able to draw the graphs for the following activities in the Unisa study guide:  
 Activity 7.3, short question (b)  
 Activity 7.4, short question (b)

#### LEARNING UNIT 8

#### CHAPTER 20: MORE ON MACROECONOMIC THEORY AND POLICY: AGGREGATE SUPPLY AND AGGREGATE DEMAND

[New textbook: Chapter 19]

- 8.1 The aggregate demand-aggregate supply model
- “Relax” the remaining assumptions of the original Keynesian model and adjust the model to allow for variable prices, wages and interest rates.

The aggregate demand (AD) and aggregate supply (AS) model is the most commonly used model in macroeconomics. Figure 20-1 (new textbook: 19-1) in the prescribed textbook illustrates the relationship between AD and AS.

Note the following:

- AD and AS relate to demand and supply for goods and services in general
- On the vertical axis is the general price level in the economy
- On the horizontal axis is the level of total production and income of the economy.

*How does the AD - AS model differ from the Keynesian model?*  
 AD and AS model differs from the Keynesian model in two main ways:

- It allows for supply conditions – in the Keynesian model we simply assumed AS would adjust passively to aggregate spending.
- It incorporates a variable price – in the Keynesian model these were assumed constant.

You are not expected to understand the derivation of AS and AD. It is, however, assumed that the law of demand and law of supply are still applicable.

#### STUDY THE DIFFERENCE BETWEEN THE ASSUMPTIONS IN THE KEYNESIAN MODEL AND IN THE AD-AS MODEL, BOX 20-1 (Box 19-1)

##### The Aggregate Demand Curve

The AD curve is determined by everything that affects total spending (A) in the economy. Table 20-1 (table 19-1) in the prescribed textbook lists the key determinants of the AD curve and how it is affected by each. LEARN THEM. You must be able to tell what will cause a movement along the AD curve and what will cause the AD curve to shift.

The following are some of the factors that affect the AD curve:

- A decrease in consumption spending – AD curve shifts LEFT.
- An increase in exports (X) – the AD curve shifts RIGHT.
- FISCAL POLICY:
  - Expansionary fiscal policy – this will lead to a rightward shift in the AD curve
  - Contractionary fiscal policy – this will lead to a leftward shift in the AD curve
- MONETARY POLICY:
  - Expansionary monetary policy - this will lead to a rightward shift in the AD curve
  - Contractionary monetary policy - this will lead to a leftward shift in the AD curve.

##### Aggregate Supply Curve

All the factors that affect the AS curve are listed in Table 20-2 (table 19-2) in the prescribed textbook. LEARN THEM.

##### NOTE RE CHANGES:

The new textbook introduces the LRAS curve. However, because it does not appear in the older version, Unisa should not examine this until only the new textbook is prescribed.

#### Slope of the Aggregate Supply Curve

AS is most commonly illustrated as a positively-sloped straight line, but it can be rather flat or steep as is seen in Figure 20-2 in the prescribed textbook. When an economy is in severe recession (with large excess capacity) production can be increased without putting any undue pressure on the price level. This is illustrated by the flat part of AS. On the other side, if there is little or no spare capacity in the economy the AS curve is steep and this can give rise to stagflation. Stagflation refers to the situation where there is inflation and no economic growth (no increase in Y). When full employment is reached (Y<sub>F</sub>) the curve actually becomes vertical — as production cannot be expanded past full employment in the short run. Between these extremes AS has a normal positive slope.

**Changes in AD and AS**

Students should be able to explain and illustrate each of the following:

- An increase in AD while AS remains the same.
- A decrease in AD while AS remains the same.
- An increase in AS while AD remains the same.
- A decrease in AS while AD remains the same.

**SIMULTANEOUS Changes in AD and Changes in AS**

Students will have to be able to work out what happens to the price level and the level of output when AD and AS change simultaneously. Use the rules you learnt in microeconomics.

Refer to Figures 20-3 (19-4) and 20-4 (19-5) in the prescribed textbook and note the following:

- \* Both Expansionary monetary and fiscal policy will shift the AD curve to the right.
- \* An increase in the price of imported oil (products) increases the cost of production and the AS curve will shift to the left.

**8.2 The Monetary Transmission Mechanism**

**Definition:** The way in which changes in the monetary sector are transmitted to the rest of the economy is called the Monetary Transmission Mechanism.

The interest rate is determined in the monetary sector and is then transmitted to the real sector (goods market) through its influence on investment and consumer spending.

Study Figure 20-6 (19-7) in the prescribed textbook carefully. Make sure you are able to explain and illustrate the transmission mechanism.

Complete the following Transmission mechanism identities for the AS-AD model and the Keynesian model:

- (a) AI .....
- (b) AI .....

**Crucial links in the monetary transmission mechanism:** the link between interest rates and investment spending is influenced by the elasticity of investment demand, aggregate demand and price level. The smaller the interest elasticity of investment demand and the steeper the AS curve, the less effective an expansionary monetary policy will be as a means of stimulating the economy.

**8.3 Monetary and Fiscal Policy in the AD-AS Framework**  
 Monetary and fiscal policy can collectively be referred to as demand management. Why?

**MONETARY AND FISCAL POLICY IN THE AS-AD FRAMEWORK**

Expansionary

*GM* *MSD*

Fiscal Policy Monetary Policy

*GM* *MSD*

Contractionary/Restrictive

*GM* *MSD*

*GM* *MSD*

Neutral economy Not aimed at increasing or decreasing aggregate demand in the economy

*Text book . 465*

*NR*

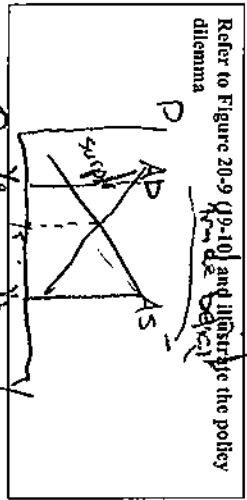
- Monetary and Fiscal Policy Lags :
  - Recognition Lag: lag between changes in economic activity and the realization that the changes have occurred.
  - Decision Lag: once it has been established what is happening, the authorities have to decide how to react.
  - Implementation Lag: it takes time to implement the decisions that are made.
  - Impact Lag: once the policy measures are introduced, a further time passes before the actual effects on the economy become apparent.
- Relative effectiveness of FISCAL and MONETARY policy:
  - Fiscal policy has generally been more successful in stimulating a depressed economy, while monetary policy seems more effective in dampening an overheated economy suffering from severe inflationary pressures.
  - Apart from the lags, the institutional features of the two sets of policy instruments also have to be taken into account
    - Fiscal policy is subject to parliamentary approval
    - Monetary policy is formulated by the SARB
    - Policies must be co-ordinated.

*Money supply*

### The policy dilemma in an open economy

Policymakers are often confronted with a dilemma, since steps taken to increase production, income and employment may cause the general price level to rise (inflation), while steps taken to lower the price level may result in lower production and income and increasing unemployment. A further dimension to the policy dilemma concerns the balance of payments.

When the authorities stimulate production and income, the level of imports will increase and this can cause the trade position (or balance on the Balance of Payments) to worsen or deteriorate. When measures are taken to improve the balance of payments position, then unemployment will increase.



LEARNING UNIT 9, COURSE  
TEXTBOOK CHAPTER 21:  
[New textbook: Chapter 20]

### INFLATION

#### 9.1 DEFINING INFLATION

- Definition: A continuous and considerable rise in prices in general.
  - Note the four aspects (elements) of the definition.
  - Neutral definition which does not imply a specific cause for inflation
  - Inflation is a process, not a once-off increase in prices. It is continuous, meaning that prices increase from year to year and even month to month.
  - It must be considerable. A 1% or 2% increase may not be considered as inflation.
  - General: increase in the price of a particular good would not be considered inflation. Only inflation when the prices of most goods and services increase.
- 9.2 MEASURING INFLATION**
- Remember the following from chapter 4 (chapter 13):
  - Distinguish between NOMINAL and REAL values regarding prices.

- When the prices of goods and services increase considerably, the purchasing power of money decreases.
  - To investigate what is happening to prices, the Consumer Price Index (CPI) is used. This is a composite price index compiled and published by Stats SA.
  - The Consumer Price Index (CPI)
    - Compiled from a representative basket of consumer goods and services.
    - Stats SA selects the goods and services and weights them based on the relative importance of the item in the average consumer's budget.
    - The base year is the year in which the survey of household expenditure is done.
    - Different CPIs are published each month. Different groups: pensioners; provinces; 14 major urban areas; metropolitan and rural areas.
  - Calculate the inflation rate from the CPI index using the following information:
    - CPI for January 2001 = 103,8; CPI for January 2002 = 109,0
    - CPI for July 2001 = 106,1; CPI for July 2002 = 116,3
  - Headline CPI = Unadjusted CPI
  - Core Inflation = certain items are excluded to allow for capturing the underlying inflationary pressures in the economy. Excludes items with volatile prices.
  - CPIX = CPI excluding mortgage interest rate. Discontinued in 2008
  - PPI = Production Price Index. Measures the cost of production rather than the cost of living (CPI)
  - Implicit GDP Deflator = an index which is derived from the difference in GDP at nominal prices and GDP at real prices and is used to measure general inflation. It is referred to as an implicit index because it is the side-effect of measuring economic growth.
  - How to calculate the GDP deflator:  $\frac{\text{divide GDP at current prices (nominal) for a specific period by GDP at constant prices (real) for the same period. The GDP deflator can then be used to calculate the inflation rate for that period. Refer to table 21-5 in the prescribed textbook. [The table is not in the new textbook, but the GDP deflator is still prescribed.]}$
- 21.3 EFFECTS OF INFLATION**
- Also referred to as the Costs of Inflation
- Distribution Effects
    - Affects the distribution of wealth and income between the participants in the economy.
    - Distribution between Creditors and Debtors.



- Benefits debtors (borrowers) at the expense of creditors (lenders)
- Redistributes income and wealth from the old to the young.
- Redistributes income and wealth from the private sector to the public sector.
  - Taxpayers' nominal income increases therefore they pay more taxes and this leads to bracket creep. This results from the combination of inflation and progressive taxation.
  - Increased government revenue from taxation is also called the fiscal dividend.
- Economic Effects
  - May result in lower economic growth and higher unemployment
  - Entrepreneurs become more concerned with seeking ways to avoid inflation rather than seeking new profitable ventures.
  - Leads to speculative practices, whereby people try to outwit each other.
  - Discourages savings
  - Because inflation increases the costs of exports it can have an effect on the Balance of Payments position.
- Social and Political Effects
  - Price increases make people unhappy.
  - Different groups start blaming each other
  - Can give rise to political unrest.
  - Creates a climate of conflict and tension not conducive to economic progress.
  - Household budgeting becomes more and more difficult.
  - People become uncertain and even despairing.
- Greatest Cost of Inflation = is the inflation that it causes, i.e. inflation leads to inflation!

#### 21.4 CAUSES OF INFLATION

**NOTE RE CHANGES:**  
The study guide prescribes three causes for inflation. All three appear in the new textbook. Because only two are in the older book, the study guide has covered the last cause, namely the CONFLICT APPROACH.

- Demand-pull inflation
  - When aggregate demand for goods and services increases while aggregate supply remains constant.
  - Excess demand "pulls up" prices.
  - Caused by the following:
    - C (consumption spending) increases

- I (investment spending) increases
  - G (government spending) increases
  - X (export earnings) increases
  - Any or all of these are followed by an increase in the money supply (M<sub>s</sub>)
  - Increase in aggregate demand is good for the economy in that it leads to an increase in Y BUT often at the cost of inflation, i.e. increasing price levels (P).
  - To combat this inflation RESTRICTIVE MONETARY and FISCAL policy can be applied.
  - REFER FIGURE 21-1 (20-1) DRAW the graph below:
- 
- DEMAND-PULL INFLATION**
- Cost-Push Inflation
    - Increased costs of production tend to "push up" the prices of goods and services.
    - Five main sources of cost-push inflation:
      - Increases in wages and salaries
      - Cost of imported capital and intermediate goods
      - Increases in profit margins
      - Decreased productivity
      - Natural disasters
- NB*
- Stagflation = refers to the situation when there is inflation but no growth (even decreasing growth, i.e. Y is decreasing) and consequently unemployment increases.
  - How to fight against (combat) cost-push inflation:
    - Measures that help to keep increases of wages, salaries and profit down.
    - Increasing productivity can help
    - This type of inflation cannot be combated with Monetary and Fiscal Policy.
    - Incomes Policy may be applied?

- Refer Figure 21-2 (2b-2). DRAW the graph and make sure you are able to explain it.

#### COST-PUSH INFLATION

- The conflict approach to inflation
  - Inflation is the result of a continuous imbalance between the claims/demands of various interest groups and the production capacity in an economy.
  - Stakeholders all want to maximise their own portion of the economy without contributing more to the economy.
  - Neither the market mechanism nor the political process political process has sufficient influence to balance the various claims and contributions on the existing income (GDP) in an economy.
  - All the groups together claim more than is available in the domestic economy.
  - These excess claims will lead to an increase in imports (an outflow) and/or an increase in prices (inflation).

### LEARNING UNIT 10

#### TEXTBOOK CHAPTER22: UNEMPLOYMENT

[New textbook: Chapter 21]

#### 10.1 Unemployment

- Measuring employment and unemployment: to assess whether or not the macroeconomic objective of full employment is being achieved.
  - The unemployment rate is used to measure unemployment
  - Expressed as follows: Total number of unemployed as a % of the EAP (economically active population) or labour force.
  - Note that unemployment can be measured in terms of the STRICT definition or the EXPANDED definition.
    - STRICT : Unemployed are those people between the ages of 15 and older, that are not in paid employment or self-

- employed, were available for paid employment or self-employment during the seven days preceding the interview and took specific steps during the 4 weeks preceding the interview to find paid employment or self-employment.
  - EXPANDED: omits the last requirement and requires only the desire to find work.

#### Costs of Unemployment

- Individual costs of unemployment: loss of income, shock, frustration, illness and even death.
- Loss of experience and human development: workers are not using their skills and may even lose them by not being employed.
- Loss to society: as a factor of production, labour cannot be stored for later use.
- New entrants cannot find jobs and some people have never been employed. This leads to negative consequences.
- Unemployment benefits and other social welfare programmes also entail significant costs.

#### Types of Unemployment

- Fictional unemployment: sometimes called search unemployment. At any time there will be a number of people looking for work. This kind of unemployment is unavoidable.
- Seasonal unemployment: certain occupations only require workers for part of each year. E.g. activities such as picking fruit.
- Cyclical unemployment (demand-deficiency). This occurs when there is a slump or recession in the economy.
  - Business cycles
  - Insufficient demand
- Structural unemployment: usually confined to certain industries, sectors or categories. Occurs when there is a mismatch between workers qualifications and job requirements.
  - Lack of skills, training, even when economy is booming
  - Changes in production methods; technologically unemployed
  - Changing consumer preferences
  - Foreign competition
  - Structural decline in certain industries
  - Discrimination

#### Policies to Reduce Unemployment

- Before we can develop strategies to reduce unemployment we need to understand the factors that contribute to unemployment.
  - When the growth of the labour force is greater than the growth in the number of job opportunities, unemployment increases.
  - In SA the rapid increase in unemployment has been the result of the supply side of labour market as well as the demand side: a rapid increase in supply, but a constant or slow growing increase in demand.

- Causes of unemployment (because of increased supply) can be:
  - Rapid growth of population can cause unemployment. The population growth in SA has slowed considerably.
  - Net increase in immigration
  - Shortage of skills but an oversupply of unskilled and semi-skilled labour.
- Demand side strategies to reduce unemployment: additional employment opportunities can be created by raising the aggregate demand for goods and services and increasing the labour intensity of production.
  - More production leads to more jobs.
  - Government spending can lead to increased production and therefore more jobs.
  - Stimulate consumption and investment spending
- Supply side strategies to reduce unemployment:
  - education programmes to decrease population programmes are considered important in order to decrease the supply of labour. However, these are very long-term.
  - Shortage of skills and oversupply of under-skilled workers is a problem in South Africa. Action should be taken to increase the levels of the skills required.
  - Any strategy intended to decrease unemployment in SA must take into account efforts to improve the quality of labour.
- Other strategies that may be implemented:
  - Steps can also be taken to increase the labour intensity of production.
  - Government can embark on special employment programmes aimed at employing as many people as possible to carry out public works programmes.
  - Promote small businesses and the informal sector.
  - Tax incentives or subsidies to encourage employment.
- Unemployment in the Keynesian and AD-AS model
  - Assumed that the level of employment is positively related to the growth in production.
  - All other factors of production are assumed to be fixed, only labour is variable.
  - The relationship between the level of employment (N) and the level of real production (Y) reflects the law of diminishing returns.
  - The slope of this production function (equal to the MRP of labour) decreases as employment increases. Refer figure 22-1 (Figure 21-1).
  - Full employment in the real sense of the word cannot be achieved.
  - An increase in real production (i.e. economic growth) is a necessary but not sufficient condition for reducing

unemployment. In other words, an increase in Y does not guarantee an increase in N.

10.2 Unemployment and inflation: the Phillips curve

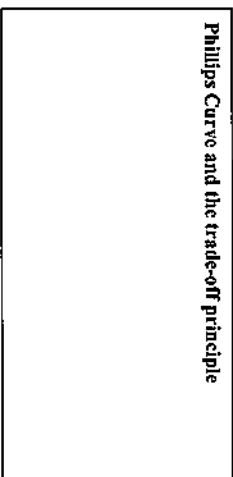
The existence of the Phillips curve is a controversial matter, but students need to be aware of what is referred to as the Phillips curve and the trade-off principle.

The Phillips curve illustrates the relationship between the unemployment rate and the inflation rate. It reflects an inverse relationship between the percentage of people unemployed (on horizontal axis) and the inflation rate (vertical axis). According to this relationship a lower inflation rate means a higher unemployment rate and vice versa.

Use the space below to draw a graph showing the Phillips curve:

NB

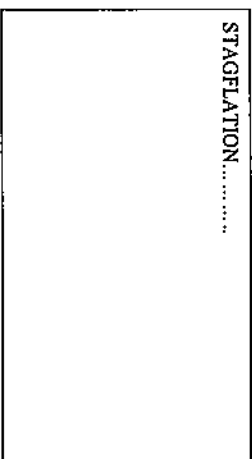
Phillips Curve and the trade-off principle



The trade-off principle  
The Phillips curve clearly indicated the trade-off between inflation and unemployment. However, in the 1970s empirical studies indicated that both inflation and unemployment could increase together. This is illustrated by a rightward shift of the Phillips curve. This situation is known as stagflation (inflation and zero economic growth, or even negative economic growth). Any of the factors that cause a leftward shift of the AS curve (decrease in aggregate demand) will cause a rightward shift of the Phillips curve.

Use the space below to show a simultaneous increase in inflation and unemployment:

STAGFLATION.....



**Stagflation** causes a policy dilemma. Demand management policies cannot be used to solve the problem. Stagflation is often seen as a supply-sided problem and attempts are made to try and reduce the costs of production. Many countries have tried incomes policy actions to overcome the problem of stagflation. Incomes policy refers to attempts by government to formulate guidelines or implement controls on the determination of prices and/or wages. Some economists argue that incomes policy is one way in which both unemployment and inflation can be decreased.

## LEARNING UNIT 11

### CHAPTER 23: ECONOMIC GROWTH AND DEVELOPMENT [New textbook: Chapter 22: Economic growth and business cycles]

#### 11.1 The Definition and Measurement of Economic Growth

Economic growth is defined as the year on year increase in total production or income. Please note that the measurement used must reflect a real value – inflation has been removed. Remember that inflation is a very misleading value and can distort true values substantially. The value must also be adjusted for population growth – per capita. Positive economic growth, therefore, occurs when, and ONLY when, real production grows faster than population growth! In reality economic growth is simply measured as the real growth in production, with no regard to rate of population growth.

The most common measure of economic growth is GDP.  
What are the problems with using GDP?

- Goods and services not sold in the market are not counted in GDP – Non market production.
- Some activities or transactions in the economy are never recorded in the informal sector. An example is illegal activities.
- Data used is not always as accurate as it could be, so values are often revised and adjusted.
- GDP has no indicator of economic welfare. This means that R100 million spent on military goods and hardware is measured in the same way that R100 million would be measured when spent on education.

Despite all these issues GDP is still the best alternative that we have to measure economic activity.

#### Calculating Economic Growth

Economic growth is usually calculated on an annual basis. Growth is not a smooth process. It can vary significantly from year to year.

#### 11.2 The Business Cycle

**Definition:** cyclical variations in aggregate economic activity along a long-term trend.

A business cycle can be described as the pattern of upswings and downswings that all modern economies are faced with in today's world. Make sure you are able to draw a graph illustrating the business cycle and identify the different elements: trough, upswing, peak and downswing.

Economists try to identify indicators that can predict the movements of the business cycle. These indicators fall into three main groups (NOT PRESCRIBED):

- **Leading indicators:** these tend to peak before the peak in aggregate economic activity: e.g. opinion survey of business confidence; commodity prices in US\$ for basket of SA's export commodities; real M1 money supply; prices of shares; jobs advertised.
- **Coincident indicators:** tend to correspond with the direction of the cycle, e.g. gross value added at constant prices; value of wholesale, retail and new vehicle sales; industrial production index.
- **Lagging indicators:** these tend to follow the direction of the cycle, e.g. hours worked in construction; number of commercial vehicles sold; unit labour costs of manufacturing.

#### 23.3 Sources of Economic Growth

The sources of economic growth can be grouped into 2 categories:

- Supply factors.
- Demand factors.

#### Supply Factors

These factors relate to the factors of production (FOPs). Supply factors are those factors which cause an expansion in productive capacity or potential output of an economy.

- **Natural resources** – in the narrow sense a country's natural resources are fixed. But what of finding new reserves of minerals? What of fishing a certain area more efficiently? It is, therefore, ALWAYS possible to increase the exploitation of the available natural resources.
- **Labour** – quality and quantity. The quantity is dependent on the physical growth of the population and, therefore, the labour force. This is open-ended, so to speak. Quality, on the other hand, depends on education and training. This is also something that can be improved and so exploit labour more effectively! HIV is an important consideration for the South African economy over the next decade. Another important factor is the net migration rate: skilled individuals are leaving and being replaced by semi and un-skilled migrant workers.
- **Capital** – quantity and quality. Economic growth needs both a greater quantity and quality of capital. An increase in capital stock can either be in the form of capital widening or deepening. Capital widening means that the growth in capital is at the same rate as the growth in the labour force. Capital deepening means that the growth in capital is greater than the growth in the labour force.

- Entrepreneurship – the most important factor. Without entrepreneurial spirit, an economy is doomed to fail. It is the entrepreneur that groups the other FOP together with the objective of making a good or service, in order to realise a profit. If the entrepreneurial spirit is lacking, government will frequently try to take this role upon themselves, often with disastrous consequences.

#### Demand Factors

The above all relate to the productive potential or capacity of the economy. This is not the ONLY important factor. There must be an adequate or growing demand for the goods and services being produced by the economy for the economy to grow.

- Domestic demand: consists of consumption (C), investment (I) and government spending (G).
- Export demand: international trade is an important factor in economic growth and so should be encouraged.
- Import substitution: another growth strategy is that of substituting imported goods with locally manufactured goods.

Economic growth can be achieved by a rise in domestic spending ( $C + I + G$ ), a rise in export demand (X) and a reduction in imports (Z). Make sure you are able to discuss each of the components of domestic demand.

**!!!! THE END !!!!**

