MANAGERIAL ECONOMICS

STUDY GUIDE

Mancosa
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INTRODUCTION TO THE MANAGERIAL ECONOMICS STUDY GUIDE

1. INTRODUCTION

Welcome to the world of MBA Managerial Economics!

This module forms the core of the Master in Business Administration (MBA) programme and lays the foundation for many other subsequent courses you will encounter during the programme. Once you have successfully completed this module, you will be able to competently and strategically apply economic theory and application to business decisions.

Understanding the role of Managerial Economics in business management and decision-making is integral for the modern business leader. After all, Managerial Economics is about society and society is about people. How we, the people who make up society, see and regulate ourselves is important. Equally important is how we express our opinions. Through our understanding of Managerial Economics, we can transform minnows into future industry giants, or provide nourishment to a starving child in a tiny hamlet in Africa, or even engineer change in society. Managerial Economics helps us understand who we really are.

"We who live in free market societies believe that growth, prosperity and ultimately human fulfilment, are created from the bottom up, not the government down. Only when the human spirit is allowed to invent and create, only when individuals are given a personal stake in deciding economic policies and benefiting from their success -- only then can societies remain economically alive, dynamic, progressive, and free. Trust the people. This is the one irrefutable lesson of the entire post war period contradicting the notion that rigid government controls are essential to economic development."

Ronald Reagan, Former US President, 1981 – 89

2. STRUCTURE OF THE STUDY GUIDE

This Managerial Economics Study Guide is structured as follows:

Introduction to Managerial Economics Study Guide	*Provides an overview of the Managerial Economics Study Guide*
Part I: Introduction to Managerial Economics 1. Economic Problems and Decision Making 2. Understanding Market Forces: Demand and Supply Analysis 3. Elasticity	*This part of the Study Guide details what you are required to learn.* *Each section details:* • *Specific Learning Outcomes* • *Brief Overview of Relevant Literature* • *Prescribed Reading (Textbooks and Journal Articles)* • *Questions for Reflection*
Part II: Production, Market Structure and Competition and Factor Markets: The Labour Market 4. Production and Optimisation Analysis 5. Market Structure and Competition 6. The Factor Markets: The Labour Market	
Part III: Macroeconomics 7. Economic Indicators 8. The Monetary Sector and the Government Sector 9. Macroeconomic Theory and Policy	
Part IV: International Economics 10. Economic Environment and Globalisation 11. International Trade/Foreign Sector 12. Exchange Rates	
Part V: Sustainable Economics 13. Economic Growth and Environmental Protection	
Appendix A: Case Study 1: Microeconomics Strategies Used by Microsoft to Leverage its Monopoly Position in Operating Systems to Internet Browser Markets.	*Appendix A contains the Case Study on Microeconomics.*
Appendix B: Case Study 2: Macroeconomics Short Run Stabilisation and Long Run Competitiveness: The Latvian Case.	*Appendix B provides the course Case Study on Macroeconomics.*

3. STRUCTURE OF EACH SECTION

Each section is structured as follows:

- Specific Learning Outcomes
- Brief Overview of Relevant Literature
- Prescribed Reading (Textbooks and Journal Articles)
- Questions for Reflection

3.1 Specific Learning Outcome

These are listed at the beginning of each section. These detail the specific outcomes that you will be able to competently demonstrate on successful completion of the learning that each particular section requires.

3.2 Prescribed Reading

Your prescribed reading comprises the following:

International Textbook

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) Human The Economy Today 13th Edition, Boston: McGraw Hill.

This textbook will provide you with an overall understanding of economic issues within advanced economies.

South African Textbooks

- Janse van Rensburg.J, McConnell, C., Brue, S., (2011) Economics Second Southern African Edition Boston: McGraw Hill.
- Mohr, P and Associates (2015), Economics for South African Students, Fifth Edition: Van Schaik Publishers

These economics textbooks will provide you with an overall understanding of economic issues within Southern Africa.

- ***Journal Articles***

Journal articles have been prescribed for each section. They are available on EBSCO, Emerald, and Sabinet databases that are accessible through the http://mymancosa.com website.

These journal articles will provide you with an understanding of Managerial Economics within both the developed and emerging markets, with particular focus on African economies. It is imperative that you acquire and read these journal articles, as they form a key part of the curriculum and demonstration of insights from these articles will form part of the student's overall assessment.

3.3 BRIEF OVERVIEW OF RELEVANT THEORY

Each section provides a brief overview of the relevant theory pertinent to a specific topic. The purpose of the overview is to introduce you to some of the general, yet current issues regarding the topic. Once you have read and understood the overview, you need to explore the topic in great detail by reading the prescribed textbooks and journal articles. You are also encouraged to undertake your own literature review so that you may gather a deeper understanding and appreciation of the various topics covered in this course.

3.4 QUESTIONS FOR REFLECTION

At the end of each section there are questions for reflection. These have been carefully chosen to test your understanding. The questions will allow you to reflect on what you have learnt and consider how what you have learnt should be applied in practice.

4.1 Case Studies

Case studies form an integral part of developing competence in Managerial Economics. Two Case Studies have been included: Appendix A (Microeconomics) and Appendix B (Macroeconomics).

4. ELECTRONIC LEARNING RESOURCES

Additional electronic learning resources are available to supplement your learning. These are detailed in the document "Supplementary Electronic Learning Resources". These resources seek to build on, and expand, the learning that is facilitated through the Managerial Economics Study Guide and the Managerial Economics workshops. They include video podcasts, audio podcasts, individual activities, as well as additional recommended reading on Managerial Economics issues in emerging markets.

Interactive webinars may also be conducted to supplement learning.

CHAPTER 1: ECONOMIC PROBLEMS AND DECISION MAKING

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of the field of Managerial Economics within both advanced economies and emerging economies. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that he/she will be able to:

1. Define Economics and what the economic problem is.

2. Explain briefly what Managerial Economics is all about.

3. Define the important concepts of scarcity, choice and opportunity cost.

4. Construct a Production Possibility Curve (PPC) and use it to explain scarcity, choice and opportunity cost.

5. Explain the role of the market in allocating resources in different economic systems.

ESSENTIAL READING

*Learners are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 1: Economics: The Core Issues*. (pp 2 – 68).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2011) Economics Southern African Edition Boston: McGraw Hill. *Chapter 1: Limits, Alternatives and Choices* (pp 3 – 21).
- Mohr, P and Associates (2015), Economics for South African Students, Fifth Edition, Van Shaik Publishers (pp 2 – 57).

Journal Articles & Reports

- The Economist, (1997), "*The Puzzling Failure of Economics*", The Economist, 23 August 1997, pp 11.
- Jansen, J., (2012) "*Education crisis a threat to democracy – Jansen*," 22 News24.com, 22 November 2012.
- Parker, F., (2012) *"JZ denies telling ministers to fund Zumaville,"* Mail & Gaurdian, 13 September 2012, pp 117 – 122.
- Schwab, K., (2012) "*The Global Competitiveness Report 2012 – 2013*," World Economic Forum Publication, Geneva Switzerland.

Further Reading (Recommended)

- Guest, R., (2010) The Shackled Continent:Power, Corruption, and African Lives, September 2010, Smithsonian Books (DC).
- www.frbsf.org/education (click on "Publications" and then "Great Economists and Their Times").
- Marx, K., Engels, F., (2009) The Communist Manifesto, Echo Library, (first published in 1848).
- Smith, A., (2009) The Wealth of Nations, Edition reprint, Digireads.com Publishing, (first published in 1776).
- Keynes, J.M., (2006) General Theory of Employment, Interest And Money, Atlantic Publishers & Distributors, (first published in 1936).

1.1 INTRODUCTION

Economics is sometimes considered the 'queen' of social science as it is intrinsically entwined with many other areas within the realm of social sciences, namely psychology, sociology, marketing etc. Generically speaking, Managerial Economics is about the patterns of society and how people make decisions regarding their lives. More formally, Economics can be defined as a social science which studies how limited resources are used to satisfy unlimited human wants.

Other definitions often used include '*Economics is the study of how scarce resources are used to satisfy unlimited wants*' or '*Economics is the study of how societies use scarce resources to produce valuable commodities and distribute them among different people*.' In sum, Managerial Economics is about the management of scarce resources and some of the more popular definitions are listed below:

DEFINITIONS OF ECONOMICS

'Economics is the study of how societies use scarce resources to product valuable commodities and distribute them among different people'

Paul Samuelson

'Economics is the study of how society manages its scarce resources'

Gregory Mankiw

'Economics is the study of how individuals and groups of individuals respond to and deal with scarcity'

James Kearl

Consequently, the central economic problem is to reconcile the conflict between people's virtually unlimited demands with society's limited ability to produce goods and services to fulfil these demands (Begg, 2000).

? THINK POINT
Learners are required to try and answer the questions set below. Believe it or not, you have already been practising as an economist all your life. Think of your total monthly income and reflect on what you are currently doing with it. Are you able to satisfy all your needs and wants with this income? Do you have to make difficult choices in determining what is important for you at this point in time? How do you allocate your income among these needs?

1.2 Key Questions Facing Economists

As you can see from the various definitions of Economics, one of the central issues is the scarcity of resources (sometimes called the *factors of production*). Factors of production are those *inputs* used in the production process in order to deliver an *output* and are classified into four main categories, namely:

- Natural
- Human or Labour
- Capital
- Entrepreneurial

In most cases, all four of the above factors of production are combined in a production process in order to produce an output. Thus, and central to Economics is the issue of relative scarcity (or abundance) of resources.

Scarcity is the problem that arises due to an imbalance between finite resources and infinite wants. Schiller (2013) defines scarcity as *the lack of enough resources to satisfy all desired uses of those resources*. Individuals and firms have unlimited desires to consume goods and services but the resources available to satisfy such desires are limited; hence the main economic problem experienced by all economies relates to scarcity. As a consequence, a key concern for any economist is the opportunity cost of a decision.

Opportunity Cost is defined informally as the value of the next best alternative that could have been chosen. Schiller (2013:6) defines opportunity costs as what is given up to get something else.

Opportunity cost is an important concept in Economics and central to decision-making. As a result of the scarcity of resources and the opportunity costs associated with the use of them, choices – often very difficult to make, as economic choices are hardly made with absolute certainty – need to be made based on some key questions:

- **WHAT** to produce with our limited resources?
- **HOW** to produce the goods and services we select? and
- **FOR WHOM** do we produce these goods and services?

1.3 Economic Systems

In trying to address the above questions, many analysts have suggested different forms of market organisation (or structure) over time. *Karl Marx*, often considered the father of communism, wrote in *Das Kapital* (1867) and the *Communist Manifesto* (1848) where he explains that free markets tend to concentrate wealth and power in the hands of the few, and at the expense of the many. Thus, he claimed the best form of economic organisation was the foundation of a communist state in which the government is the master of economic outcomes.

On the other hand, *Adam Smith* in his famous book *The Wealth of Nations* asserted that markets should be left alone (*laissez faire*) and that the market mechanism has the basic ability to answer the fundamental economic questions, namely WHAT, HOW and FOR WHOM. Smith claimed that the market mechanism works as though there is an 'invisible hand' which orchestrates what, how and for whom we produce goods and services.

John Maynard Keynes, often recognised as the father of Economics, offered a less drastic solution to market organisation/structure. While he conceded that the market mechanism will be pretty efficient in allocating resources, he felt that an unregulated market could easily veer off course. He thus advocated for some government control where he claimed that governments should play an active role, but at the same time not an all-inclusive role, in managing the economy. In simple terms, governments should be ambulances – nice to know they exist and there only when you need them!

Apart from market structure, another key consideration is the relative use of the resource, in other words how *efficient* are we in using any resource? Efficiency can be described in a number of ways but it simply means getting the maximum benefit from a given amount of resources. It deals with the productive use of resources (sometimes described as the level of productivity).

In production, this would mean getting the maximum *output* for the factors of production available, while in the case of the consumer, it would be getting the highest amount of *satisfaction* for their resources (this would mainly be the consumer's budget or income). In the case of public economics, it would be the attaining the highest amount of *welfare* given the country's resource base.

Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on *"Elasticity"*, source and work through the textbook Chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section on "Production and Optimisation Analysis", you probably feel a bit more confident. It is essential that you read ***all*** of the textbook chapters and journal articles listed.

QUESTIONS FOR REFLECTION

After completing your study of this section on an 'Introduction to Managerial Economics' reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

The following questions require you to consider the country in which you currently live.

1. Reviewing the various economic systems, list some of the strengths and weaknesses of each one. What economic system do you think best suits your country? Why do you think this?

2. Africa has always been characterised as the 'dark' continent where the service delivery for the most basic goods (and services - e.g. water, food and shelter) is lacking. African economies have some of the lowest living standards in the world. Coupled with this are some of the poorest levels of GDP growth. This has been the plight of the continent for decades and there have been as many solutions cited as there have been problems raised. Discuss.

3. Thinking of Africa, and particularly your own country, do you think that governments have failed us? Have governments been practicing Economics based on the above understanding? Are governments efficient in maximising the welfare of the people? If not, why is this not the case? What are the impediments to economic success and freedom?

4. The fact that Economists often disagree proves that Economics is not a science. Do you agree with this statement? Explain your viewpoint.

5. The fact that the South Korean economy has grown rapidly since the Korean War (in the early 1950's) implies that South Korea is one of the richest countries in the world today. Do you agree? Explain your view.

CHAPTER 2: UNDERSTANDING MARKET FORCES: DEMAND AND SUPPLY ANALYSIS

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of *Demand*, *Supply* and the *Market Forces* that affect demand and supply. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that he/she will be able to:

1. Describe the circular flow of *total production*, *total income* and *total spending* in the economy.

2. Distinguish between *households* and *firms* and show how their decisions and activities are interrelated.

3. Explain *demand* and distinguish between demand and quantity demanded. Further, differentiate between a movement along a demand curve and/or a shift of a demand curve.

4. Explain *supply* and distinguish between supply and quantity supplied. Further, distinguish between a movement along a supply curve and/or a shift of a supply curve.

5. Explain how the equilibrium price and quantity are determined.

6. Explain how a change in demand or supply affects equilibrium, and explain how equilibrium price is formed in the market.

ESSENTIAL READING

*Learners are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 3: Supply and Demand* (pp 45 – 66).
- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 19: Consumer Choice*. (pp 412 – 426).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2015) Economics Southern African Edition Boston: McGraw Hill. *Chapter 3: Demand, Supply and Market Equilibrium* (pp 51 – 74).
- Mohr, P and Associates (2015), Economics for South African Students, Fifth Edition, Van Schaik Publishers (pp 60 – 101).

Journal Articles & Reports

- Casselman, B (2010) "*Oil Industry Boom – in North Dakota*", Wall Street Journal, 26 February 2010.
- Wolfram, C Orie, S and Gertler P, 2012. "*How Will Energy Demand Develop in the Developing World?*" Journal of Economic Perspectives, 26(1): 119-38.
- Knittel, C R. 2012. "*Reducing Petroleum Consumption from Transportation*." Journal of Economic Perspectives, 26(1): 93-118.

2.1 INTRODUCTION

Given our previous discussion that economics is concerned with allocating resources to attain the maximum amount of benefit, it is important to highlight the key market participants. The key participants and their roles are illustrated in figure 2.1. *Consumers* are market participants who consume goods and services and therefore try and maximise utility (satisfaction). *Businesses* produce goods and services from resources and hence try to maximise profits. *Governments* (also called the public sector) undertake certain forms of market activity (providing public goods and services, security services etc.) and hence try to maximise the welfare of citizens. Finally, the *international sector* also interacts with local participants through international trade.

These transactions take place in different markets and the two most popular are the *product market* and the *factor market*. The product market is simply where goods and services are demanded and supplied (in other words traded) while the factor market is where factors (such as labour) are traded. The circular flow diagram helps us understand the flow of goods, services, and factors in an economy.

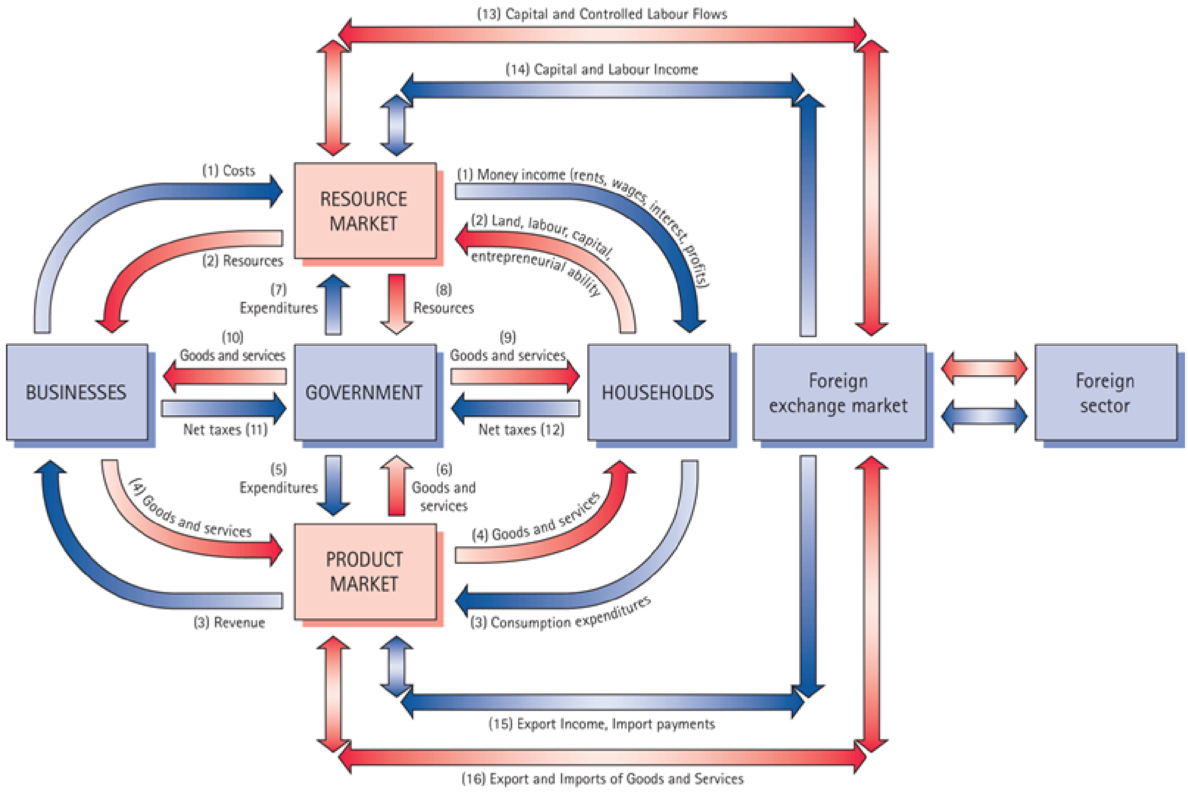


Figure 2.1 Key Market Participants

Source: Economics Southern African Edition, 2015.

Coffee is a product that is consumed all over the world and you would be hard-pressed to find any urbanised place where you cannot buy a cup of coffee. Such is the demand for coffee in the world. As a result, coffee is a commodity that is grown, processed and shipped throughout the world.

It is such a popular product that franchises like *Starbucks* have opened branches throughout most parts of the world. Why is coffee so popular? In other words, what drives the demand (and subsequent supply) of coffee in a particular country and/or the world?

? THINK POINT

Learners are required to read the following extract and then answer the questions set below.

In trying to understand demand and supply, research the coffee market over the last three decades using the internet and then try and answer the following questions. A good website that you can use is www.ico.org.

1. What are the explanatory factors that affect the *demand* for coffee?
2. What events will cause consumers to adjust the quantities they demand (i.e. a movement along an existing demand curve) and what will cause consumers to change their demand patterns completely (i.e. shift in the demand curve)?
3. What will be the resulting effect on the equilibrium price and quantity if demand changes?
4. What are the explanatory factors that affect the *supply* of coffee?
5. What events will cause suppliers to adjust the quantities they supply (i.e. a movement along an existing supply curve) and what will cause suppliers to change their supply completely (i.e. shift in the supply curve)?
6. What will be the resulting effect on the equilibrium price and quantity if supply changes?
7. What historical economic events drastically influenced the coffee market (equilibrium price and quantity)? Why did this occur?

A good starting point for any discussion on demand and supply is to try and explain why consumers choose certain products and services, and what determines the quantity they are willing to purchase or consume? In simple terms, consumer choices are intrinsically linked to the level of satisfaction they derive from consuming that product or service, and/or the amount of money they have.

Utility derived from consuming a product – the level of utility (satisfaction) increases, albeit in varying levels of satisfaction, as one consumes more and more of a product. In other words, total utility will increase, reach a maximum level, and could then actually decline.

Remember the last time you consumed a few units of a biscuit you liked? Can you remember how good the very first unit tasted? What happened after you had eaten the 10th or 100th unit? Was the level of satisfaction the same as the first unit? If you say no (that is, the last unit did not bring me the same amount of satisfaction as the first unit) then you, like most consumers, have what is called *diminishing marginal utility*.

Janse Van Rensburg (2015); states that in any specific time period, buyers of a product will derive less satisfaction (or benefit/utility) from each successive unit of the product consumed. In other words, as you consume additional units of a product, at first you marginal utility increases, reaches a maximum, and then decreases and could even go into *disutility* (negative value).

The Price of the Product – people purchase products according to the product's underlying price. Clearly when something is expensive (or beyond affordability), consumers tend to buy less (if any at all) of a product.

Consumers will buy products based on (1) the level of satisfaction they derive from consuming it and (2) the underlying price of the product as well.

In Economics, we speak of the *Law of Equi-Marginal Satisfaction* which explains the varying quantity of products (product bundles) consumers purchase. However, this law is beyond the scope of this module. For now, we are more interested in the relationship between the quantity demanded and price.

2.2 Demand

Janse Van Rensburg (2015) defines demand as the various amounts of a product that consumers are willing to purchase at each of a series of possible prices during a specific period of time. This relationship is captured on a demand curve which illustrates how the quantity demanded changes, in response to a change in the price of that good, *ceteris paribus*.

Demand for Meat Price/kg	Quantity demanded per week
R50	2
40	3
30	4
20	5
10	6

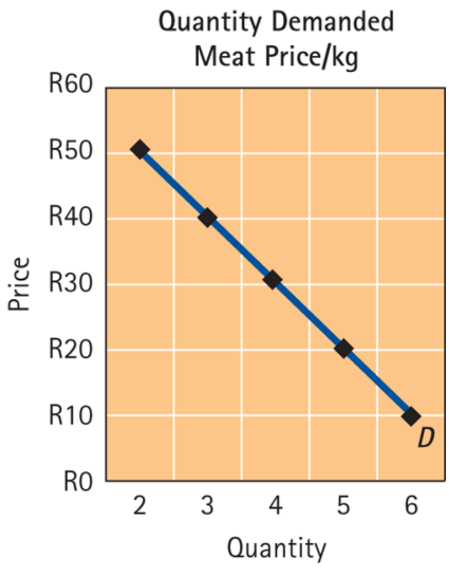


Figure 2.2 The demand curve

Source: Economics Southern African Edition, 2015.

The *Law of Demand* states that the quantity of a good demanded in a given period increases as the good's price falls, *ceteris paribus*. This means that the demand curve is negatively sloped – that is, slopes downward. It is important to emphasize that (1) *a change in the price of the good leads to a change in quantity demanded (and not the other way round), and (2) a change in the price of the good leads to a change in quantity demanded and not a change in demand.*

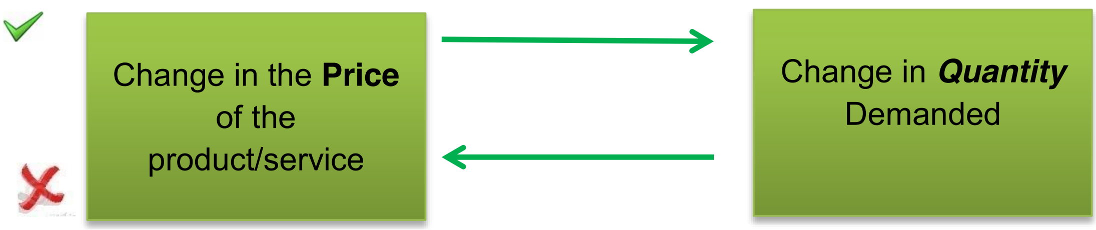


Figure 2.3 Change in price and quantity demand

At the start of this chapter, you were asked to identify the explanatory factors that could have influenced the demand for coffee over the last three decades? You may by now have compiled quite a comprehensive list but in general we are simply trying to identify the *determinants of demand*. A key question is 'what are the key determinants (other than price which was discussed above) that could influence the demand of a good or service?'

Janse Van Rensburg (2015:56) cites the following determinants that will cause a change in demand:

- Price of the product or service (remember this changes the quantity demanded and not demand);
- Price of related goods;
- Income of consumers;
- Number of consumers;
- Taste and Preferences; and
- Consumer expectations.

Each of the abovementioned determinants (except the first one above) will cause a change in demand. This change will either be positive – called an *increase in demand* – or negative, called a *decrease in demand*. You are required to understand each of the above-mentioned determinants and how each one may influence demand as this is the central part of Managerial Economics.

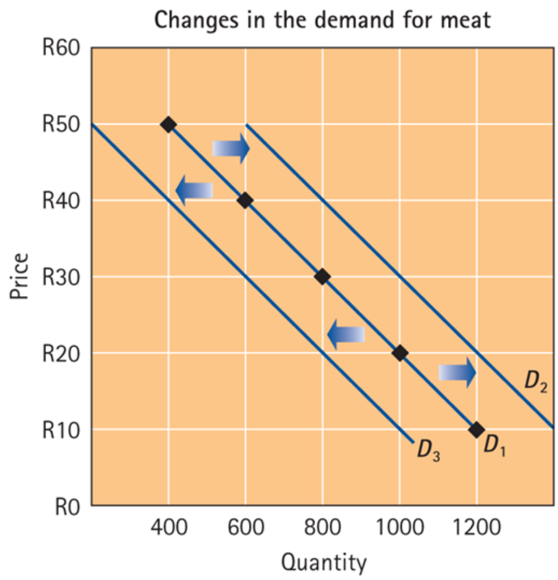


Figure 2.4 Change in quantity and change in demand

Source: Economics Southern African Edition, 2015.

You are required to understand *the difference between a change in quantity demand and a change in demand*. Quantity demanded is directly influenced by a change in the price, whilst demand is influenced by other factors in the market e.g. changes in income.

Table 2.1 Determinants with depicted effects

DETERMINANT	EFFECT	DEPICTED AS
Change in the price of the good or service	Change in quantity demanded	A movement along an existing demand curve.
Change in any one of the other determinants (e.g. income)	Change in demand	Outright shift of the demand curve.

2.3 Supply

A common mistake made by most students when reviewing supply is to continue thinking from the consumer's perspective. Despite the natural tendency to do this (given most people are more likely consumers and suppliers) imagine that you are the supplier of a product. In other words, remove your consumer hat and replace it with a supplier's hat.

Clearly, as was the case in demand, price will influence the supplier's decision. The question is how is the price of a product related to the quantity supplied? If the price of a product increased, would the supplier (we assume the supplier is rational and behaves normally) increase or decrease the quantity he supplies? If you said decrease, then you still are thinking like a consumer!

Suppliers are motivated by maximising profits and if the price of a product increases, the chance of making a greater profit is also increased (ceteris paribus), hence the supplier will *increase* the quantity he supplies into the market. Thus, price and quantity supplied are positively related and the supply curve is positively sloped.

Formally, Janse Van Rensburg (2015) defines supply as the various amounts of a product that producers are willing to make available for sale at each of a series of possible prices during a specific period.

Supply of Meat	
Price/kg	Quantity demanded per week
R10	2
20	3
30	4
40	5
50	6

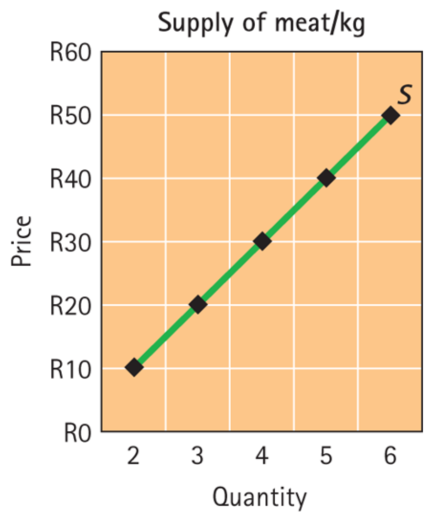


Figure 2.5 Supply of products

Source: Economics Southern African Edition, 2015.

As were the case in demand, there are also *determinants of supply* which will cause supply to change. These determinants will shift the supply curve to the left or right. The determinants of market supply are numerous and the more popular ones are:

- Technology
- Input Cost
- Number of supplies
- Taxes and Subsidies
- Expectations

If the price of the product has to change, this will induce a change in quantity supplied (movement along an existing supply curve) and if any of the determinants of supply had to change, this will cause a change in supply (shift in the supply curve).

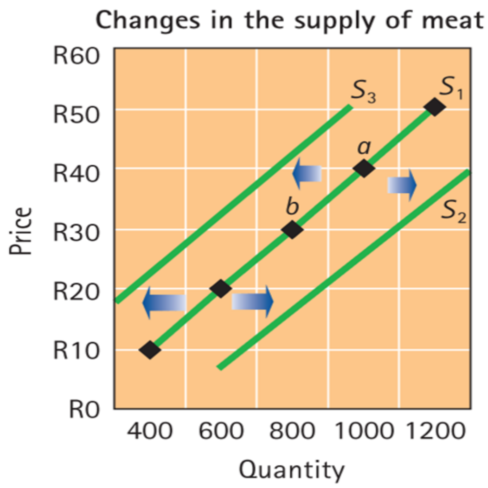


Figure 2.6 Shift in supply curve

Source: Economics Southern African Edition, 2015.

2.4 Equilibrium

Equilibrium in the market occurs where the quantities demanded exactly balance the quantities supplied for goods and services, $Q_d = Q_s$. This is where the demand and the supply curves intersect, and determines the equilibrium price and equilibrium quantities that are bought and sold in this particular market.

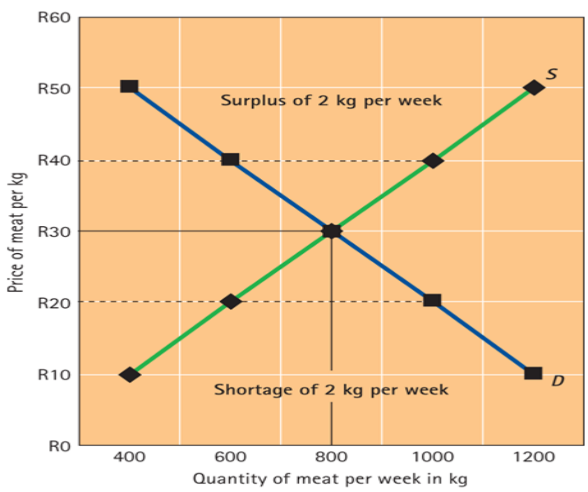


Figure 2.7 Demand and supply curves intersect.

Source: Economics Southern African Edition, 2015.

Market Disequilibrium - Whenever the market price is set above or below the equilibrium price, the market will be in disequilibrium. This disequilibrium will result in either a market *surplus* or a market *shortage*. To overcome a surplus or shortage, buyers and sellers need to change their behaviour and the market will tend towards equilibrium where no further adjustments will be required. The behavioural change can be a result of the price changing and/or the supply/demand determinant(s) changing. You are required to be able to explain both market equilibrium and market disequilibrium using appropriate diagrams as this forms an essential part of the course.

2.5 Changes in Equilibrium

When one of the determinants (of demand or supply) changes, there will always be a change (or departure) from the equilibrium position. Each change will bring about a unique change in the price and quantity traded. You are required to understand this fully and be able to explain why the change occurs, and determine the direction of change. Schiller (2008:58-59) and Janse Van Rensburg (2015:66-67) provide more information of this. Make sure you read and understand each of the changes.

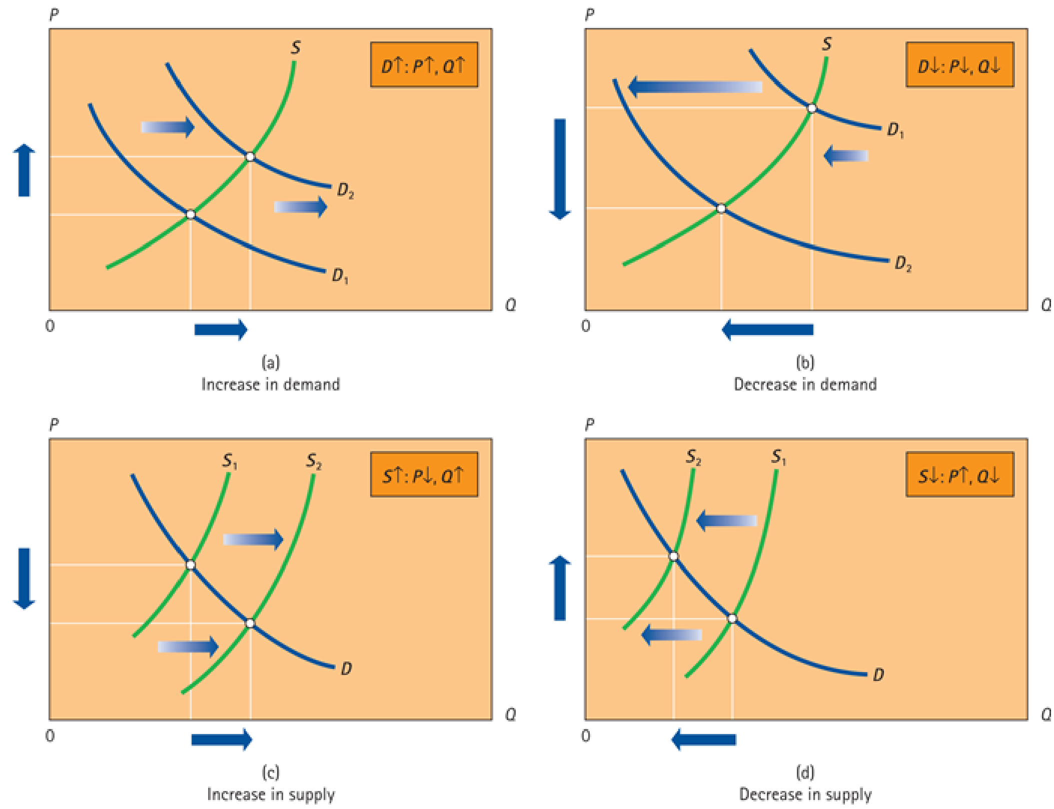
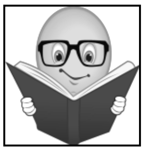


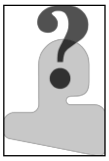
Figure 2.8 Changes in Equilibrium.

Source: Economics Southern African Edition, 2011.



Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on *"Understanding Market Forces: Demand and Supply"*, source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.



QUESTIONS FOR REFLECTION

After completing your study of this section on "Understanding Market Forces: Demand and Supply", analysis reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. How is the price of a product related to the quantity demanded? If the price of peanut butter had to decrease, will consumers demand a larger or smaller quantity?

2. Using appropriate diagrams distinguish and explain the difference between a movement along an existing demand curve and a shift in a demand curve.

3. Assume the price of bread increased. How would this affect consumer's demand for peanut butter? (Use relevant diagrams to explain your answer).

4. After three years of study, Henry obtains his degree and finds meaningful employment. Explain how his increase in salary (income) will influence Henry's demand for peanut butter now. Use appropriate diagram(s) to justify your answer and assume peanut butter is an inferior good.

5. When the international price of crude oil increases, there is often an increase in domestic prices of goods and services. Using appropriate diagram, explain why this would be the case.

CHAPTER 3: ELASTICITY

Specific Learning Outcomes

The overall outcome for this section is that on completion thestudent should be able to demonstrate a broad understanding of Demand, Supply and the concept of *Elasticity*. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that his/her will be able to:

1. Define price elasticity of demand and explain its significance.
2. Explain the determinants of price elasticity of demand.
3. Explain the relationship between price elasticity and revenue.
4. Define and explain income elasticity and cross price elasticity of demand.

ESSENTIAL READING

*Learners are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 20: Elasticity* (pp 436 – 452).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2015) Economics Southern African Edition Boston: McGraw Hill. *Chapter 4: Elasticity – An Application of Demand and Supply* (pp 75 – 98).
- Mohr, P and Associates (2015), Economics for South African Students, Fifth Edition, Van Schaik Publishers (pp 104 – 119).

Journal Articles:

- Nelson J P, (2013), Estimating the Price Elasticity of Beer: Meta-Analysis of Data with Heterogeneity, Dependence, and Publication Bias, Pennsylvania State University - College of the Liberal Arts - Department of Economics.
- Zieba M, O'Hagan J, (2013), *Demand for Live Orchestral Music – The Case of German Kulturorchester*, Journal of Economics and Statistics, vol. 233, issue 2, pages 225-245.

3.1 Elasticity

Thus far we have seen how market forces affect both the behaviours of consumers and suppliers alike. While this is important to know, often much more specific information is required. For example, suppliers often like to know if the price of their product increased by 10%, how would consumers react?

If you assumed that consumers will cut back on the *quantity* they demand, then you are correct and probably have by now mastered the previous section (if you unable to work this out, you need to revisit the previous section).

However, a key question left unanswered is by **HOW MUCH** will the quantity demanded *fall* if the price were raised? This is exactly what the price elasticity of demand measures.

Suppose a chocolate supplier is concerned about his chocolate bar sales. The general observation that chocolate bar sales will decline when prices increase would be of little use as this would be well understood. However, the supplier would be more interested in how much sales will decline when the price is increased.

The price elasticity of demand measures the consumer's response (reaction) to a change in price and Schiller (2013:437) formally defines the price elasticity of demand as the response of consumers to a change in price. The price elasticity of demand refers to the percentage change in the quantity demanded divided by the percentage change in the price and is calculated as:

$$\textbf{Price Elasticity } (Ep) = \frac{\textbf{\% change in quantity demanded}}{\textbf{\% change in price}}$$

Price elasticity is an important concept as it ultimately influences the *Total Revenue* of the supplier, given that total revenue is the product of price times quantity sold.

Total Revenue = Price x Quantity Sold

Janse Van Resburg (2015:82) provides a Table (Table 4.1 see prescribed textbooks) which illustrates the relationship between price, the price elasticity of demand, and total revenue. You are required the know how to calculate the columns and what the different categories of elasticity means.

3.2 Computing Price Elasticity

After you review Table 4.1 in Janse Van Rensburg (2015), you should be able to notice two important observations, namely:

- ✓ The Elasticity Coefficient (E_d) changes over the demand curve;
- ✓ The Total Revenue curve increases, reaches a maximum and then declines.

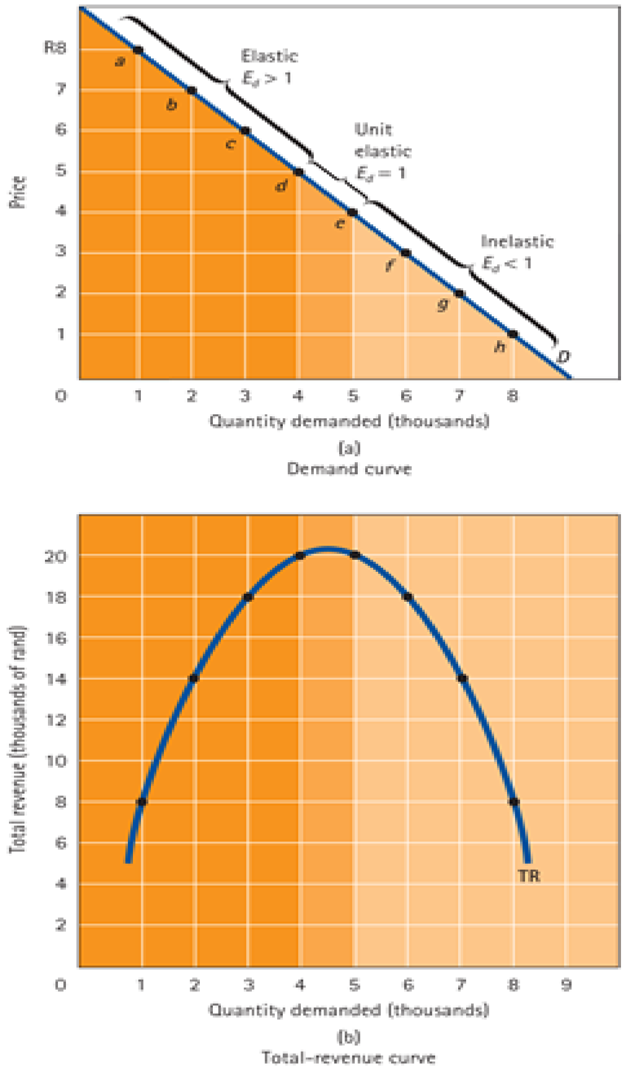


Figure 3.1 Computing price elasticity.

Source: Economics Southern African Edition, 2015.

Why would this be the case? Before answering this, calculate the Elasticity Coefficient (E_d) along the various points of the demand curve. If you calculated this correctly, you will notice that E_d decreases as you move down the demand curve. This has something to do with the consumer's reactions to the changes in price (at different price points along the demand curve). It is likely that consumers will adjust the purchase behaviour differently depending on the underlying price point, and the quantum of the price change.

This sensitivity to price changes can be categorised as *elastic*, *inelastic* and *unitary* demand. Janse Van Rensburg (2015:84) provides a detailed description of each category in Table 4.2 and it is important that you are completely fluent in this.

? THINK POINT
Students are required to try and answer the questions set below. 1. Would the duration of time affect the Price elasticity of Demand? 2. Would the short-run price elasticity of demand be *lower* or *higher* than long-run elasticity? 3. Why would this be the case?

Janse Van Rensburg (2015:85) provides an interesting overview of the price elasticities of typical household goods in Table 4.3. Electricity is highly inelastic for example while shoes are highly elastic. Do you agree with this?

3.3 Factors that Affect the Price Elasticity of Demand.

Why are consumers price-sensitive with some goods and not with others? Remember the elasticity of demand is computed between points on a given demand curve, and hence the price elasticity of demand is influenced by all the determinants of demand. Janse Van Rensburg (2015) identifies the following factors which you need to read and be able to explain:

- Availability of substitutes
- Proportion of income
- Necessities (relatively inelastic) vs. Luxuries (relatively elastic)
- Time

3.4 Other Elasticities

There are other elasticities that can be calculated in *Managerial Economics* and you are expected to understand each of the following one listed below.

3.4.1 Income Elasticity

The income elasticity of demand measures the degree to which consumers respond to a change in their incomes by buying more or less of a particular product. The **Income elasticity of demand** measures this response of demand to a change in income and is calculated as:

$$\textbf{Income Elasticity} = \frac{\textbf{\% change in quantity demanded}}{\textbf{\% change in income}}$$

Normal versus Inferior Goods

When it comes to changes in consumers' incomes, the classification of the product between a *normal* good and an *inferior* good becomes important as demand and income don't always move in the same direction. A hamburger is a **normal good** since consumers buy more of it when incomes increase.

However, people actually buy less of some goods when they have more income. With low incomes, people buy discount clothes, used textbooks and cheap beer. With more income to spend they switch to designer clothes, new books and premium beers. The former products are called **inferior goods** because the quantity demanded falls when income increases.

3.4.2 Cross Price Elasticity

One can similarly calculate the cross price elasticity of demand. The cross-price elasticity of demand is the percentage change in the quantity demanded on one good divided by the percentage change in the price of another good - that is,

$$\textbf{Cross Price Elasticity} = \frac{\textbf{\% change in quantity demanded of good x}}{\textbf{\% change in price of good y}}$$

Substitute versus Complementary Goods

The cross-price elasticity of demand makes it easy to distinguish *substitute* and *complementary* goods. When two products, sandwiches and hamburgers are **substitute goods** - when the price of one decreases, the demand for the other decreases.

In the case of **complementary goods**, the reduction in the price of one good (e.g. Coca-Cola) leads to an increase in the demand for hamburgers. The demand for hamburger demand shifts to the right (increases) when the price of a complementary good falls. The concept of complementary goods also explains why the demand for cars decreases when the price of petrol increases.

If cross-price elasticity is positive, the two goods are substitutes; if the cross-price elasticity is negative, the two goods are complements.

Janse Van Rensburg (2015:90) provides a compact overview in Table 4.4 of the different elasticities and the classes of goods. You must understand each of these categories and be able to explain each one.

Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on *"Elasticity"*, source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.

QUESTIONS FOR REFLECTION

After completing your study of this section on 'Elasticity', reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. According to the World Bank, the price elasticity of demand for tobacco is different in developing and developed countries. Which one is more elastic? Why do you think this would be the case?
2. What are some of the key determinants that can explain differences in the price elasticity of a product?
3. Is price elasticity of demand time invariant?
4. Suppose that you are the managing director of a firm that produces three goods: X, Y and Z. The price elasticity of demand for X is 2.5; for Y it is 1,00; and Z it is 0.50. The firm is experiencing serious cash flow problems and you have to increase total revenue as soon as possible. If you are in a position to set the prices for these goods, what would be your pricing strategy for each product? Explain.
5. Developing countries that export agricultural products to industrialised countries frequently argue that unless they expand their manufacturing sectors, they will always remain relatively poor. Use the elasticity concept to explain such an argument.
6. If you were the Minister of Finance and you wanted to raise revenue by taxing a specific good, would you tax a good of which the price elasticity of demand is high or one of which the price elasticity of demand is low? Explain.
7. Suppose that you are the owner of an ice-cream shop and that you have established that the price elasticity of the demand for ice-cream in your particular market is 1.8. Would you sell ice-cream at R5,00 per litre or R4.50 per litre? Explain.

CHAPTER 4: PRODUCTION AND OPTIMISATION ANALYSIS

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of *Production*, *Revenue* and the *Costs* that affect output decisions and profitability. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that his/her will be able to:

1. Define the Revenue, Cost and Profit concepts.

2. Distinguish between the Total, Average and Marginal Product.

3. Explain the relationship between the Law of Diminishing Returns and the shapes of the Total, Average and Marginal Product curves in the short-run.

4. Distinguish between Total, Average and Marginal Costs.

5. Explain the relationship between the law of diminishing returns and the shapes of the total, average and marginal product curves in the short-run and long-run.

ESSENTIAL READING

*Students are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 22: The Competitive Firm*. (pp 484 – 506).
- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 23: Competitive Markets*. (pp 510 – 529).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2015) Economics Southern African Edition Boston: McGraw Hill. *Chapter 6: The Costs of Production* (pp 119 – 142).
- Mohr, P and Associates (2015); Economics for South African Students, Fifth Edition, Van Schaik Publishers (pp 143 – 162)

Journal Articles:

1. Zhang, L. (2013). "Kanban-controlled exponential production lines: analysis and design". Journal of Manufacturing Technology Management. 24(3), pp. 358-383. (available from Emerald).
2. Mishra, S.K. (2010). "Brief History of Production Function". Journal of Managerial Economics. 8(4), pp. 6-34. (available from Ebscohost).
3. Ng, A.H.C., Bernedixen, J. & Syberfeldt, A. (2012). "A comparative study of production control mechanisms using simulation-based multi-objective optimization". International Journal of Production Research. 50(2), pp. 359-377. (available from Sabinet).
4. Wessel, O. & Gorlach, I. (2008). "A comparative study of automation strategies at Volkswagen in Germany and South Africa". The South African Journal of Industrial Engineering. 19(1), pp. 149-168. (available from Sabinet).
5. Zhen, L. (2014). "A three stage optimization model for production and outsourcing under China's export-oriented tax policies". Transportation Research. 69, pp. 1-20. (available from Ebscohost).
6. Panzar, J, C, Willig R,D (1977) *Economies of Scale in Multi-Output Production*, The Quarterly Journal of Economics, Vol. 91, No. 3 (Aug., 1977), pp. 481-493.

4.1 INTRODUCTION

In market economies, a wide variety of businesses produce a wide variety of goods and services. In obtaining and using resources, a firm makes monetary payments to resource owners and incurs opportunity costs. Those payments and opportunity costs make up the firm's cost of production which is discussed in this section.

4.2 DEFINITIONS OF REVENUE, COST AND PROFIT

Mohr and Associates (2015:144) refer to profit as the surplus of revenue over cost. Hence, for a profit-maximising firm, it is essential to examine at which level of output the difference between total revenue and total cost is at a maximum.

4.3 BASIC COST AND PROFIT CONCEPTS

Economists use the opportunity cost principle to determine the value of all the resources used in production. To the economist, the cost of using something in a particular way is the benefit forgone by not using it in the best alternative way. This is called **opportunity cost** (Mohr and Associates, 2015:146).

The difference between accounting costs and economic costs can be explained by distinguishing between explicit costs and implicit costs. Accountants tend to consider **explicit costs** only. Explicit costs are the monetary payments for the factors of production and other inputs bought or hired by the firm. These costs are also opportunity costs, since the payments for inputs reflect opportunities that are sacrificed.

Economists use a broader concept of opportunity cost and consider **implicit costs** as well as explicit costs. Implicit costs are those opportunity costs which are not reflected in monetary payments. They include the costs of self-owned or self-employed resources.

Therefore:

Economic costs of production	= opportunity costs
	= explicit costs + implicit costs

Janse Van Rensburg, McConnell & Brue (2015:119-120) refer to total profit as the difference between total revenue from the sale of the firm's product(s) and total explicit costs.

Normal profit is equal to the best return that the firm's resources could earn elsewhere and forms part of the cost of production.

Economic profit is the difference between total revenue from the sale of the firm's product(s) and total explicit and implicit costs (i.e. the total economic, or opportunity costs of all resources, including normal profit).

Hence,

Accounting profit = total revenue – total explicit costs; and
Economic profit = total revenue – total costs (explicit and implicit), including normal profit).

4.4 TOTAL, AVERAGE AND MARGINAL REVENUE

Mohr and Associates (2015:144) state that total revenue is the total value of a firm's sales and is equal to the price (P) of its product multiplied by the quantity sold (Q). Average revenue (AR) is equal to the total revenue (TR or PQ) divided by the quantity sold (Q). Marginal revenue (MR) is the additional revenue earned by selling an additional unit of the product.

4.5 LAW OF DIMINISHING RETURNS

According to Schiller, Hill and Wall (2013:461-462), the law of diminishing returns states that as more of a variable input is combined with one or more fixed inputs in a production process, points will eventually be reached where first the marginal product, then the average product and finally the total product will start to decline.

This law is clearly illustrated in Figure 4.1 below.

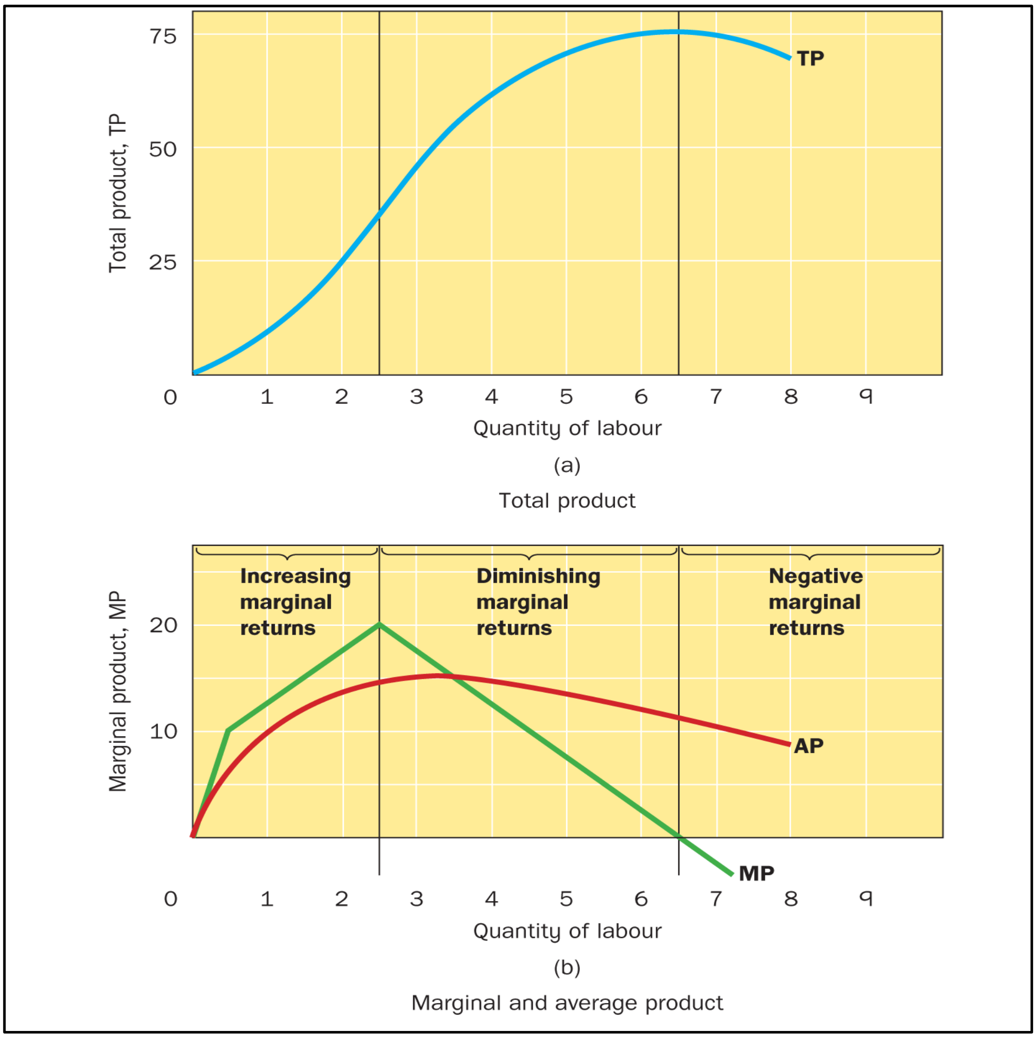


Figure 4.1: The law of diminishing returns

Source: Janse van Rensburg, McConnell & Brue (2015:125)

4.6 PRODUCT CURVES AND COST CURVES IN THE SHORT RUN

Fixed costs remain constant irrespective of the quantity of output produced (TP). Variable costs change when TP changes – it represents the cost of the variable input(s) (Mohr and associates, 2015:153).

TC = TFC + TVC

where TC = Total costs

TFC = Total fixed costs

TVC = Total variable costs

The relationship between production and costs in the short-run is illustrated in Figure 4.2.

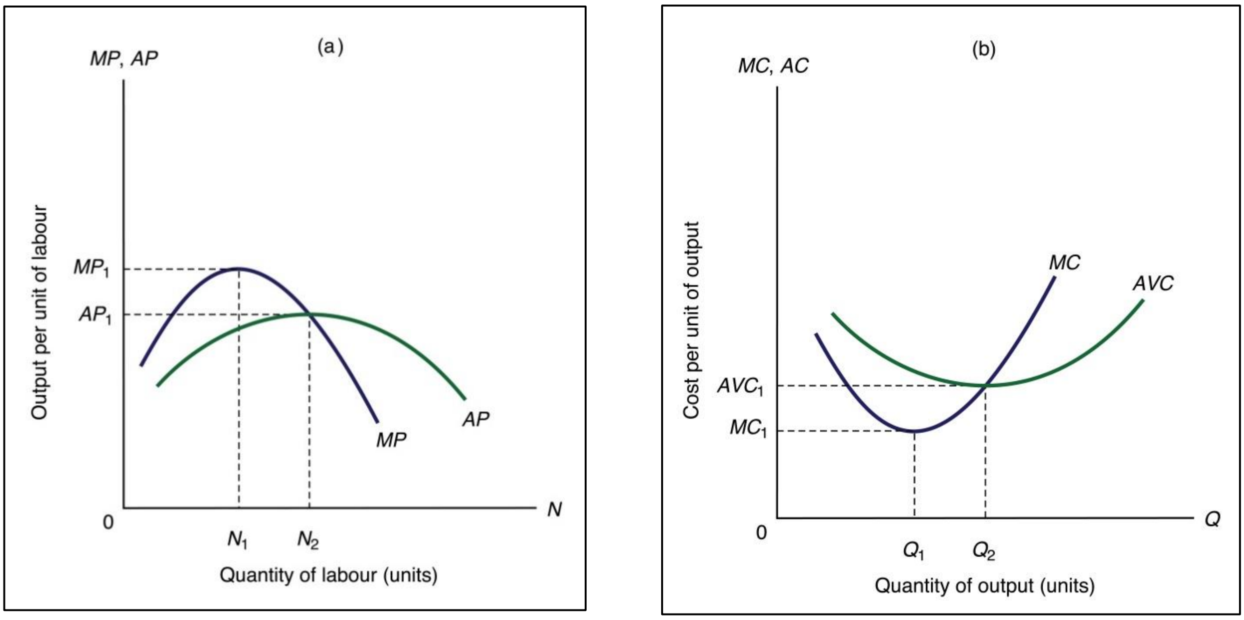


Figure 4.2: The relationship between production and cost.

Source: Mohr and associates (2015:157)

4.7 PRODUCTION AND COSTS IN THE LONG-RUN

In the long run, there are no fixed inputs. All inputs are variable. There are no fixed costs. All costs are variable. The law of diminishing returns does not apply. Economies and diseconomies of scale may be experienced (Mohr and associates, 2015:157-160) The long-run average cost curve (LRAC) can therefore take various shapes. A typical long-run average cost curve is illustrated in Figure 4.3.

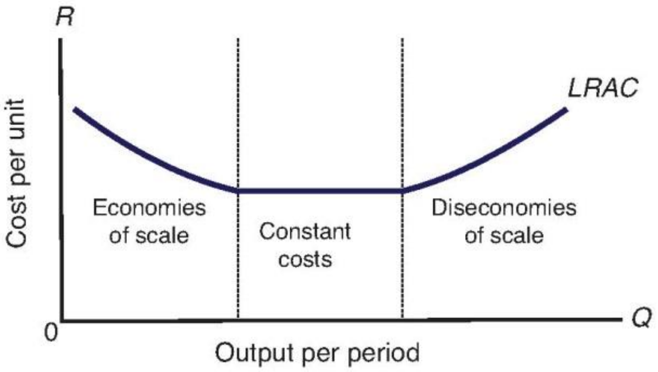
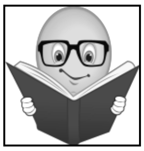


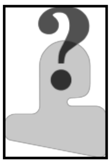
Figure 4.3: A typical long-run average cost curve.
Source: Mohr and associates (2015:159)

As long as economies of scale are experienced, average costs fall. This is followed by a range of output over which average costs remain constant. At some level of output, diseconomies of scale may set in resulting in an increase in average costs.



Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on 'Production and Optimisation Analysis', source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.



QUESTIONS FOR REFLECTION

After completing your study of this section on 'Production and Optimisation Analysis', *reflect on the following questions. (To adequately address these questions, you will need to have completed all the 'essential reading' listed at the beginning of this section.)*

1. It is always better to hire a more qualified and productive worker than a less qualified one regardless of cost. True or False. Explain.
2. Suppose that the marginal product of the last worker employed by a firm is 40 units of output per day and the daily wage that a firm must pay is R20, while the marginal output of the last machine rented by the firm is 120 units of output per day and the daily rental price of the machine is R30.

   (a) Why is the firm not maximising output or minimising costs in the long-run? (b) How can the firm maximise output or minimise costs?
3. Draw a figure showing constant, increasing and decreasing returns to scale by the quantity of inputs required to double output.
4. Many businesspeople have never heard of marginal cost. Why the do economists use the concept so often? Explain.
5. Explain why average variable cost and average total cost get closer to each other as output increases. At what level of output is total cost equal to total fixed cost?
6. Explain the relationship between (a) the average product and marginal product of a variable factor of production employed by a firm (b) the firm's short-run average cost and marginal cost.
7. Use the concepts of economies and diseconomies of scale to explain the shape of a firm's long-run ATC curve. What is the concept of minimum efficient scale? What bearing can the shape of the long-run ATC curve have on the structure of an industry?

CHAPTER 5: MARKET STRUCTURE & COMPETITION

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of how markets are structured and how this may affect the interests of either consumers or suppliers. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that he/she will be able to:

1. List the standard forms of market structure and the market conditions which have to be met in each case.
2. Explain the equilibrium position of the firm under different market structures.
3. Discuss the merits of establishing statutory bodies to control imperfective competition.
4. Explain the demand curve facing the firm for each of the four forms of market structure.
5. Explain the short-run equilibrium of the firm for each of the four forms of market structure.
6. Describe the long-run equilibrium of the firm for each of the four forms of market structure.

ESSENTIAL READING

*Learners are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 22: The Competitive Firm*. (pp 484 – 506).
- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapters 23 – 26*. (pp 510 – 596).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2015) Economics Southern African Edition Boston: McGraw Hill.*Chapter 7: Pure Competition and Pure Monopoly* (pp 143 – 173).
- Mohr, P. and Associates (2015), Economics for South African Students. Fifth Edition, Van Schaik Publishers. Chapter 10, Market Structure 1: Overview and Perfect Competition (pp 163 – 178).

Recommended Textbooks:

- Moodaliyar, K, Roberts, S (2012) The Development of Competition Law And Economics In South Africa, Human Research Science Council, Cape Town.

Journal Articles:

- *Competition Amendment Act*, (2009), Parliament of South Africa, Government Gazette, No. 32533, Vol. 530 Cape Town 28 August 2009.
- Conyon M, Machin S, (1991), "*Market Structure and The Empirical Specification of Profit Margins*", Economics Letters, Volume 35, Issue 2, February 1991, Pages 227-231.
- Naude, C, M, (2003), Industry Concentration in South Africa, University of Pretoria, Pretoria.
- Arrawatia, R., Misra, A. & Dawar, V. (2015). *"Bank competition and efficiency: empirical evidence from Indian market".* International Journal of Law and Management. 57(3), pp. 217-231. (available from Emerald).

- Chong, H.Y. & Chan, T.H. (2014). *"Market Structure and Competition: assessment of Malaysian Pharmaceutical Industry based on the modified Structure-Conduct-Performance Paradigm".* International Journal of Organisation Innovation. 7, pp. 135-148. (available from Ebscohost).
- Clark, B.H. (2011). *"Managerial identification of competitors: accuracy and performance consequences".* Journal of Strategic Marketing. 19(3), pp. 209-227. (available from Ebscohost).
- Kupka, J. & Thomas, A. (2014). *"Anti-competitive behaviour in the agri-food and steel value chains in the South African manufacturing sector".* Journal of Economic and Financial Services. 7(2), pp. 315-340. (available from Sabinet).
- Nojiyezi, S. & Muthoka, J. (2013). *"Barriers to entry to Kenya's telecommunication industry: is there a market slice for new entrants"?* Journal of Management and Administration. 11(1), pp. 136-196. (available from Sabinet).
- Pezzing, M. (2010). *"Minimum Quality standards with more than two firms under Cournot Competition".* Journal of Managerial Economics. 8(3), pp. 26-40. (available from Ebscohost).

5.1 INTRODUCTION

This Chapter explains the standard market structures that can exist and builds on the foundations presented in the previous chapter. It is important that you have read and understood the previous chapter.

While the necessary conditions for all four forms are considered, this chapter focuses on the two extreme market structures, namely the *perfectly competitive* market and the pure monopoly market. Janse Van Rensburg (2015) provides a Table of the different market forms and students are expected to know this thoroughly.

In the previous section, we examined a firm's cost of production and distinguished between *total, marginal* and *average* cost. However, we still have not determined whether it would be profiTable for a companyto produce and, if so what quantities of the product the firm should supply at different prices of the product. In other words, we need to determine the equilibrium position of a company.

We start by assuming a neo-classical assumption that firms want to maximise the profits they generate. In other words, the firm aims to **maximise profit** (maximise the difference between **revenue** and **cost**).

The basic incentive for producing goods and services is the expectation of profit. Clearly this would depend on the market(s) (market structure) they operate in, and their individual cost structures.

At this stage, it is important to draw a distinction between economic profit and accounting profit – see Schiller (2013:486). Accounting profit simply uses *explicit costs* when calculating profit while Economic profit uses both *implicit and explicit costs* into consideration.

Total Revenue	**R1 000.00**
Less: Explicit Costs	
Cost of Sales	R 400.00
Electricity	R 200.00
Accounting Profit	**R 400.00**
Less: Implicit Costs	
Wages: Owner's Wife (not paid)	R 50.00
Economic Profit	**R 350.00**

Figure 5.1 Calculating profit.

5.2 MARKET STRUCTURE: AN OVERVIEW.

The behaviour of a firm depends somewhat on the characteristics of the market in which it sells its product(s) in. These market organisational features are called **market structure**. These features include the number of sellers and buyers, the degree of product differentiation, the availability of information and the barriers to entry (and exit). As mentioned, Janse Van Rensburg (2015:144) provides a Table of the different market forms and their inherent characteristics.

The structure of the industry which a firm operates in largely determines the firm's ability to generate profits. For example, *Microsoft* had for a long time monopoly power within the computer operating systems industry and consequently was able to generate abnormally high profits during that time. By contrast, in perfectly competitive markets (where all firms compete on an equal footing) the chances of making abnormal profits indefinitely is limited as high profits acts as a signal for new incumbents to enter the profitable market.

? THINK POINT

Learners are required to try and answer the questions set below.

Suppose you decide to leave work and start a business. You have just enough resources to open one plant and you have two manufacturing opportunities worth considering. The first one is to produce T-shirts (and join the thousands of other global manufacturers in doing so) and, the second opportunity is to become the sole producer of a drug called X FACTOR. Assume that this drug has been 'proven' to cure mankind of all ailments!

1. Based on the above information which opportunity looks more attractive to you?
2. Why do you think so?
3. What did you base your answer on?
4. In which opportunity would you be more likely to make super profits?
5. Why do you think this will likely happen?

One of the key considerations when determining market structure is the supplier's ability to influence the market price. Assume that Peter decides to start poultry farming and sell his output (chickens) to make a profit. Poultry farming is practiced both locally and worldwide by hundreds of farmers. Hence Peter is just another (relatively small) supplier of chickens into the market.

It is therefore safe to assume that within the chicken market there will be a large number of suppliers and that no one supplier has influence on the price of chickens. In other words, Peter will (as would all the other suppliers) be a price taker – they will accept the market price. This clearly indicates that in this case the poultry market displays ample evidence of a perfectly competitive market given that Peter is a PRICE TAKER.

? THINK POINT

Learners are required to try and answer the questions set below.

If the market price is R42 per chicken, and assuming that the chicken market is perfectly competitive, consider the following questions:

1. Would Peter be able to sell his chickens at a market price *greater* than R42 per chicken?
2. Is this possible in the perfectly competitive market?
3. Would Peter be able to sell his chickens at a price *less than* R42 per chicken?
4. Is this possible in a perfectly competitive market?
5. If Peter is indeed able to sell his chickens below the market price, as a rational and profit driven supplier, would this be a favourable strategy for him to consider?
6. Why do you think this?

Do you recall that individual demand/supply makes up the market demand/supply? Given this and the fact that all suppliers are price takers, the demand curve of any one supplier in a perfectly competitive market is perfectly elastic (a horizontal line) at the market price level. This simply means that each individual supplier has just one price point to consider – the market price.

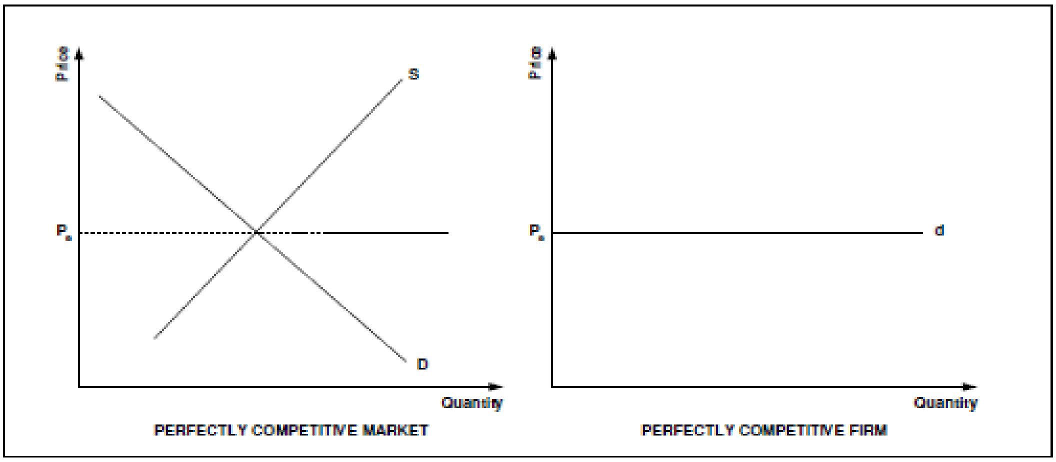


Figure 5.2 Perfectly competitive market and firm

Based on this market price, individual suppliers then determine the feasibility of production. In the last section, Total Revenue, Average Revenue and Marginal Revenue had been discussed. You are now required to complete the Table below before you proceed any further in this section.

Table 5.1

Market Price (P)	Quantity Demanded (Q)	Total Revenue (P x Q)	Average Revenue	Marginal Revenue
R42	0			
R42	1			
R42	2			
R42	3			
R42	4			
R42	5			

If you completed the Table correctly, you would notice a very important maxim of a perfectly competitive market – that is, the

Market Price = Average Revenue=Marginal Revenue.

Make sure you complete the Table until you arrive at the correct solution. Even if you get it incorrectly the first few times, try and try again until you get the correct answers!

If the market price had to change for some reason – perhaps due to a determinant of demand and/or supply changing – all that will happen is the respective values in each column changes, but the above mentioned relationship will still hold. Try this by changing the market price and convince yourself of this.

Jan Van Renburg (2015) provides two Tables explaining demand and profit maximising output when the market price is equal to R131. Make sure you thoroughly understand these Tables.

5.3 PROFIT MAXIMISATION UNDER PERFECT COMPETITION.

The profit maximisation or equilibrium position of a firm can be derived in one of two ways, namely using:

(1) The Total Revenue/Cost Approach; and

(2) The Marginal Revenue/Cost Approach.

You are expected to know both approaches although either one will provide the same solution.

Total Revenue / Cost Approach

In order to understand this approach, it is important that you have, by now, mastered your understanding of total revenue/cost, average revenue/cost, and marginal revenue/cost. If you are still having problems, please go back to Chapter five before proceeding.

Janse Van Rensburg (2015:147) created a summary Table (Table 7.3 – see prescribed book) highlighting the profit or loss situation of the firm when the market price is R131. After reviewing the Table, can you identify at what level of output is profit maximised? Clearly this would be at the output level where total revenue exceeds total cost by *the largest possible amount*.

If one had to illustrate columns 4, 5 and 6 in the prescribed textbook using conventional graphs, figure 5.3 is possible. Please note that the bottom diagram is simply derived by subtracting total costs from total revenue. In this example, profits are maximised at an output of 9 units (and equally R299). Make sure you are able to identify this in both the Table and graph(s).

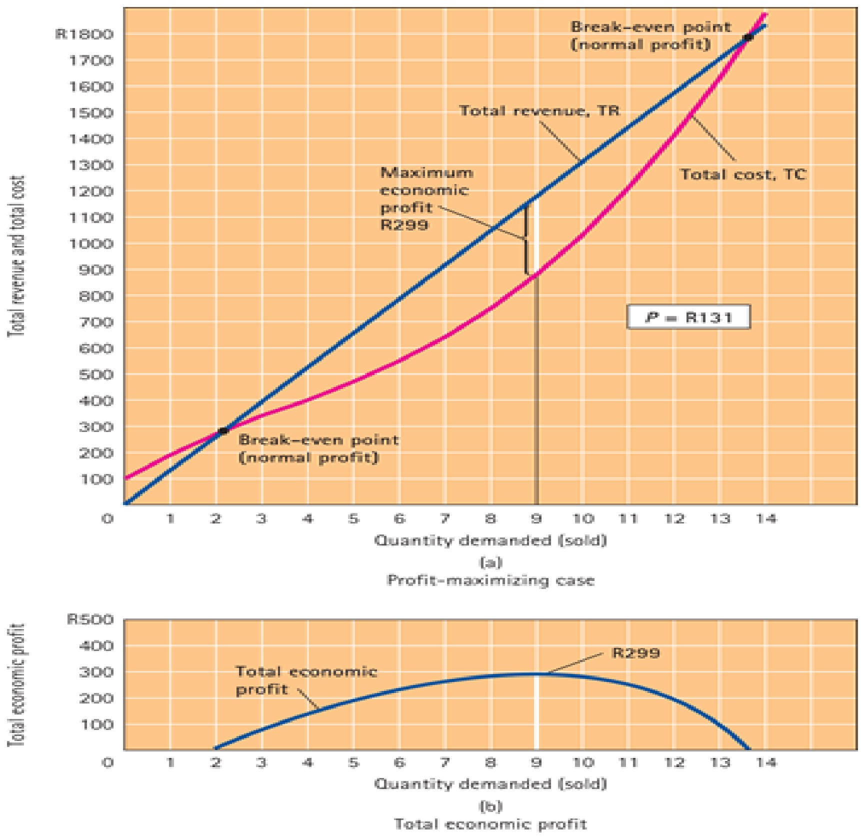


Figure 5.3 Total Revenue/cost approach

Source: Economics Southern African Edition, 2015.

? THINK POINT
Learners are required to try and answer the questions set below. Suppose we expand on our poultry business example? Remember that the market price is R42 per chicken. Suppose that Peter now hires a temporary worker and pays him R150 per day to work in his poultry business. Assume that all other costs do not change when hiring the worker and thus the marginal cost associated with hiring the worker is R150. If this worker is unable to add any additional output (i.e. zero output), would it be wise to hire him? What about if he is able to increase output by 3 chickens? What is the minimum amount of output needed for Peter to retain the services of the worker?

Janse Van Rensburg (2015) provides a further example and you are required to determine the equilibrium position.

Marginal Revenue / Cost Approach

If you worked out the above question correctly, you will notice that given the marginal cost associated with hiring the worker (R150), it would only make sense to hire him if the marginal benefit (revenue) derived from hiring this worker *exceeds* his marginal cost? If it does not, then it would cost Peter more to hire the worker than what he derives from hiring him. In the world of high powered finance, such a poor decision can be seen as 'destroying shareholder (or owner) value'.

This leads to an important maxim in Economics, namely that profit is maximised where **marginal revenue (MR) is equal to marginal cost (MC)**. You need to fully understand this maxim and be able to explain why this would always is the case.

We now apply this rule to a firm operating in a perfectly competitive market. To determine the equilibrium position and profitability of the firm, four simple steps need to be followed:

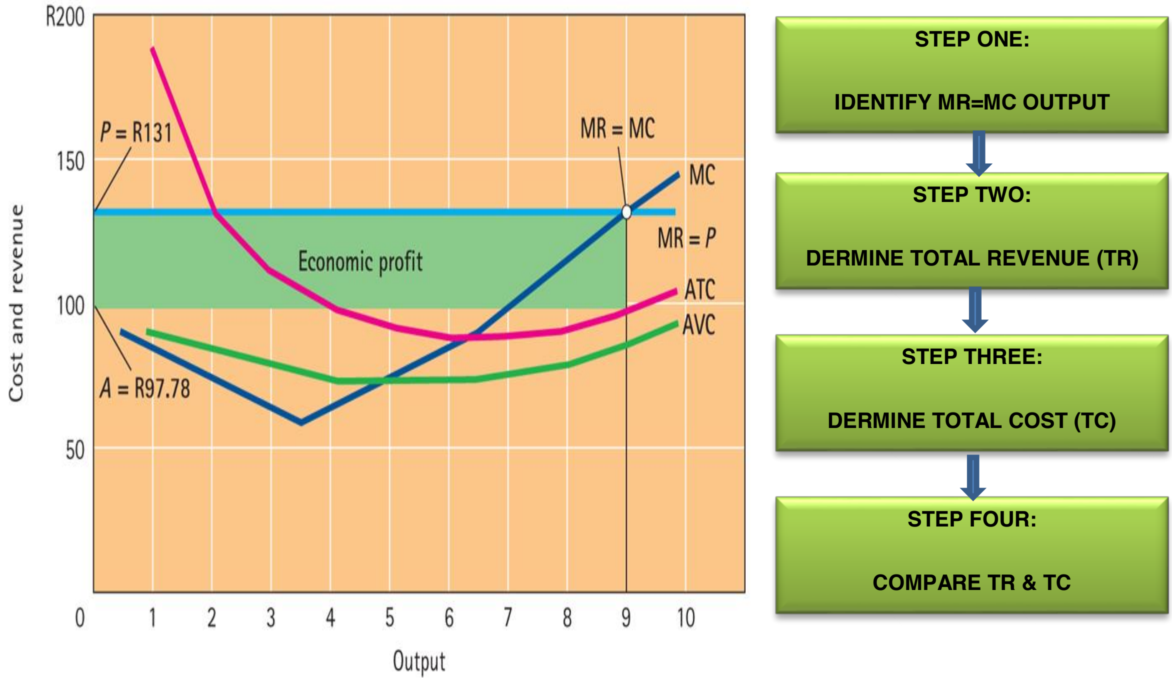


Figure 5.4 Marginal Revenue/cost approach

Source: Economics Southern African Edition, 2015.

The above situation demonstrates that is if the market price is R131, the perfectly competitive supplier will produce an output of 9 units and make economic profits. However, what would have been the case if the market price was equal to R100? What will now be the equilibrium output?

Will the supplier still make economic profits? Clearly the equilibrium output will not equal 9 units now? If you are still unable to determine the equilibrium position at a market price of R100, you need to re-read the above section.

As can be seen, the equilibrium position depends on *both MR and MC*. When either changes, so too would the equilibrium position. Thus four possible profit situations for any firm can be derived:

- ✓ Economic profit
- ✓ Normal Profit
- ✓ Loss Minimising
- ✓ Shutdown

Janse Van Rensburg (2011: 149-52) and Schiller (2013: Part 9 – Market Structure) provide ample explanation for each case. Make sure you are able to illustrate and explain *each of these situations.*

5.4 PROFIT MAXIMISATION UNDER MONOPOLY

We now turn our attention to the equilibrium position of a monopoly. In its pure form, monopoly is a market structure in which there is only one seller of a good or service that has no close substitutes. A very important characteristic of a monopoly is that the single supplier can manipulate or control the market price. In other words, the supplier is a price maker! Another requirement is that entry to the market should be completely blocked. The single seller is called a **monopolist** and the firm is called a **monopoly**.

A key distinction between a PC market and a monopoly is that whereas in the perfectly competitive market, P = MR = AR, in a monopoly price need not necessarily equal the MR and/or AR (given that the monopolist can choose whatever price he decides for each individual consumer. Thus, the MR and AR curves will not (necessary) coexist with the price line.

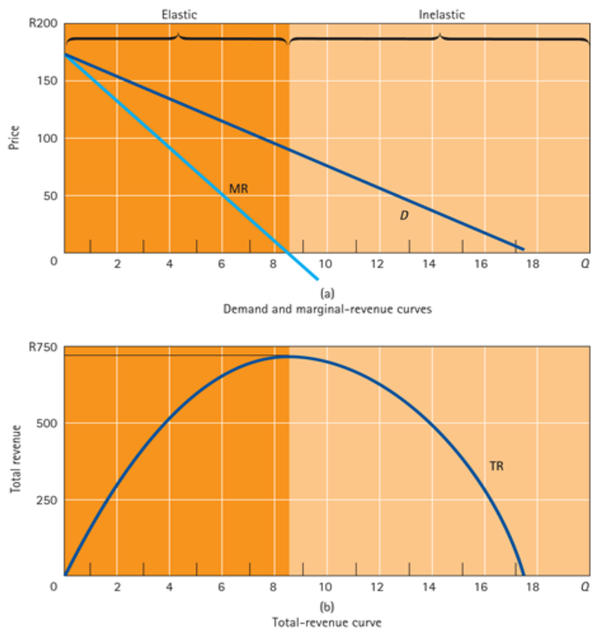
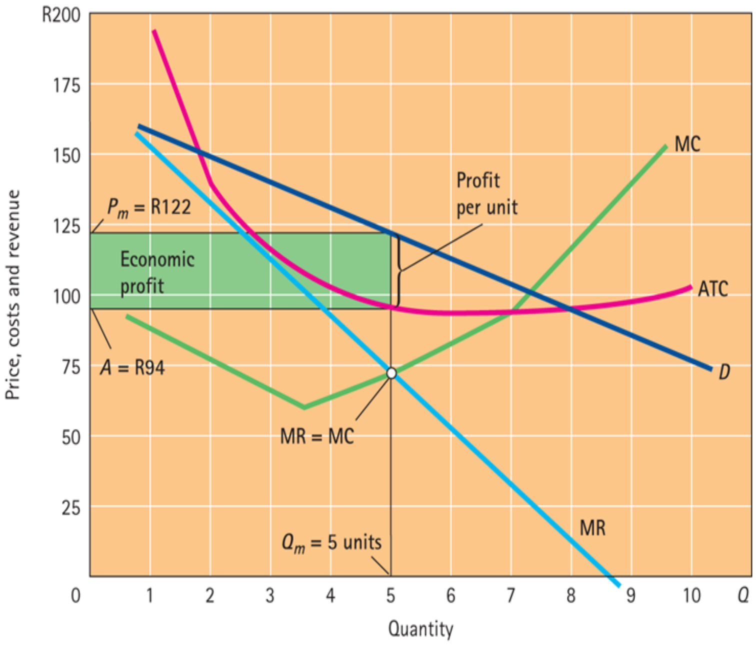


Figure 5.5

Source: Economics Southern African Edition, 2015.

In principle, the profit maximising decision of a monopoly is exactly the same as that of any other firm. Like any other firm, a monopoly should produce where marginal revenue (MR) is equal to marginal cost (MC) - the profit maximising rule - provided that average revenue (AR) is greater than minimum average variable cost (AVC). If this not the case, the monopolist will simply increase the market price until he makes abnormal profits.



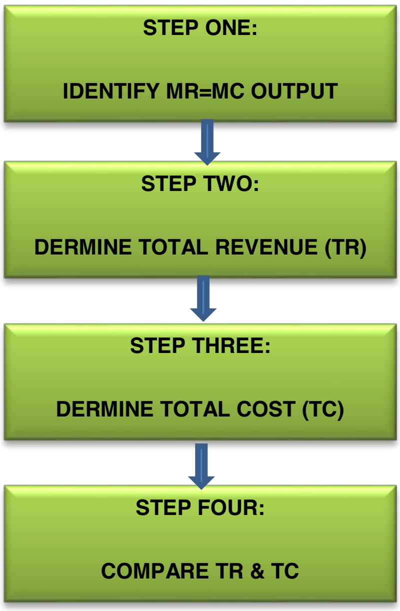


Figure 5.6

Source: Economics Southern African Edition, 2015.

5.5 MARKET COMPETITION

Given your above understanding of the role of market structures in determining profitability, it is not surprising that many governments around the world have mechanisms that limit the market power (and exploitation) of a monopolist. Furthermore, many consumers have formed groups around the world and often publically lobby against the behaviour of monopolies.

Equally worrisome is the case of **collusion**. This is where a market only has a few suppliers (oligopoly or duopoly) and they collude with each other to fix the market price to some artificially high level. This is done in order for all suppliers to enjoy economic profits.

This is especially problematic in many African economies where the concentration index (the number of suppliers in a given industry) is extremely high (meaning there are very few suppliers in a given industry). Consequently, consumers are at the mercy of these few suppliers and even though in most cases suppliers do not formally collude with each other, they are able to 'guess' the future plans of another supplier. As a result, these few suppliers will abuse their market position.

Another key concern is when the few suppliers in an industry decide to merge. **Mergers and Acquisitions** is a major area of concern for governments and public bodies around the world. This is due to the fact that when the few suppliers in an already concentrated market merge with each other, the market moves that much closer to a pure monopoly market structure.

For example, assume that there were only two (independent owned and managed) suppliers in a particular industry. Even though there is already such limited competition in the market, there is some competition none the less. If these two suppliers had to merge and become a single supplier, then consumers now have to deal with a single supplier!

In South Africa (and many other SADC nations) governments take a rather hard line stance against market exploitation and collusion. The *Competition Commission of South Africa* (www.compcom.co.za) is a statutory body constituted in terms of the Competition Act, No. 89 of 1998 by the Government of South Africa. It is empowered to investigate, control and evaluate restrictive business practices, abuse of dominant positions and mergers in order to achieve equity and efficiency in the South African economy.

You are required to read the prescribed article at the start of this section, and to be familiar with the latest happenings regarding competition in your country.

Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on a *"Market Structure & Competition"*, source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.

QUESTIONS FOR REFLECTION

After completing your study of this section on "Market Structure & Competition", reflect on the following questions.

(To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. Economists often speak of productivity levels. That is, the rate at which a firm converts its inputs into output. Clearly the more productive a firm is, the greater the volume that can be produced for a given level of inputs.

   Suppose a company employs a smart economist who was able to bring down the costs of production. If the cost of production decreases, what do you think will happen to the average and marginal cost curves? What do you think will happen to the company's profitability if the market price remained the same?
2. Do you think South Africa/SADC firms are productive? Can we compete with the likes of China and India?
3. Are imperfectly competitive markets economically efficient? Explain.
4. Do you think that Competition Commission of South Africa has a role to play in regulating economic activity? If so, what role should they take and how can they make their role more decisive and evident?
5. AM Harrison, the newly-appointed managing director of One and Only, a monopolistic firm, tells you that (as monopolist) he can set any price he wishes and sell as many units of his product as he wants at that price. Do you agree? Explain.

CHAPTER 6: THE FACTOR MARKETS: THE LABOUR MARKET

Specific Learning Outcomes

The overall outcome for this section is that, on its completion, the student should be able to understand the interaction between the factor market and the labour market. This overall outcome will be achieved through the student's mastery of the following specific outcomes, in that he/she will be able to:

1. Determine the factors that shape labour supply and demand.

2. Understand how wage rates are established.

3. Explain how a perfectly competitive labour market functions.

4. Analyse how minimum wages alter labour market outcomes.

ESSENTIAL READING

*Learners are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C. & Wall, S. (2013). The Economy Today. 13th Edition. New York; McGraw-Hill Irwin. Chapter 30, The Labor Market, pp. 662-685.
- Mohr, P. and associates. (2015). Economics for South African Students. 5th Edition. Pretoria: Van Schaik Publishers. Chapter 12, The factor markets: the labour market, pp. 207-231.
- Janse van Rensburg, J., McConnell, C.R. & Brue, S.L. (2015). Economics Second Southern Edition. Chapter 8, Wage Determination, pp. 177-193.

Journal Articles & Reports

1. Hoskisson, R.E., Wright, M., Filatotchev, I. & Peng, M.W. (2013). *"Emerging Multinationals from Mid-Range Economies: The Influence of Institutions and Factor Markets".* Journal of Management Studies. 50(7), pp. 1295-1321. (available from Ebscohost).
2. Huffman, S.C. & Rizov, M. (2014). *"Body weight and lobour market outcomes in Post-soviet Russia".* International Journal of Manpower. 35(5), pp.671-687. (available from Emerald).
3. Lee, J.Y. (2015). *"Internal Labor Markets Under External Market Pressures".* Industrial & Labor Relations Review. 68(2), pp. 338-371. (available from Ebscohost).
4. Serban, A. C. & Aceleanu, M.L. (2015). *"Minimum wage-labour market rigidity factor".* Theoretical & Applied Economics. 22(2), pp. 171-182. (available from Ebscohost).
5. Tisch, A. & Wolff, J. (2015). *"Active labour market policy and its outcomes: Does workforce programme participation increase self-efficiency in Germany".* International Journal of Sociology and Social Policy. 35(1/2), pp. 18-46. (available from Emerald).

6.1 INTRODUCTION

Factor markets operate like product markets with supply and demand interacting to determine prices and quantities. In factor markets, however, resource inputs rather than products are exchanged. Those exchanges determine the wages paid to workers and the rent, interest and profits paid to other inputs. Increases in wages and salaries are often blamed for increases in costs and prices. Wage disputes and strikes are often in the headlines.

6.2 LABOUR SUPPLY

Schiller, Hill & Wall (2013: 682) state that the motivation to work arises from social, psychological and economic forces. People need income to pay their bills, but they also need a sense of achievement. As a consequence, people are willing to work – to supply labour. The determinants of labour supply include tastes (for leisure, income and work); income and wealth; expectations (for income or consumption); prices of consumer goods and taxes.

There is an opportunity cost involved in working – namely, the amount of leisure time one sacrifices. By the same token, the opportunity cost of not working (leisure) is the income and related consumption possibilities thereby forgone. Everyone confronts a trade-off between leisure and income.

Higher wage rates induce people to work more, that is, to substitute labour for leisure. However, this substitution effect may be offset by an income effect. Higher wages also enable a person to work fewer hours with no loss of income. When income effects outweigh substitution effects, the labour supply curve bends backward, as illustrated in Figure 6.1.

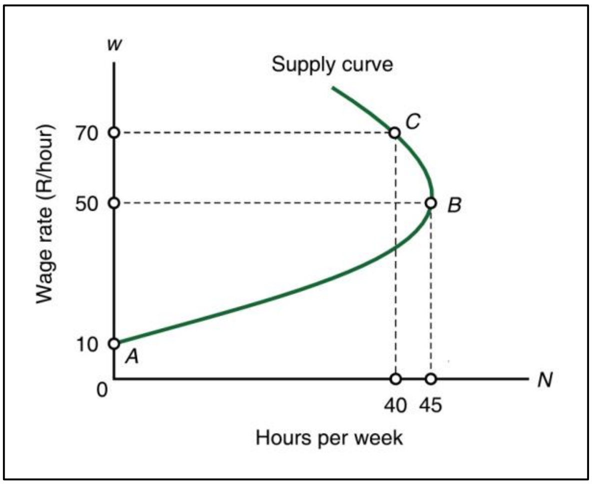


Figure 6.1: The individual supply of labour

Source: Mohr and Associates (2015:211)

Figure 6.1 illustrates that the quantity of labour supplied increases up to a certain point (B) and then declines as the wage rate increases further. This is called the backward-bending individual supply curve of labour.

6.3 LABOUR DEMAND

A firm's demand for labour reflects labour's marginal revenue product, which refers to the change in total revenue associated with one additional unit of input. A profit-maximising employer won't pay a worker more than the worker produces (Schiller, Hill & Wall, 2013: 669). Figure 6.2 shows the demand for labour.

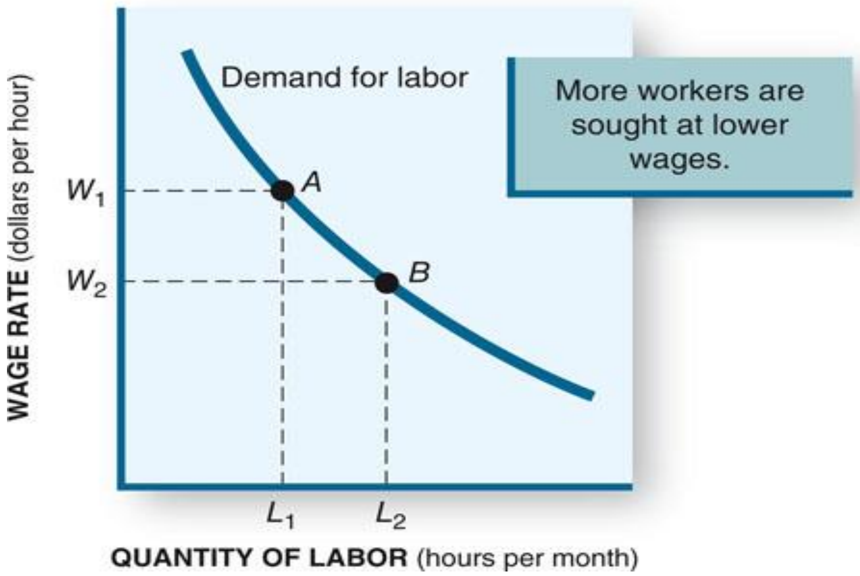


Figure 6.2: The demand for labour

Source: Schiller, Hill & Wall (2013:668)

According to Figure 6.2, the higher the wage rate, the smaller the quantity of labour demanded (*ceteris paribus*). At the wage rate W_1, only L_1 of labour is demanded. If the wage rate falls to W_2, a larger quantity of labour (L_2) will be demanded. The labour demand curve obeys the law of demand.

Figure 6.3 clearly illustrates that the marginal revenue product curve is the labour demand curve.

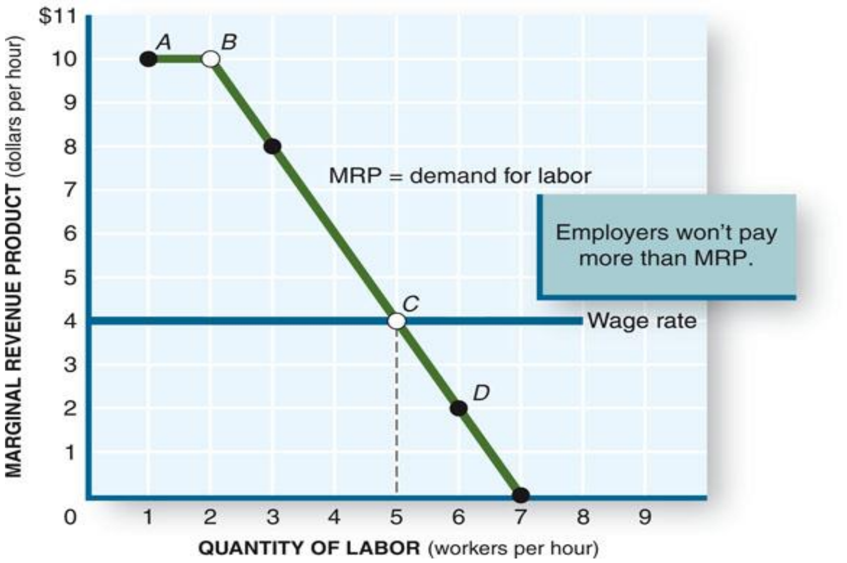


Figure 6.3: The Marginal Revenue Product Curve Is the Labour Demand Curve

Source: Schiller, Hill and Wall (2013:672)

According to Schiller, Hill & Wall (2013:672), an employer is willing to pay a worker no more than the marginal revenue product. With reference to Figure 6.3, an employer will gladly hire a second worker because the worker's MRP (point B) exceeds the wage rate ($4). The sixth worker won't be hired at that wage rate since the MRP (at point D) is less than $4. Therefore, the MRP curve is the labour demand curve. Hence, in keeping with the law of diminishing returns, the MRP of a variable factor declines as more of it is employed with a given quantity of other (fixed) inputs.

6.4 EQUILIBRIUM IN THE LABOUR MARKET

The intersection of the market supply and demand curve establishes the equilibrium wage in a competitive labour market, as illustrated in Figure 6.4.

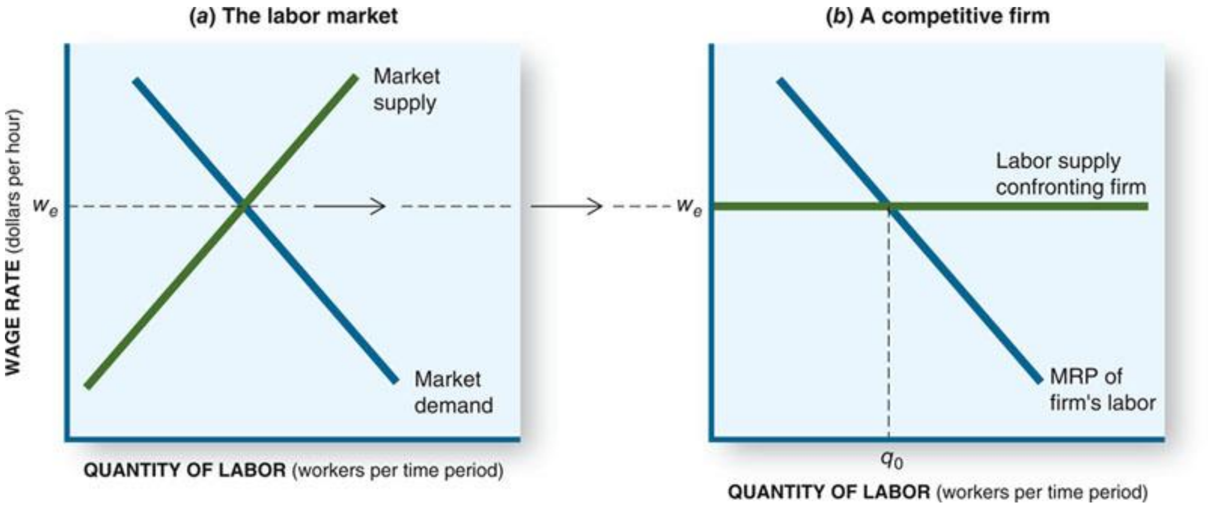


Figure 6.4: Equilibrium wage

Source: Schiller, Hill & Wall (2013:675)

All the firms in the industry can hire as much labour as they want at the equilibrium wage. In terms of Figure 6.4, the firm can hire all the workers it wants at the equilibrium wage w_e. It chooses to hire q_o workers, as determined by their marginal revenue product within the firm.

6.5 MINIMUM WAGES

Mohr and Associates (2015:223) state that wage determination is an emotional process. When the pay of those at the bottom end of the wage structure is an issue, concepts such as basic needs, minimum wage levels, living wages and calls for minimum wages tend to become emotionally loaded. Figure 6.5 demonstrates the impact of the imposition of a minimum wage in a perfectly competitive labour market.

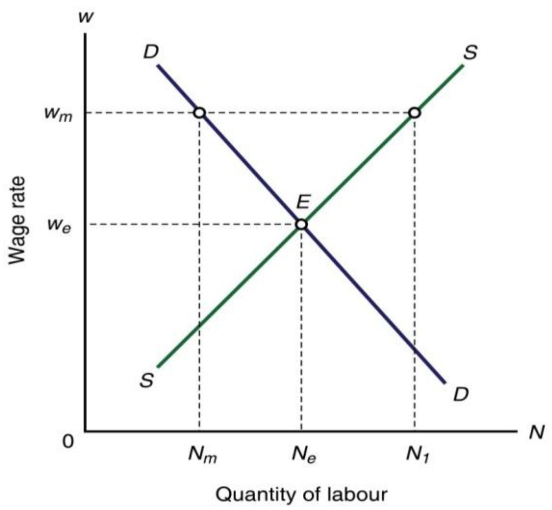


Figure 6.5: The impact of the imposition of a minimum wage in a perfectly competitive labour market

Source: Mohr and associates (2015:224)

In Figure 6.5, DD and SS are the demand and supply of labour, respectively. The original equilibrium wage is w_e and the quantity of labour employed is N_e. The imposition of a minimum wage at w_m decreases the quantity of labour demanded to N_m and thus causes unemployment equal to the difference between N_e and N_m. At the minimum wage w_m, there is an excess supply of labour equal to the difference between N_1 and N_m.

Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on The Factor Markets: The Labour Market, source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.

QUESTIONS FOR REFLECTION

After completing your study of this section on the The Factor Market: The Labour Markets reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. Would you continue to work after winning a lottery prize of R500 000 a year for life? Would you change jobs or career opportunities? What factors, besides income, influence work decisions?
2. Is this Managerial Economics course increasing your marginal productivity? If so, in what way?
3. How would you measure the marginal revenue product of a team's coach?
4. Explain why marginal physical product would diminish as:
   - More secretaries are hired in an office.
   - More professors are hired in the economics department.
   - More construction workers are hired to build a school.
5. "Many of the lowest paid people in society, for example those involved in waste disposal, also have relatively poor working conditions. Hence, the notion of compensating wage differentials is disproved". Do you agree? Explain.
6. In 2002 Brian Gilberston, a South African, was Chief Executive Officer of BHP Billiton, a major international mining company and earned a basic annual remuneration package of R52 million (i.e R1 million per week). Do you think a remuneration of this magnitude was justified, particularly compared to the earning of mine workers working for the company? Substantiate your view.
7. Why do people in pleasant jobs often earn higher wages than people doing unpleasant work?
8. Explain how labour productivity (represented by the marginal revenue product of labour) affects the wage rate in a perfectly competitive labour market.
9. If the national average wage for men exceeds the national average wage for women, there is definitely sexual discrimination in the labour market. Do you agree? Substantiate your view.
10. Explain how minimum wage legislation can affect a perfectly competitive labour market. Do you think that these effects can occur in the markets for domestic and farm workers in South Africa?

CHAPTER 7: MACROECONOMIC ECONOMIC INDICATORS

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of common economic indicators used to assess economic performance of a country. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that he/she will be able to:

1. List and explain the key economic indicators used to assess economic performance.

2. Provide direction on macroeconomic data sources and where to find suitable information.

3. Understand what is meant by economic development.

4. Explain how and why economic policies are implemented.

ESSENTIAL READING

Learners are required to read ***ALL*** *of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapters 5 – 7*. (pp 92 – 149).
- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapters 11: Fiscal Policy*. (pp 228 – 247).
- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapters 15: Monetary Policy*. (pp 314 – 335).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2011) Economics Southern African Edition Boston: McGraw Hill.*Chapter 15: Measuring Domestic output and National Income* (pp 301 – 319).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2011) Economics Southern African Edition Boston: McGraw Hill.*Chapters 18 – 19* (pp 363 – 405).

Recommended Textbook:

- Mohr, P, (2007), Economic Indicators, UNISA, Pretoria.

Journal Articles:

1. *South African Reserve Bank Quarterly Bulletin*, (2012), South African Reserve Bank, December, No 266.
2. *South African Reserve Bank Quarterly Bulletin*, (2011), South African Reserve Bank, December, No 262.
3. *2012 World Development Indicators*, (2012) World Bank, Washington.
4. *African Development Indicators 2011*, (2011) World Bank, Washington.
5. *Making Africa Count* (2013) The Economist, January 31, 2013.
6. *Sub-Saharan Africa Maintains Growth in an Uncertain World*, IMF, October 2012

7.1 INTRODUCTION

Have you ever wondered how any country measures economic progress? How do countries around the world assess if they used their resource base efficiently and effectively in uplifting living standards? In other words, how does one measure the 'efforts' of governments (and other stakeholders) in driving economic growth and performance?

In microeconomics, assessing performance is relatively straightforward; in profit-driven firms you simply check how well the business was able to use its resources in generating profits. What about in macroeconomics, how does one assess performance? In good starting point in answering that question is to firstly distinguish between microeconomics and macroeconomics.

Macroeconomics is concerned with the ***economy*** as a whole. It focuses on aspects such as the stability of the general price level (commonly known as inflation), the maintenance of full employment, economic growth, the distribution of income, government spending, and the nation's money supply.

Microeconomics, on the other hand, focuses on the ***individual*** participants in the economy: producers, workers, employers and consumers. Microeconomic policies focus on specific markets.

As highlighted in the start of this study guide, the aim of any economic activity is the production of goods and services for the satisfaction of (unlimited) human wants. In order to satisfy these wants, policy-makers such as government, the central bank and other important stakeholders must embark on *economic policies*. At the end of a given time period (normally a quarter or a year), the *outcomes* of these economic policies need to be assessed. In order to do so, we will need benchmarks or financial indicators to assess the performance.

Economists generally look at five macroeconomic objectives to assess the performance of an economy. These are:

- Economic growth
- Full Employment
- Price Stability
- External or Balance of Payments Stability
- Equal Income Distribution

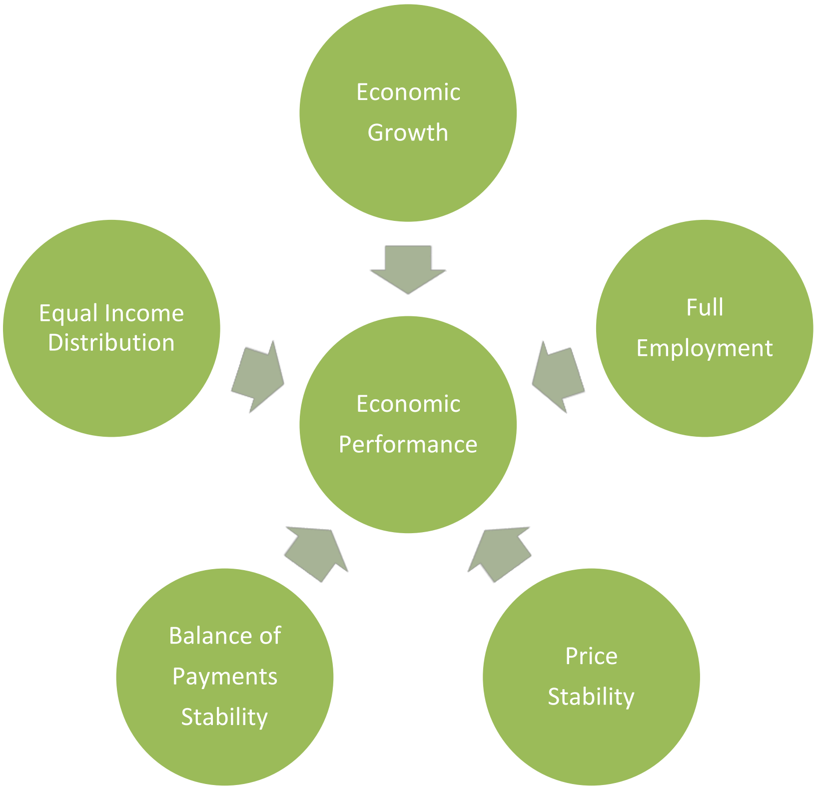


Figure 7.1 Macro economics objectives

You are required to fully understand each of these objectives and be able to explain each one in detail. Furthermore, you are required to understand the linkages between the different objectives and how a change in any one of them can/may influence the other(s).

There are many recognised economic data websites which provide a host of macroeconomic data on various countries around the world.

www.worldbank.org www.imf.org www.economist.com

Furthermore, various central banks (e.g. www.reservebank.co.za) provide macroeconomic indicators for individual countries.

Providing this type of information in the module guide is counterproductive for two reasons. Firstly, it robs students of the chance to engage in first hand research, and secondly the amount of information can be quite large. Students are therefore expected to access these sites and download the necessary information needed.

You must be able to explain the macroeconomic variables and at least have a reading knowledge of the latest macroeconomic changes in your domestic country/region. This information will be used in your Assignment and/or examinations. To assist you, a brief synthesis of each of these variables is provided below.

7.2 ECONOMIC INDICATORS

7.2.1 Economic Growth

Economic output looks at the total amount of *final* goods and services produced in a country during a specific time period. Therefore *economic growth* looks at the change in the total amount of goods and services over different time periods (from one period to the next).

In order to determine the economic growth of a country, economists look at the *Gross Domestic Product (GDP)* of a country for a given time period. Notice that the definition looks at *final* goods and services and not *intermediate* goods and services. You are required to read up on this and be able to explain why this is the case.

Another key distinction is the difference between *nominal* and *real* GDP. Real GDP is measured in constant prices (normally some base year is chosen) while nominal GDP is measured in current prices (the prices that exist in that particular year). It is important that you are able to distinguish between the two concepts as misinterpreting economic growth can be quite problematic.

Janse Van Rensburg (2015) highlights the three ways of calculating GDP – namely the *Spending, Income* and *Production* methods – which are the most common methods in any economy. A good starting point is to become familiar with the standard circular flow diagram illustrated below. This will help you understand each approach. Make sure you understand the method followed by each approach and how GDP is calculated using either of these approaches. With regards to the other national accounts found in Janse Van Rensburg (2015) you are required to have a reading understanding of them but you are not expected to calculate any of them.

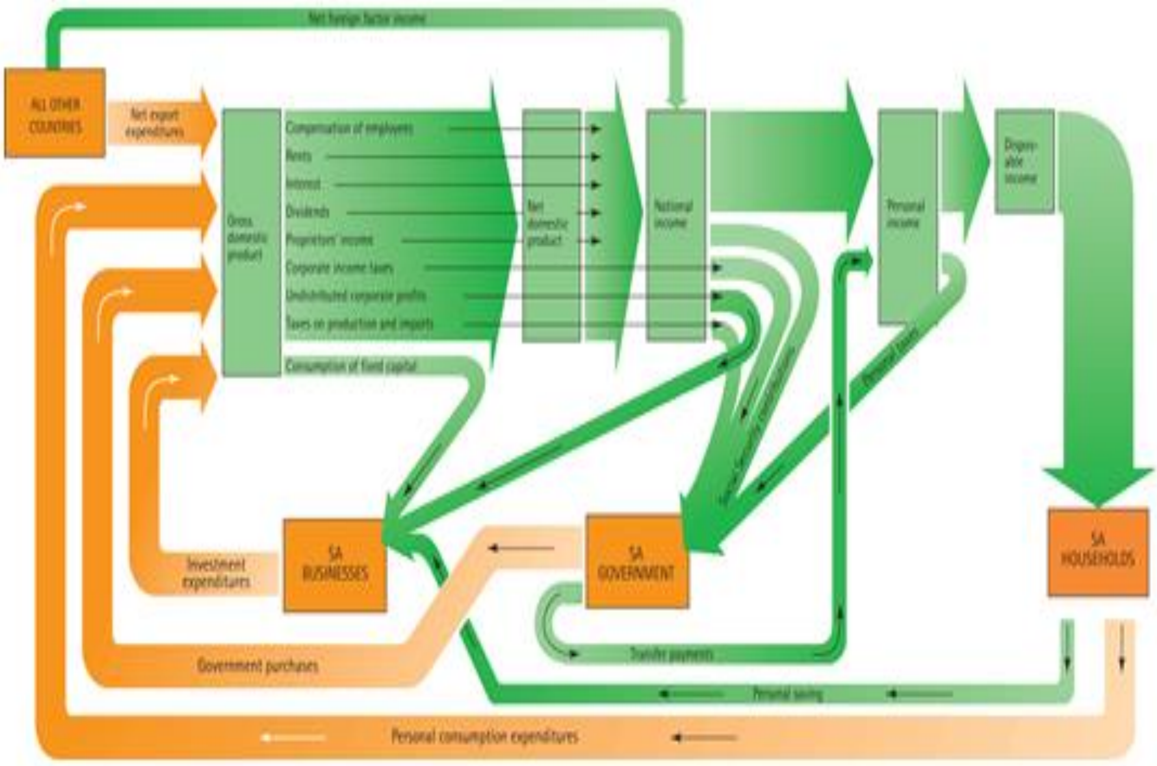


Figure 7.2 Spending, Income and Production Methods

Source: Economics South African edition,2015

Economists sometimes use GDP to assess the living standards prevalent in a country. Clearly more economic output would mean higher living standards. However, not all economic activity is captured in the formal calculation of GDP and there are some shortcomings related to GDP. These shortcomings are presented in most economic textbooks and you are required to understand them.

Another problem relating to simply calculating GDP and using this as an indicator of wellbeing is that when the population is growing, even in an expansionary phase, it could sometimes mean that the average living standards do not necessary increase. To overcome this issue, economists make use of GDP per capita which measures the value of GDP that can be allocated to each citizen in a country.

7.2.2 Full Employment

At a certain level of output in an economy, it can be said that all factors of production are being fully utilised. In such a situation, all workers would be employed, all machinery would be in use and all usable land would be involved in production. This is called **full employment** – all factors of production are in full use.

Full employment is important as under-employment or unemployment causes social and political instability. Most often, unemployment is related with labour but unemployment could also relate to the other factors of production that are not being employed – for example, an unused tract of agricultural land. When speaking of labour specifically, the unemployment rate is the percentage of the labour force unemployed (Janse Van Rensburg, 2015). There are various kinds of unemployment which economists contend with and you are expected to know each of them.

Any form of unemployment should be seen as a loss in potential production, since the country could have earned more if those who were unemployed were indeed economically active. Clearly, a drop in the standard of living occurs as production is lost.

The losses emanating from unemployment can be divided into *economic* and *non-economic* costs which you need to be able to explain.

7.2.3 Price Stability

It is common knowledge that the price of goods and services generally increases from one year to the next. The process of increases in the general level of prices is called **inflation**. When economists talk of price stability they are actually referring to keeping inflation equal to zero (or more practically as low as possible). An inflation rate of 1% to 2% is regarded in most Western economies as a “healthy” inflation rate.

Rising prices *per se* are not a problem, but the accompanying effects are undesirable. Among these effects are the redistribution of income, the country’s balance of payments and social as well as political effects.

Two types of inflation are generally distinguished, namely *Demand-pull Inflation* and *Cost-push Inflation*. You are required to be able to explain both of these (with the use of diagrams) and understand the explanatory factors driving each case. Janse Van Rensburg (2015) provides further information on this.

7.2.4 External Stability or Balance of Payments

A country’s balance of payments is the sum of all the transactions that take place between the residents of a country and the residents of all foreign nations. Those transactions include exports and imports of goods, exports and imports of services, tourist expenditures, interests and dividends received and paid abroad, and purchases and sales of financial and real assets abroad (Janse Van Rensburg, 2015).

Stated simply, the Balance of Payments account is a recording of all the above mentioned transactions, separated or broken up into a current account and a financial account.

This means, like most other accounting records, the balance of payments could be either in a deficit or surplus. Balance of payments stability means that this balance is managed over time and that there are not unwarranted changes to it. Clearly the exchange rate is critical in a country's balance of payments as it determines the quantum of imports and exports.

You would be expected to have a good knowledge of what makes up a country's balance of payment account and where individual transactions will fit in. You will not however be required to calculate the balance of payment of a country in both the Assignment and examinations.

7.2.5 Equitable or Redistribution of Wealth (Income)

How does any country ensure that the success of economic growth and development cascades down to all citizens (as opposed to just a small select minority)? Although often overlooked, this is an important objective, especially in South Africa where income inequality is among the highest in the world.

While most people agree with the other four policies outlined above, not everyone will agree with the redistribution policy. Some, for example, regard an unequal distribution of income as a means of *stimulating saving and investment* which will benefit the poor. On the other hand, a highly unequal distribution of income tends to *generate social and political conflict*. It can also have important effects on the structure and development of the economy.

Therefore governments try and achieve this macroeconomic objective by redistributing wealth away from the very wealthy towards the very poor. Often this would entail a policy where the wealthier people of a country have to contribute more (mainly through taxes) towards the underprivileged without harming the incentive to work.

In order to do so, the first step is to capture the status quo of the current situation. To do this, economists usually use the *Lorenz Curve* and the *Gini Coefficient*. Both of these indicators capture the level of income distribution in a country. You are required to have a good understanding of the situation in your country but not required to be able to calculate any of these ratios.

Having read and understood each of the individual objectives, you now need to read up on the situation in your country. As mentioned earlier, these are easy assessable (and downloadable) from most central banks across the world. You need to have a good understanding of the situation in your country as most of the critical analysis and thinking in this course will take it for granted that you have read and understood the macroeconomic situation in your country.

7.3 ECONOMIC POLICIES

Governments use both *Fiscal Policy* and/or *Monetary Policy* in order to influence the broad macroeconomic objectives. Depending on the situation and type of outcome sought, governments resort to using different policy instruments to influence overall performance.

The most common instruments under fiscal policy include the use of government expenditure and/or the use of taxation, while the most popular monetary instruments include controlling money supply, and/or interest rates.

Each of these instruments has specific macroeconomic impacts. For example, during recessionary periods governments may seek to stimulate the economy by reducing interest rates (part of monetary policy), and/or reducing tax rates (as part of fiscal policy) in order to induce consumer spending. Strictly speaking, monetary policy is not under the control of the government but rather the central bank, that then takes 'guidance' from the government.

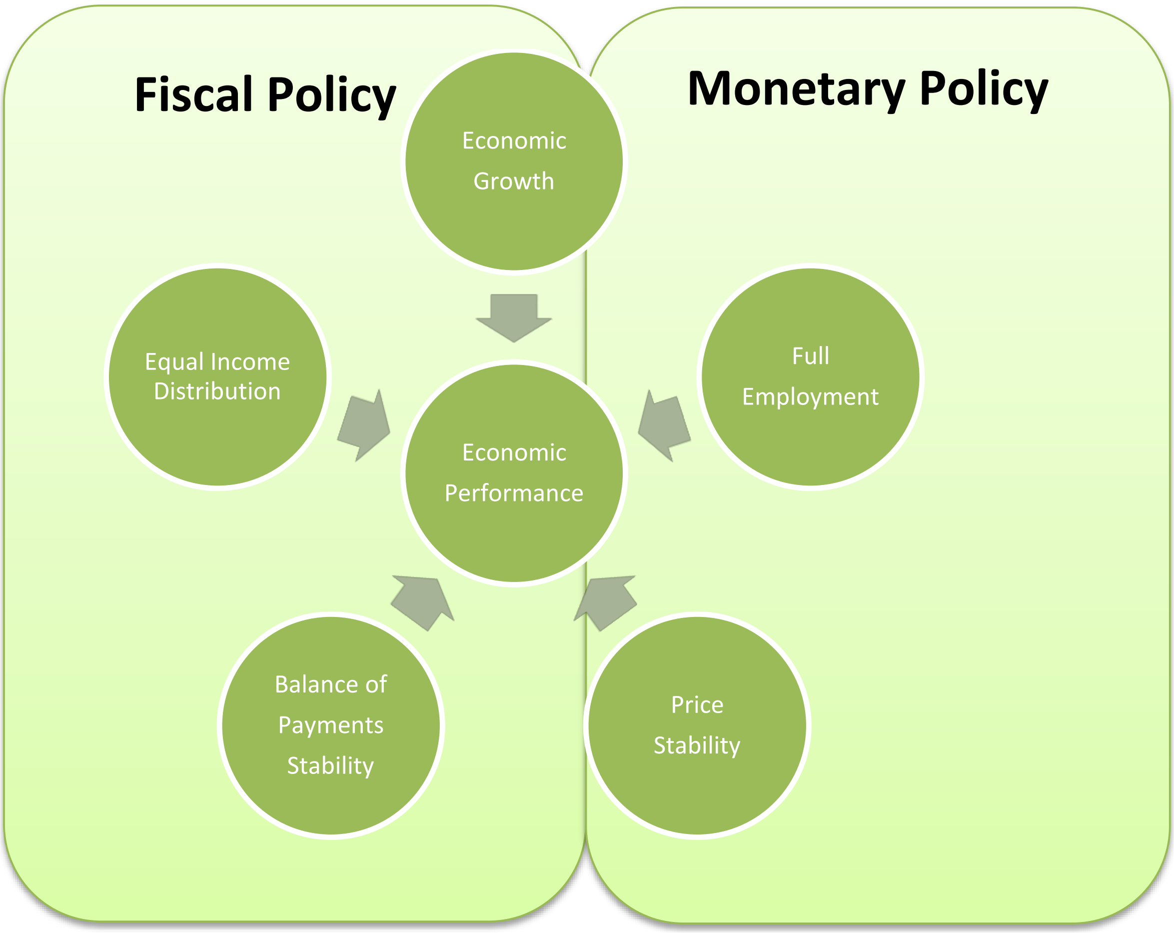
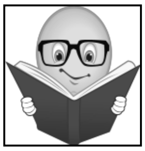


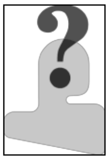
Figure 7.3 Economic Policies

You must know how each of these instruments affects the economy. Both Janse Van Rensburg (2015) and Schiller (2013) provide ample information on this and you are required to read and understand the relevant sections.



Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on a *"Economic Indicators"*, source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.



QUESTIONS FOR REFLECTION

After completing your study of this section on 'Economic Indicators', reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. Consider the economic performance of your country over the last five years. Based on the economic indicators discussed in the section, how would you rate the country's performance?
2. How is it possible that countries like China and India are able to perform so much better than most other countries, especially those in sub Saharan Africa?
3. What, if any, adjustments would you undertake with regards to your country's current economic policies and why would you do so? What will the likely impact(s) of this adjustment(s) be on the macroeconomic performance?
4. List South Africa's main macroeconomic goals (or objectives) and rank them in order of priority. Substantiate your ranking. Would you classify your rankings as an example of positive or normative economics? Explain.
5. If you are told that the South African GDP at current prices increased by seven percent last year. What conclusions can you draw from this fact? Explain your answer.

CHAPTER 8: THE MONETARY SECTOR AND THE GOVERNMENT SECTOR

Specific Learning Outcomes

The overall outcome for this section is that, on its completion, the student should be able to describe the functions of the South African Reserve Bank, describe how government intervenes in the economy, distinguish between nationalisation and privatisation and discuss the criteria for a good tax. These overall outcomes will be achieved through the student's mastery of the following specific outcomes, in that he/she will be able to:

1. Describe the functions of money.
2. Describe the main functions of the South African Reserve Bank.
3. Explain the demand for money and how money is created.
4. Explain the basic instruments of monetary policy.
5. Explain why government participates in economic affairs.
6. Describe how government intervenes in the economy.
7. Distinguish between nationalisation and privatisation.
8. Explain what fiscal policy is and how it can be used to stimulate the economy.
9. Discuss government spending and the financing of such spending.

ESSENTIAL READING

*Learners are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C. & Wall, S. (2013). The Economy Today. 13th Edition. New York; McGraw-Hill Irwin. Chapter 11, 12, 13 and 15; Chapter 11, Fiscal Policy, Chapter 12; Deficit and Debt; Chapter 13; Money and Banks
- Mohr, P. and Associates. (2015). Economics for South African Students. 5th Edition. Pretoria: Van Schaik Publishers. Chapter 16, The foreign sector, pp. 299-311.
- Janse van Rensburg, J.J, McConnell, C.R. & Brue, S.L. (2015). Economics Second Southern Edition. Chapter 10,11 & 13; Chapter 10 and 11: Money, Banking, Interest Rates and Monetary Policy and Money Creation (pp 219 – 241); Chapter 13, (pp 271 - 272), South Africa in Brief: Private and Public Sectors.

Journal Articles & Reports

- Bekink, B and Botha, C (2009), The Role of a Modern Central Bank in Managing Consumer Bankruptices and Corporate Failure: A South African Public- Law Angle of Incidence.
- Lacker, J.M (2009), Government Lending and Monetary Policy.
- Ozkan, F.G, Kipici, A and Ismihan, M (2010), The Banking Sector; Government Bonds, and Financial Intermediation: The Case of Emerging Market Countries, Emerging Markets Finance and Trade, July – August 2010, Vol. 46, No.4 pp 55 – 70.
- Sichei, M.M, Amanga, D.M, Tiriongo, Government Deposits at the Central Bank and Monetary Policy Operations in a Monetary Targeting Framework: A Threshold Autog-regressive Model from Kenya, Research and Policy Analysis Department, Central Bank of Kenya.
- Tymoigne, E (2014), Modern Money Theory, and Interrelations Between the Treasury and Central Bank: The Case of the United States, Journal of Economic Issues / Association for Evolutionary Economics.

8.1 INTRODUCTION: MONETARY SECTOR

Money is one of the most important institutions in the economy. Money, it is said, talks, makes the man (or woman) and makes the world go around. The Bible says that the love of money is the root of all evil. Everyone is fascinated by money. Without money, the process of acquiring goods and services would be much more difficulty and time-consuming.

8.1.1 What is money?

- Janse Van Rensburg, McConnell and Brue (2015: 219), define money as (and thus amounts to) anything that is generally accepted as a medium of exchange.
- Mohr and Associates (2015:256), Money is anything that is generally accepted as payment for goods and services or that is accepted in settlement of debt.

8.1.2 The functions of money

- Money as a medium of exchange
- Money as a unit of account
- Money as a store of value

8.1.3 Different kinds of money

- Through the ages various goods have served as money. For example, cocoa beans, beads, seashells, tea, cattle, silver and cigarettes have all served as money at one time or another.

8.2 MONEY IN SOUTH AFRICA

- The South African Reserve Bank, which is in charge of monetary matters in South Africa, uses three different measures of the quantity of money. These measures are labelled M1, M2 and M3 respectively (Mohr and Associates 2015:259).

8.2.1 The conventional measure (M1)

- M1 is defined solely on the basis of the function of money as a medium of exchange.
- M1 includes coins and notes (in circulation outside the monetary sector) as well as all demand deposits (including cheque and transmission deposits) of the domestic private sector with monetary institutions.

8.2.2 A broader definition of money (M2)

- M2 is equal to M1 plus all other short-term and medium-term deposits of the domestic private sector with monetary institutions.

8.2.3 The most comprehensive measure of money (M3)

- For many years M1 and M2 were the only measures used to quantify the money supply, but nowadays great significance is attached to the M3 measure.
- M3 is equal to M2 plus all long-term deposits of the domestic private sector with monetary institutions.

8.2.4 Characteristics of money

According to Janse Van Rensburg, McConnell and Brue (2015) seven (7) characteristics or properties of money can be identified.

- General acceptability.
- Uniformity / Homogeneity.
- Divisibility
- Durability
- Portability
- Stable Value
- Relative scarcity

8.3 THE SOUTH AFRICAN RESERVE BANK

- South Africa's central bank is the South African Reserve Bank (SARB), which was established in 1920 and started doing business in 1921 (Mohr and Associates, 2015).
- The Constitution of the Republic of South Africa clearly states that:
- The primary object of the South African Reserve Bank is to protect the value of the currency in the interest of balanced and sustainable economic growth in the Republic.
- The SARB, in pursuit of its primary object must perform its functions independently and without fear, favour or prejudice, but there must be regular consultation between the Bank and the cabinet members responsible for financial matters.

- The Reserve Bank 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.

8.4 THE SUPPLY OF MONEY

Money is created by the banks and not by a printing press, or the mint. Banks accept deposits from the general public and lend these funds to borrowers. The difference between the lending rates and the deposit rates represents the income that banks receive for their intermediation role.

The money supply can also be influenced by transactions with foreign countries and by government transactions. Foreign trade and international capital movements can also exert a significant influence on the domestic money supply. If a local exporter earns foreign currency and exchanges it at his bank for a demand deposit, the money supply will be directly increased. On the same principle, payment for imports will have a negative effect on the quantity of money.

Capital inflows have the same effect as exports while capital outflows decrease the money supply in the same way as imports do. A country's money supply generally increases when its gold and foreign exchange reserves increase and falls when the gold and foreign exchange reserves decrease.

8.5 THE DEMAND FOR MONEY

The demand for money is the amount that the various participants in the economy plan to hold in the form of money balances.

The demand for money does not relate to the amounts of money that people want. The demand for money is concerned with the choices of those participants who earn an income or possess wealth. The opportunity cost of holding any money balance is the interest that could have been earned had the money been used to purchase bonds instead.

Money will only be held if it provides a service that is valued at least as highly as the opportunity cost of holding it. The demand for money is therefore directly related to the functions that it performs. Two most important functions of money are the medium of exchange and the store of value functions. On the basis of these two functions we can distinguish two basic components of the demand for money:

- The transactions demand for money which arises from the medium of exchange function.
- The demand for money as an asset which arises from the store of value function.

Reasons for holding money.

- Transaction motive
- Precautionary motive
- Speculation motive

8.6 THE INTEREST RATE

- Interest rates may generally be described as the prices of loanable funds. The suppliers of funds would like to earn an income on the funds invested or lent out, while borrowers are usually willing to pay a price for the right to use these funds.

8.6.1 Types of interest rates

- Repo rate (which plays a dominant role in the money supply process)
- The interbank lending rate
- The prime rate of banks.
- Various rates deposits e.g. fixed interest rates.
- Mortgage rates.
- Rates on government stock etc.

Though all the rates differ and there are sound economic reasons for this difference, the rates nevertheless tend to move in harmony with each other. Therefore, the term interest rate is regarded as a representative rate for all the individual rates encountered in practice.

8.6.2 The monetary policy framework in South Africa

Monetary policy can be defined as the measures taken by the monetary authorities to influence the quantity of money or the rate of interest with a view to achieving stable prices, full employment, and economic growth.

Monetary policy in South Africa is formulated and implemented by the South African Reserve Bank. Decisions on the appropriate monetary policy stance are taken by the Monetary Policy Committee (MPC) of the SARB. The MPC consists of the governors and a few senior officials of the Bank. Regular Monetary Policy Forums are also held to provide a platform for discussion of monetary policy issues with a broad range of stakeholders.

8.6.3 The instruments of monetary policy

The key market-oriented policy instruments are:

- Accommodation policy (or the refinancing of the liquidity requirements).
- Open market policy.
- Public debt management.
- Intervention in foreign exchange markets.

The South African Reserve Bank relies extensively on its accommodation policy to influence interest rates. Open market policy is the main supporting instrument of the accommodation policy.

8.7 THE ROLE OF GOVERNMENT IN THE ECONOMY: THE GOVERNMENT SECTOR

Government provides the legal framework and the services needed for a market economy to operate effectively. The legal framework sets the legal status of business enterprises, ensures rights of private ownership, and allows the making and enforcement of contracts (Janse Van Rensburg, McConnell and Brue (2015).

Government also establishes the legal 'rules of the game' that control relationship among businesses, resources suppliers and consumers. Discrete units of the government referee economic relationships seek out foul play and impose penalties.
In this section, an approximate mix of markets and government intervention is investigated.

8.7.1 Government Intervention in the economy

The great strength of the market system is its ability to generate reasonably efficient outcomes in most cases through a system of decentralised decision-making, in which each individual participant tries to maximise his or her benefit. Not surprisingly, however, markets do not perform well when broader social goals are at stake. Much of the justification for government's role in the economy can be traced to the inability of the market system to achieve such broader goals as equitable income distribution and macroeconomic growth and stability.

8.7.2 How does government intervene?

- Public provision of goods and services: This can be achieved by public ownership or by public financing of production undertaken by the private sector e.g. of public goods such as national defence, justice system and infrastructure.
- A second way in which government can try to achieve its objectives is through its role as a market participant. For example, government is the largest employer of labour in the economy and through its wage policy and other employment practices it can try to achieve certain objectives (e.g. price stability, redistribution of income) and also set an example for other employers to follow.
- Government spending is a powerful tool. Both the level and the composition (or structure) of government spending have a powerful impact on the economy. Apart from deciding which and what quantity of goods and services to purchase, government also makes transfer payments, that is, payments for which it receives nothing in return. Examples include old-age pensions, child support grants, disability grants and various subsidies. Transfer payments are a powerful instrument that can be used to change the distribution of income.
- A fourth instrument at the disposal of government is taxation. Although the primary purpose of taxation is to finance government expenditure, the level and structure of taxation can be used to achieve various objectives. Taxation can be used to redistribute income, to promote certain desirable activities and to penalise other socially undesirable activities. For instance, tax incentives (possibly in the form of lower tax rates or tax holidays) are often provided to stimulate investment spending and small business development, while tobacco products and alcoholic beverages are subject to additional taxes.
- A fifth important instrument that government can use to affect economic outcomes is regulation. Regulation refers to all laws, rules and regulations that affect private behaviour. Examples include the labour laws (that govern the labour market); competition policy (that governs the goods markets); the anti-tobacco law (that regulates smoking in public places); the law prohibiting shops from providing free plastic bags to customers and fixing of maximum or minimum prices and minimum wages. In many cases these regulations are enforced through a system of fines and criminal penalties.

8.7.3 Nationalisation and Privatisation

One of the aspects of the role of the public sector that has been debated vigorously in South Africa is the desirability of nationalisation compared with privatisation (i.e. the desirability of public vs private ownership)

8.7.3.1 Nationalisation

- Nationalisation means that the government takes over the ownership or management of private enterprise (with or without compensation). Proponents of nationalisation in South Africa often argue that it was a significant element in the solution of the 'poor white' problem, particularly during the 1920's and 1930's.
- They cite the establishment of a national transport system, a national posts and telecommunications, Iscor and Sasol as examples of successful nationalisation by the South African government. This is, however, an incorrect interpretation. The establishment of state-owned industries is not the same as nationalisation (i.e. the transfer of ownership from private enterprise to government).

8.7.3.2 Privatisation

- Privatisation refers to the transfer of ownership of assets from the public sector to the private sector (i.e. the sale of state-owned assets to the private sector).
- The case for privatisation is usually based on three broad arguments.
- The first concerns the problem of financing increasing government expenditure in a situation where tax burdens are already very high. In South Africa, for example, privatisation is regarded as a possible way of obtaining funds that can be used to reduce public debt and lower personal income tax.
- The second argument is based on the view that government ownership is always less efficient than private ownership. According to this argument the role of the government in the economy should be reduced and more scope should be created for private ownership and private initiative.
- The third is based on the view that the losses of inefficient state-owned enterprises are important source of budget deficits and other fiscal problems.

The arguments for privatisation include the following:

- State-owned enterprises are bureaucratic, inefficient, and unresponsive to consumer wishes and often a burden on the tax payer. They are also characterised by a lack of creativity and innovation by management, poor investment decisions, poor financial control, a lack of accountability to taxpayers and low levels of productivity. Privatisation, it is argued, will eliminate these shortcomings.
- Privatisation will attract foreign direct investment, thereby also augmenting the country's foreign exchange reserves.
- To the extent that public enterprises do not pay tax, privatisation will broaden the tax base (since the privatised enterprises have to pay tax).
- Privatised enterprises will have greater access to investment capital and will be able to adapt more easily to changing economic conditions.
- The proceeds from privatisation will make funds available for spending on housing, education, health and so on.
- Privatisation will increase share ownership in the economy and serve as an instrument of black economic empowerment.

Arguments against privatisation include the following:

- Privatised firms will not necessary be exposed to greater competition and be more efficient than state-owned firms. In the extreme case, privatisation may simply entail the replacement of a state monopoly with a private monopoly.
- Whereas state-owned firms, privately owned firms will not take a broader view of the public interest. For example, the provision of postal services, rail transport, telephone services and electricity to rural areas often entails losses which have to be recouped from the more profitable provision to metropolitan and urban areas. If these services are privatised, the services to the rural areas may be terminated or become more expensive.

8.7.3.3. Commercialisation

- Commercialisation means the transformation of state-owned enterprises into commercial entities, subject to commercial legal requirements and governance structures, while retaining state ownership. In other words, the enterprise remains in the public sector but is run like a private company and is also liable for tax. This is what has happened in recent years at Transnet, Eskom and other enterprises.

8.8 FISCAL POLICY AND THE BUDGET

The government purchases goods and services, raises taxes and borrows funds to finance its expenditure. It is, therefore, necessary that government have policies with regard to the level of government spending, taxation and borrowing. This is known as the fiscal policy. The main instrument of fiscal policy is the budget and the main policy variables are government spending and taxation.

The budget is essentially a reflection of political decisions about how much to spend, what to spend it on and how to finance the spending. But the size and composition of government spending and the way in which it is financed can have significant effects on important macroeconomic variables such as aggregate production, income and employment and the price level, as well as on the distribution of income. These effects have to be taken into account when the budget is prepared. In fact, the government often uses the budget (or fiscal policy) to stimulate economic growth and employment, redistribute income, control inflation or address balance of payments problems.

Fiscal policy is often regarded as an effective means of influencing total spending (aggregate demand for goods and services) in the economy. Mohr and Associates (2015) refer to this as demand management.

Monetary policy is also recognised as demand management. ***Whilst fiscal policy deals with government spending, taxation and borrowing, monetary policy deals with manipulation of interest rates. Whilst fiscal policy is controlled by government, monetary policy is controlled by the central bank.*** These policies have to be applied in harmony; otherwise the one may counteract or negate the effects of the other. Therefore, there isusually a close liaison between the National Treasury, which is responsible for the execution of fiscal policy and the South African Reserve Bank, which applies the monetary policy in South Africa.

8.8.1 Expansionary and contractionary policies

One of the key functions of government in a mixed economy is to counteract economic instability. When the economy is in a recession, the tendency is, therefore, to apply expansionary fiscal and monetary policies to stimulate economic activity. On the fiscal side, this means taxes are reduced and government spending is increased, and *vice versa.*

8.8.2 Components of Aggregate Demand

Aggregate demand is the total quantity of output demanded at alternative price levels in a given period of time, ceteris paribus. ***A recession occurs when aggregate demand declines*** and it persists when aggregate demand remains below the country's capacity to produce.

Aggregate demand is made up of four components:

- Consumption (C);
- Investment (I);
- Net Exports (X-M); and
- And Government Spending (G).

The government can alter aggregate demand by:

- Purchasing more or fewer goods and services;
- Raising or lowering taxes;
- Changing the level of income transfers (payments to individuals for which no current goods or services are exchanged, such as social pension, welfare, unemployment benefits); and
- Increasing government spending turns into income for the people who provide goods and services to the government.

8.9 TAXATION

According to Mohr and Associates (2015), taxes are compulsory payments to government and are the largest source of government revenues. There are three criteria for good tax:

- Neutrality;
- Equity; and
- Administrative simplicity.

Taxes can be classified into two (2) major categories, direct and indirect**. Direct taxes** are levied on ***persons or companies***, whilst **indirect taxes** are levied ***on transactions***. Examples of direct taxes are personal income tax, company tax and estate duty. Examples of indirect taxes in South Africa are VAT, customs duties and excise duties.

Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on Monetary Sector and the Government Sector, source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.

QUESTIONS FOR REFLECTION

After completing your study of this section on Monetary Sector and Government Sector" reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. Why does the Central Bank require commercial banks to have reserves? Explain why reserves are an asset to commercial banks but a liability to the Central Bank. What are excess reserves?
2. Whenever currency is deposited in a commercial bank, cash goes out of circulation and, as a result, the supply of money is reduced. Do you agree? Explain why or why not?
3. What did the Reserve Bank do to stop the negative effects of the world financial crises on South Africa?
4. Describe the main functions of money and explain the role of each function in your personal life.
5. Identify and briefly describe the main economic functions of government. What function do you think is the most controversial? Explain why?
6. What do economists mean when they say government purchases are 'exhaustive' whereas government transfer payments are 'non-exhaustive' expenditures? Cite an example of a government purchase and a government transfer payment.
7. What is the most important source of revenue and the major type of expenditure at the national government level?
8. What are the main determinants of the demand for money?
9. Suppose the South African Reserve Bank pursues an aggressive open-market policy by purchasing government bonds. What will happen to (a) the price of bonds and (b) the interest rate on bonds? Explain.
10. Explain the difference between (a) a progressive tax and a regressive tax (b) a direct tax and an indirect tax, and give examples.
11. Which is the most beneficial to society: privatisation or nationalisation? Substantiate your view.

CHAPTER 9: MACROECONOMIC THEORY AND POLICY

Specific Learning Outcomes

The overall outcome for this section is that, on its completion, the student should be able to understand how the variables such as prices, wages and interest rates affect the functioning of an economy. This overall outcome will be achieved through the student's mastery of the following specific outcomes, in that he/she will be able to:

1. Use aggregate demand and supply curves to analyse changes in aggregate demand and supply, including the impact of monetary and fiscal policy.

2. Describe how the changes in interest rates can affect important macroeconomic variables such as total and the price level.

3. Use the AD-AS model to illustrate the policy dilemma in the open economy.

4. Describe the major features of monetarism and supply-side economics.

ESSENTIAL READING

*Learners are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C. & Wall, S. (2013). The Economy Today. 13th Edition. New York; McGraw-Hill Irwin. Chapter 9, Aggregate Demand, pp. 178-206; Chapter 11, Fiscal policy, pp. 228-249; Chapter 12, Deficits and Debt, pp. 250-275; Chapter 15, Monetary policy, pp. 314-339.
- Mohr, P. and associates. (2015). Economics for South African Students. 5th Edition. Pretoria: Van Schaik Publishers. Chapter 19, More on macro-economic theory and policy, pp. 233-254.
- Janse van Rensburg, J., McConnell, C.R. & Brue, S.L. (2015). Economics Second Southern Edition. Chapter 17, Aggregate Demand and Aggregate Supply, pp. 347-368.

Journal Articles and Reports

- Adu, G. & Alagidede, P. (2012). *"Modern macroeconomics: a review of the post 2008/2009 crisis debate".* African Review of Economics and Finance. 4(1), pp. 73-88. (available from Sabinet).
- Amassoma, D., Nivosa, P.I. & Olaiya, S.A. (2011). *"An appraisal of monetary policy and its effect on macro-economic stabilization in Nigeria".* Journal of Emerging Trends in Economics and Management Sciences . 2(3), pp. 232-237. (available from Sabinet).
- Hussain, M.A. & Saaed, A.A.J. (2014). *"The relationship between budget deficits and macroeconomics variables in United Arab Emirates: an empirical investigation".* Journal of Emerging Trends in Economics and Management Sciences. 5(5), pp. 449-456. (available from Sabinet).
- Montes, G.C. & Bastos, J.C.A. (2013). *"Economic policies, macroeconomic environment and entrepreneurs' expectations: Evidence from Brazil".* Journal of Economic Studies, 40(3), pp. 334-354. (available from Emerald).
- Nyamita, M.O., Garbharran, H.L. and Dorasamy, N. (2014). *"Factors Influencing Debt financing within State-owned Corporations in Kenya".* Journal of Economics and Behavioural Studies. 6(11): 884-905. (available from Summon).
- Rashid, A & Jehan, Z. (2014). *"The response of macroeconomic aggregates to monetary policy shocks in Pakistan".* Journal of Financial Economic Policy. 6(4), pp. 314-330. (available from Emerald).

9.1 INTRODUCTION

Macroeconomics examines either the economy as a whole or its basic subdivisions or aggregates, such as the government, household and business sectors. In using aggregates, macroeconomics seeks to obtain an overview, or general outline, of the structure of the economy and the relationships of its major aggregates. Macroeconomics speaks of such economic measures of total output, total employment, total income, aggregate expenditures and the general level of prices in analysing various economic problems.

In this section, the specific macroeconomic issues relate to economic growth, full employment, price stability, balance of payments stability and the equitable distribution of income

9.2 THE AGGREGATE DEMAND-AGGREGATE SUPPLY (AD-AS) MODEL

The AD-AS model deals with the **general level of prices** and the **total production of goods and services** in the economy, as illustrated in Figure 9.1.

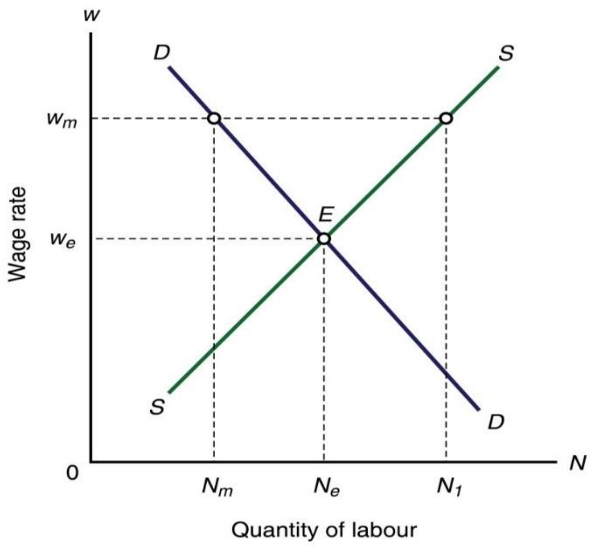


Figure 9.1: Aggregate demand and aggregate supply

Source: Mohr (2015:361)

In Figure 9.1, AD is the aggregate demand curve which shows the relationship between the total real expenditure on goods and services and the price level. AS is the aggregate supply curve which shows the relationship between real production or output and the price level. The equilibrium is indicated by E_o. The equilibrium price level is P_o and the equilibrium output level is Y_o.

9.2.1 The aggregate demand curve

Aggregate spending in the economy consists consumption spending by households (C), investment spending by firms (I), government spending (G) and exports (X) minus imports (Z). There are two major questions regarding the aggregate demand curve: why does the quantity of goods and services demanded increase as the price level falls and what can cause the AD curve to shift.

a) The slope of the AD curve

The three reasons for the downward slope of the AD curve are the **wealth effect** (due to a change in the price level), the **interest rate effect** (due to a change in the price level) and the **international trade effect** (due to a change in the price level). The above three effects are summarised in Figure 9.1.

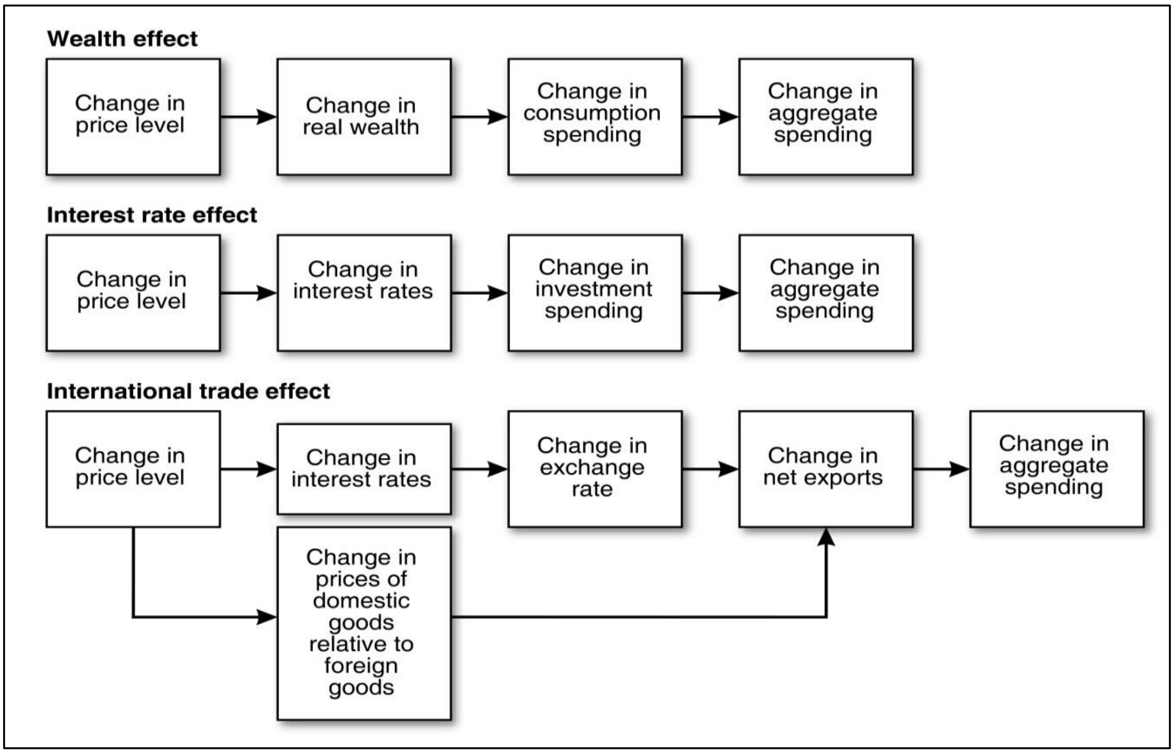


Figure 9.2: Why the aggregate demand curve slopes downward

Source: Mohr and Associates (2015: 362)

b) The position of the aggregate demand curve

Mohr and Associates (2015:362) state that everything that influences total expenditure (A) in the economy necessarily influences aggregate demand. A consists of C + I + G + X – Z. Therefore, all non-price determinants of C, I, G, X and z affect the **position** of the AD curve and that a change in any of these determinants will cause a **shift** of the curve. Table 9.1 shows some of the possible causes of shifts of the AD curve.

Table 9.1: Impact of key changes on the aggregate demand curve

Change	*Impact on AD curve*
Price level *P* increases	Upward movement **along** the curve
Price level *P* decreases	Downward movement **along** the curve
Autonomous consumption $\bar{C}$ increases	Shifts to the right
Investment spending I increases	Shifts to the right
Government spending G increases	Shifts to the right
Taxes *T* decrease	Shifts to the right
Net exports (X–Z) increase	Shifts to the right
Interest rate (i) decreases	Shifts to the right
Autonomous consumption $\bar{C}$ decreases	Shifts to the left
Investment spending I decreases	Shifts to the left
Government spending G decreases	Shifts to the left
Taxes *T* increase	Shifts to the left
Net exports (X–Z) decrease	Shifts to the left
Interest rate (i) increases	Shifts to the left

Source: Mohr (2015:363)

9.2.2 The aggregate supply curve

The aggregate supply (AS) curve illustrates the total quantity of goods and services supplied at each general price level in the economy. In the **short-run**, the As curve slopes upward from left to right, as in Figure 9.1, but in the **long-run**, the LRAS curve is vertical.

a) The slope of the short-run AS curve

Mohr and Associates (2015:364) state that the AS curve is primarily governed by the costs of production which, in turn, are governed by the prices and productivity of the various factors of production. If the price level P should rise, real wages will decrease and this will serve as an incentive for firms to employ more labour and increase production. A higher price level is, therefore, associated with a higher level of production.

b) The position of the AS curve

The position of the AS curve is determined by the availability, prices and productivity of the factors of production and the other inputs in the production process. A change in any of these factors will thus give rise to a shift of the AS curve. Table 9.2 shows some examples of these shifts.

Table 9.2: Impact of key changes on the aggregate supply curve

Change	*Impact on AS curve*
Price level *P* increases	Upward movement **along** the curve
Price level *P* decreases	Downward movement **along** the curve
Prices of factors of production (eg wages) increase	Curve shifts upward (to the left)
Prices of imported capital and intermediate goods (eg crude oil) increase	Curve shifts upward (to the left)
Productivity decreases	Curve shifts upward (to the left)
Weather conditions deteriorate	Curve shifts upward (to the left)
Prices of factors of production (eg wages) decrease	Curve shifts downward (to the right)
Prices of imported capital and intermediate goods (eg crude oil) decrease	Curve shifts downward (to the right)
Productivity increases	Curve shifts downward (to the right)
Weather conditions improve	Curve shifts downward (to the right)

Source: Mohr and Associates (2015:364)

c) The long-run aggregate supply curve (LRAS)

Mohr and Associates (2015:364-365) believe that the quantity of goods and services supplied in the long-run is independent of the price level, that is the long-run aggregate supply (LRAS) curve is vertical, as illustrated in Figure 9.3.

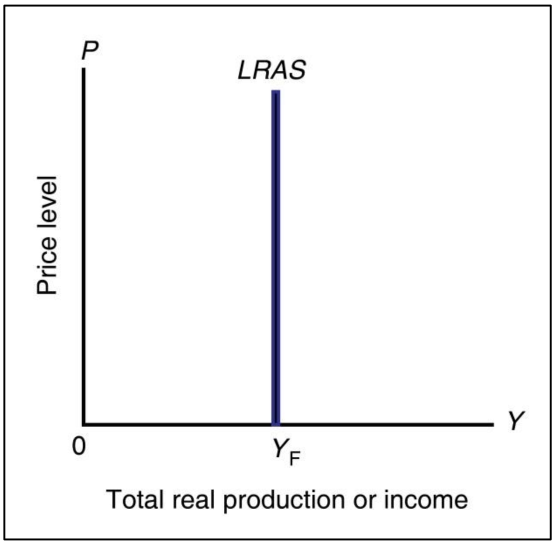


Figure 9.3: The long run aggregate supply curve

Source: Mohr and associates (2015:19)

In the long-run, the level of output Y is independent of the price level. The remainder of this section confines itself to the upward-sloping short-run AS curve.

9.2.3 Changes in short-run aggregate demand

Suppose the authorities decide to stimulate the economy by implementing an expansionary monetary and fiscal policy. In Figure 9.4, the increase in aggregate demand is illustrated by a rightward shift of the AD curve, from Ad_o to AD_1.

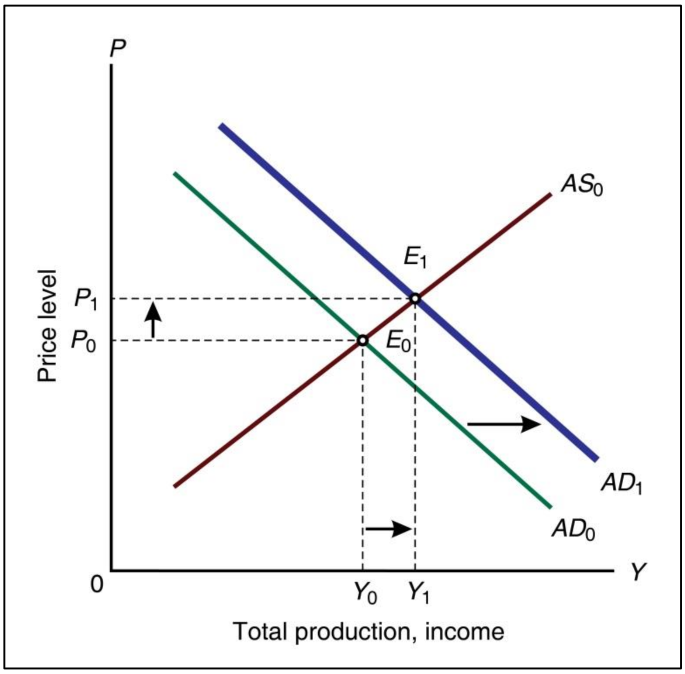


Figure 9.4: Expansionary monetary and fiscal policy in the AD-AS framework

Source: Mohr and associates (2015:365)

In Figure 9.4, the original equilibrium was E_0. The new equilibrium is indicated by E_1. The result is an increase in the equilibrium of real output or income from Y_0 to Y_1 and an increase in the equilibrium price level from P_0 to P_1. The authorities can, therefore, still use expansionary monetary and fiscal policies to stimulate production and income, as well as employment, but this is achieved at the cost of an increase in the price level.

9.2.4 Changes in short-run aggregate supply

Suppose there is an increase in the price of imported oil. Such an increase raises the domestic cost of production at each level of real output Y. This is illustrated by an upward shift of the aggregate supply curve, as illustrated in Figure 9.5.

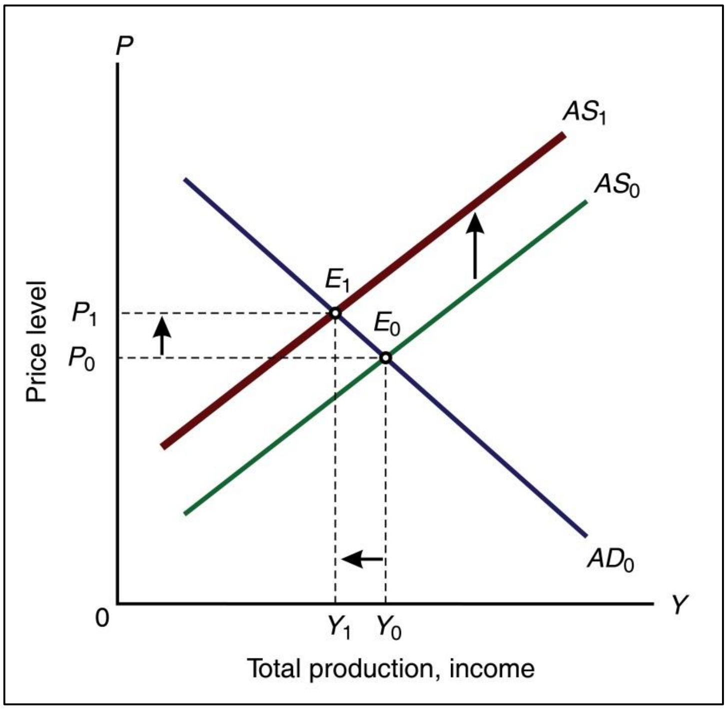


Figure 9.5: An increase in the price of imported oil in the AD-AS framework

Source: Mohr and Associates (2015:366)

The equilibrium price level increases to P_1 while the equilibrium level of production falls to Y_1. This is clearly and undesirable situation. An increase in the cost of producing the total output (e.g., GDP) results in higher prices, lower production, income and higher unemployment. This is a situation of **stagflation** which describes a situation of stagnation and inflation. Upward shifts of the AS curve are often referred to as **adverse supply shocks**.

The solution to supply shocks is to lower costs of production resulting in a rightward shift of the AS curve i.e. an anti-inflationary **incomes policy**, as shown in Figure 9.6.

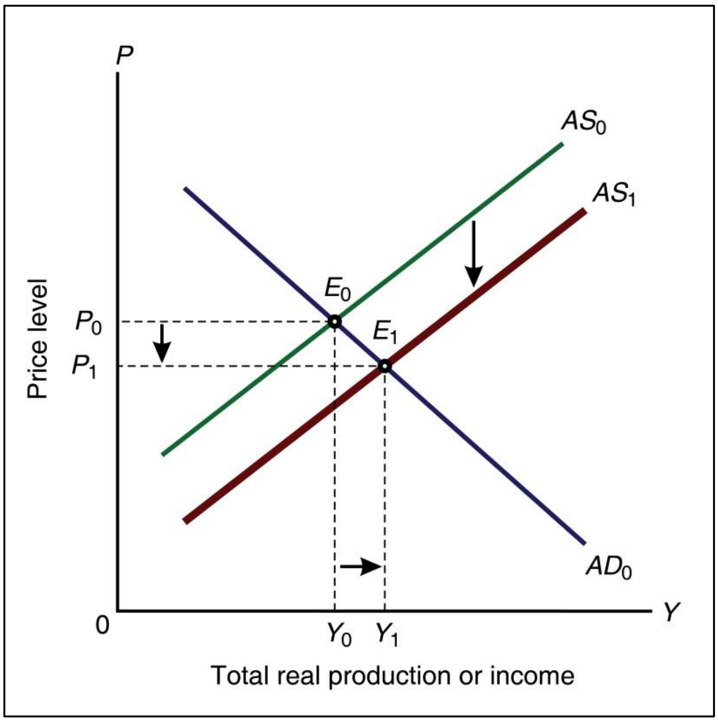


Figure 9.6: An increase in productivity without any increase in remuneration

Source: Mohr and associates (2015:367)

Figure 9.6 illustrates that total real output, income and employment increase and the price level falls. This is the most desirable result of all the possible changes in aggregate supply or aggregate demand.

9.3 MONETARY AND FISCAL POLICY IN THE AD-AS FRAMEWORK

9.3.1 Expansionary and contractionary monetary and fiscal policies

Mohr and Associates (2015:372) state that an **expansionary monetary policy** is implemented when the central bank reduces the interest rate at which it provides credit to the banks, illustrated by a rightward shift of the AD curve. Monetary policy is **contractionary** when the central bank raises the interest, illustrated by a leftward shift of the AD curve.

An **expansionary fiscal policy** is applied when the government increases government spending (G) and/or reduces taxes (T). This is illustrated by a rightward shift of the AD curve. Fiscal policy is **contractionary** when government spending is reduced and/or taxes are increased, illustrated by a leftward shift of the AD curve.

9.3.2 Monetary and fiscal policy lags

One of the basic difficulties associated with attempts to stabilise the economy by using monetary and/or fiscal policy is the existence of **delays** or **lags**. According to Mohr and Associates (2015:372-373), four types of lags can be distinguished: the recognition lag, the decision lag, the implementation lag and the impact lag.

9.3.3 The relativeness effectiveness of monetary and fiscal policy

Fiscal policy has generally been more successful in stimulating a depressed economy, while monetary policy can be employed with greater assurance to dampen an overheated economy in which inflationary pressures are severe.

9.3.4 The policy dilemma in an open economy

In terms of exports and imports, macroeconomic policy becomes complicated, particularly in developing countries where economic growth requires the importation of capital goods. His complication is referred to as a **balance of payments constraint**, as illustrated in Figure 9.7.

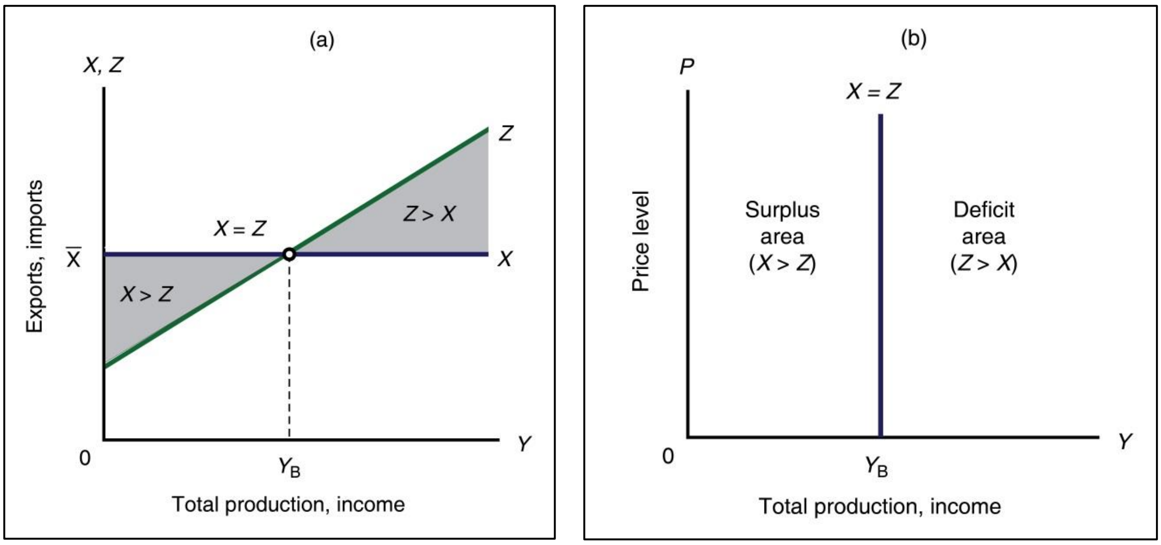
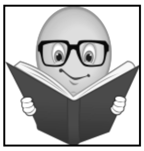


Figure 9.7: Net exports at different levels of income

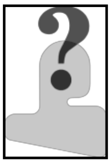
Source: Mohr and Associates (2015:374)

In terms of Figure 9.7, policymakers are confronted with a dilemma. Any measures that they take to raise the level of production and income (to reduce unemployment) will increase unemployment. When the balance of payments is introduced, the dilemma can be resolved if current account deficits are financed by net inflows of foreign capital, that is, by surpluses on the financial account of the balance of payments.



Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on Macroeconomics Theory and Policy, source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.



QUESTIONS FOR REFLECTION

After completing your study of this section on a Macroeconomic Theory and Policy, reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. How can you tell if the economy is in equilibrium? How could you estimate the GDP gap?
2. Will an extra R20 billion per year spent on housing have the same impact as an extra R20 billion spent on highways? Explain.
3. Will consumers always spend the same percentage of any tax cut? Why might they spend more or less than usual?
4. What happens to aggregate demand when transfer payments and the taxes to pay them both rise?
5. Why do high interest rates so adversely affect the demand for housing and yet have so little influence on the demand for strawberries?
6. Can there be any inflation without an increase in the money supply? How?
7. Suppose the central bank wanted to reduce aggregate demand (to fight inflation) and the government wanted to increase total expenditure (to fight unemployment). What kind of action would each take? What effects would their combined actions have on GDP?
8. How can money be "free" if you have to pay interest on loans?

CHAPTER 10: ECONOMIC ENVIRONMENT AND GLOBALISATION

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of the current economic global environment that the world finds itself in. Central to this issue is the notion of globalisation and how changes in demand and supply of products and resources have dictated recent trends. This overall outcome will be achieved through the student's mastery of the following specific outcomes in thathe/she will be able to:

1. List the current trends in the global economic environment.

2. Understand the impacts of globalisation.

3. Provide a brief overview of the key global bodies overseeing globalisation.

ESSENTIAL READING

Learners are required to read ***ALL*** *of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 35: International Trade*. (pp 764 – 786).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2015) Economics Southern African Edition Boston: McGraw Hill. *Chapter 25: South Africa in the Global Economy* (pp 510 – 522).
- Mohr, P. and Associates (2015), Economics for South African Students, Fifth Edition, Van Schaik Publishers.

Journal Articles:

Please note that the prescribed chapters in the textbooks do not fully engage the issue of globalisation. Therefore a comprehensive list of readings is provided. You are required to read all the articles listed below.

- Bordo, M, Eichengreen, B, Irwin D, (1999) '*Is globalization today really different than globalisation a hundred years ago?* National Bureau of Economic Research, BER WorkingPaper 7195 (1999).
- Freeman, R. (2006) *"People Flows in Globalization."* The Journal of Economic Perspectives, 2006, vol:20 pg:145 -170.
- Gills, B, K. Thompson W,R. (2006) "*Globalizations, Global Histories and Historical Globalities*", Globalization and Global History, Routledge.
- Gilpin, R (2000)The Challenge Of Global Capitalism: The World Economy In The 21st Century,Princeton: Princeton University Press, 2000, Chapter 10.
- Haskel, J. (2012) *"Globalization and U.S. Wages: Modifying Classic Theory to Explain Recent Facts."*The Journal of Economic Perspectives, 2012, volume 26, pg:119 -139.
- Hayden, P, El-Ojeili, C, (2006), Critical Theories of Globalization, Palgrave Macmillan.
- Held, D, McGrew, A (2007), "*Globalization Theory: Approaches and Controversies*", Polity, 2007.
- Held, D, McGrew, A, (2002), "*Governing Globalization*", Polity, 2002.

- Held, D, McGrew, A. (2003), *"The Great Globalization Debate: An Introduction"*, The Global Transformations Reader, Cambridge,Polity Press.
- Hirst, P, Thompson G (2002) '*The Future of Globalization*', Cooperation and Conflict 37(3) 2002, pp.247–65.
- Mosley, L. (2005) '*Globalisation and the State: Still Room to Move?*'New Political Economy, 10(3) 2005, pp.355–62.
- Nayyar, D. (2006), "*Globalization, History and Development: A Tale of Two Centuries*",Cambridge Journal of Economics, 30, 2006.
- Samuelson. (2004) *"Where Ricardo and Mill rebut and confirm arguments of Mainstream Economists Supporting Globalization."*The Journal of Economic Perspectives, 2004, Vol.18 (3).
- Scholte, J A(2005) Globalization: A Critical Introduction, Basingstoke:Macmillan, 2005, second edition.
- Stefanović, Z, (2008), "*Globalization: Theoretical Perspectives, Impacts and Institutional Response of the Economy*", FactaUniversitatis, Vol. 5, No 3, 2008, pp. 263 – 272.
- Yeh, C, Vaughn, P, J. (2008) "*Economic Impacts of Globalization*," International Atlantic Economic Conference.

10.1 INTRODUCTION

Globalisation is not a new phenomenon. Globalisation or viewing the 'world as a whole' seems to be rather quintessentially at first glance. Ever since mankind started to explore 'new' worlds, the opportunity to interact with each other became more apparent. In so doing, foreigners exchanged ideas, goods and services, and many other things with locals and the natural outcome of this caused a convergence in society.

Gills and Thompson (2006) claim that growing interdependence enriches some people and marginalises others. Selected poorer areas gain new jobs while other areas lose employment to places with lower wage structures. There are also clearly other losses as globalized crime and pollution, as well as the more rapid dissemination of disease. Some professional observers counsel that these economic changes are inevitable, while others mobilise in protest and opposition to unregulated and often rapid change.

As can be seen, globalisation is rather a contentious issue. Are we really converging towards a single non-descript society or will differences between us still exist? While these questions are thought provoking, they unfortunately deal more with Anthropology and Sociology, than they do with Economics. What we are more concerned with is the *economic* aspects of globalisation. In other words, has globalisation brought *more or less* economic benefit to the various fragments of society? Therefore, in Economics, *globalisation means engages in various aspects of cross-border transactions, free international capital flows, foreign direct investment, portfolio investment, and rapid and widespread diffusion of technology* (Yeh and Vaughn, 2008).

Current globalisation takes many forms. Nowadays, both product and factor markets seem to be converging into one large metamorphous state. Current globalisation is predominantly driven by economic forces with large multinational companies always looking to expand their markets and introduce new products. Globalisation is so prolific nowadays that it is difficult to totally consume locally produced goods and services, using only local resources.

? THINK POINT

Learners are required to try and answer the questions set below.

Since waking up this morning, you have most likely consumed a series of different products. Try and remember these products. Perhaps make a list of all the products you have consumed today. You would have most likely consumed at least some of the following products. Ask yourself where did these products originate from – that is the product's country of origin?

Product	Country of Origin
Toothpaste	
Shampoo	
Breakfast Cereal	
Ipod/Ipad	
Television Unit	
Motor Vehicle	
Radio	
Computer	
Cell Phone	
Electricity	
Water	

1. Having done the exercise, do you think that globalisation is on the increase or decrease?

2. What do you think are some of the impacts of globalisation?

The proliferation of globalisation in modern society makes is a key area of debate amongst economists. In assessing the impacts of globalisation, observers look at the benefits and weaknesses of globalisation on modern society. You are required to read all the prescribed literature, as well as other literature regarding the impacts of globalisation and be able to provide a comprehensive overview of the benefits and weaknesses emanating from globalisation. Listed below is a synthesis of some of the key impacts of globalisation.

10.2 IMPACT OF GLOBALISATION

The effects of globalisation can be interpreted using both social and economic contemporary paradigms, but as indicated earlier we only concern ourselves with contemporary economic theory. In this regard, we find that globalisation clearly manifests itself in areas of foreign trade, international finance and international investments.

Nayyar (2006) espouses that during the second half of the twentieth century, there was an unprecedented expansion of global trade flows. World exports increased from 61 billion U.S. dollars in 1950, to 883 billion in 1975 and 6338 billion dollars in 2000. There was a similar shift in foreign direct investment. Total stock of foreign direct investment in the world economy was 68 billion dollars in the 1960s, 636 billion in 1980 and 6258 billion in 2000. The share of foreign direct investment in the world GDP is 20% in 2000. The share of foreign direct investment in gross fixed capital formation in the world economy was 22% in 2000.

As globalisation grew, so did the role of multinational companies. Multinational companies became major players and produce 25% of world output and contribute to 70% of world trade. According to Held & McGraw (2002), multinational sales are equal to half of world GDP, and almost a quarter to a third (1/4 – 1/3) of world trade is intra-firm trade between branches of multinational companies (Held & McGraw, 2002, p. 3).

It is often claimed that the integration of world markets brings benefits to some, if not all, economic actors. Perhaps the greatest benefit of globalisation is linked with the factor mobility between regions and countries. It is often claimed that globalisation allows for the freedom of movement in factors of production between countries, and that this would ensure maximum effectiveness in their use at the global level. This effective usage would in turn lead to global efficiencies in factor usage.

In simple terms, the relative freedom in factor mobility will ensure that areas where a relatively scarcity of a resource exists can be supplied with resources from another region (where the resources are relatively abundant). In doing so, there will be a maximisation of resource usage on a global level.

Furthermore, the global market should ensure the convergence of prices of both goods and factors of production. That is, as factors of production move from areas of abundance to areas of scarcity, their relative prices will adjust through market forces (supply and demand in action yet again!).

This means that there will be a tendency for prices to converge to a global price and uniform prices across regions will be established. It is claimed that through the optimisation behaviour of economic actors (both consumers and producers), equilibrium will be achieved on a global scale and this would lead to an efficient outcome.

However, it must be stated that empirical evidence seems to suggest a very different situation. According to Nayyar (2006) economic growth in the world economy seems lacklustre. The growth rate of world economy during 1960 – 69 amounted to 3.5%, and 1% per year during 1990-99. Income discrepancies have increased both within countries and among developed and undeveloped countries. The mobility of capital makes it more competitive in relation to the labour, which amplifies the problem of unemployment. Also, despite the observed tendencies towards convergence in prices of goods on the market, convergence on the market of production factors has not being achieved to a considerable extent because of strict immigration policies in developed countries.

According to Stefanović (2008) a negative repercussion of globalisation is the immediate spread of cyclical disorders in individual economies, through integrated and very fragile mechanism of international finance. Global cyclical exogenous shocks in recent times produced financial crisis in Mexico (1994), Russia (1998) South-East Asian countries (1997-1998), Brazil (1999), Argentina (2002).

Another negative repercussion of globalisation (and perhaps not strictly in an economic sense) is the loss of individual identity due to the convergence of markets and societies. As the world economy is indisputably undergoing integration without precedent, so too has there been an unprecedented loss of individualism.

The benefits and disadvantages of globalisation are numerous and you are encouraged to read up on these issues. Listed below are just some of the likely benefits and limitations of globalisation. Students are expected to understand each of these points and be able to explain them in detail for assessment purposes.

Advantages include:

- Leads to efficient allocation of resources across regions, thus specialisation;
- Efficient use of resources (means less wastage);
- Prices will converge to an international price and hence less exploitation;
- Smaller propensity for monopolistic behaviour;

- Increase in consumer choices, i.e. product assortment; and
- Can transform societies, improvement of society.

Disadvantages include:

- Foreign products could replace locally produced products which can likely lead to unemployment;
- Multinational companies often repatriate profits out of a country back to their home country, thus there is no real increase in incomes/living standards;
- Loss of individualism or culture;
- Makes local markets susceptible to global economic conditions;
- Lack of production (of imported goods) influences a country's ability to collect tax; and
- It can lead to dumping of inferior products.

One of the key questions that can be asked is how did globalisation reached the levels it enjoys today? As was seen from the above section, globalisation has both good and bad elements to it. According to Held (2000) there are three dominant views on globalisation – which he termed globalist, traditionalist and transformationalist perspectives -and which can explain the growth in globalisation.

Globalists take the view that globalisation is a real and tangible phenomenon and its impact can be felt everywhere. Adherents of this process - positive globalists see it as a universal ''best practice'' for doing business, which is the key to efficiency and effectiveness as it offers unique opportunities, such as economy of scale and reduced costs.

The opposing group of pessimistic globalists, so-called traditionalists, perceive it as a standardised approach leading to homogenisation and marginalisation of human diversity. They emphasise the dominance of major economic and political interests, such as the USA and Western Europe, who can impose their own agenda on the world and resist all pressures for change.

The third view by transformationalists describes globalisation as having some positive effects contributing to the new shape of local cultural identity and self-expression. This way of approaching globalisation rejects the polarity of the globalist and traditionalist perspectives. Transformationalists claim that globalisation's influence is not only limited to economy, it has a political, technological and cultural issue as well.

10.3 KEY PARTICIPANTS IN GLOBALISATION

Listed below are some of the key participants that ‘oversee’ and ‘manage’ global trade. You are required to become familiar with these organisations through your own research and be aware of some of the main functions.

General Agreement on Tariffs and Trade (GATT)

GATT are proponents of free trade and often call for multilateral trade pacts which are geared towards lowering trade barriers and thereby increasing global trade. Multilateral trade pacts are not new and can be traced back to 1947 *General Agreement on Tariffs and Trade* (GATT). During this time, 23 nations pledged to reduce trade barriers and give all GATT nations equal access to domestic markets. Since then, seven more rounds of negotiations have been held and in the 1994 pact the number of member countries increased to 117.

World Trade Organisation (WTO)

During the 1994 pact, a new statutory body called the *World Trade Organisation* (WTO) was created with the purpose of enforcing free trade rules. The WTO is considered the ‘police force’ of world free trade and is empowered to cite nations that violate free trade arrangements and to even impose remedial action in cases where a nation has been found ‘guilty’ of violating these agreements.

Despite the best interests at heart of the WTO– which is debateable in its own right – many people claim it does more harm than good. One such group are environmentalists who claim that free markets left unchecked will lead to the degradation and depletion of resources (see Chapter 13 of the Study guide: Economic growth and Environmental Protection).

Furthermore, labour movements in countries that cannot compete with global prices become concerned with potential losses in production and *ipso facto*, the loss of earnings and jobs. Thus they fervently appose liberal global trade. Many claim that WTO rules are bias and benefit the richer nations at the expense of the poorer nations.

It is not surprising then that WTO talks have been met with tumultuous protests in recent times. During Seattle (1999), Doha (2001) and Hong Kong (2005) many protestors went as far as forming human chains around the buildings where these talks were taking place in an effort to prevent them from continuing.

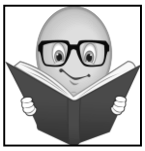
10.4 REGIONAL PACTS

Apart from global pacts, many nations around the world have also opted for regional economic pacts. Most famous are the *North American Free Trade Agreement* (NAFTA), *Central American Free Trade Agreement* (CAFTA), and the *European Union* (EU).

There are also regional economic pacts within the continent of Africa as well. These are the *Community of Sahel-Saharan States* (CEN-SAD), *Common Market for Eastern and Southern Africa* (COMESA), *East African Community* (EAC), *Economic Community of Central African States* (ECCAS/CEEAC), *Economic Community of West African States* (ECOWAS) *Intergovernmental Authority on Development* (IGAD), and *Southern African Development Community* (SADC).

Further subgroupings include *Economic and Monetary Community of Central Africa* (CEMAC), *West African Economic and Monetary Union* (UEMOA), *West African Monetary Zone* (WAMZ), and the *Southern African Customs Union* (SACU).

Each of these regional pacts was formed with more or less the same over-arching economic objective – that is to try and promote economic trade and opportunities within the regions they operate in. As was the case in globalisation, there are always individuals who support regional integration and those who do not. In recent times there has been considerable debate regarding the merits of forming (or joining) a regional economic block. You are required to have a reading knowledge of these regional organisations/pacts and be able to discuss their main focus.



Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on "Economic Environment & Globalisation*"*, source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.

QUESTIONS FOR REFLECTION

After completing your study of this section on 'Economic Environment & Globalisation' reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. Identify some of the macroeconomic impacts of globalisation on your country, and critically address whether globalisation has a net gain/loss to your country? Why do you think this is the case?
2. Review the economic integration that your country (or a country that you know) belongs to, and consider if this integration has benefited or worsened economic conditions in the country?
3. Based on your reading regarding the roles and functions of GATT and WTO, do you think these organisations have created global economic opportunities for all countries, or have they simply been the mouthpiece of a select few western economies? Motivate why you think this is the case.

CHAPTER 11: INTERNATIONAL TRADE

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of international trade and why countries take part in international trade. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that he/she will be able to:

1. Explain why countries trade on international markets.
2. Understand the concepts of absolute advantage and comparative advantage.
3. Compare the arguments for and against the use of trade barriers.
4. Become familiar with the popular international organisations advising on international trade.

ESSENTIAL READING

Learners are required to read ***ALL*** *of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 35: International Trade*. (pp 764 – 786).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2011) Economics Southern African Edition Boston: McGraw Hill.*Chapter 24: International Trade* (pp 487 – 506).

Journal Articles:

- Bora, S, Bouët, A, Roy, D (2007) *"The marginalization of Africa in world Trade."*International Food Policy Research Institute Publication.
- Feenstra, R, (1992) *"How Costly is Protectionism?"* The Journal of Economic Perspectives, 1992 Vol:6 iss:3 pg:159 -178.
- Krugman, P, R, (1979) *"Increasing returns, monopolistic competition, and international trade."*

  Journal of International Economics, 1979, Vol 9, pp 469 -79.
- Krugman, P, R, (2009) *"The Increasing Returns Revolution in Trade and Geography."*The American Economic Review, 2009, Vol.99 (3).
- Markusen, J, (1995) *"The boundaries of multinational enterprises and the theory of international trade."*The Journal of Economic Perspectives, 1995 vol:9 iss:2 pg:169
- Mold, A (2005)*"Non-Tariff Barriers: Their Prevalence and Relevance for African Countries,"* African Trade Policy Centre (2005)
- Nkuepo, H J. (2012)*"Africa's Continental Free Trade Area: A Closer Look at the 2012 African Union's Action Plan for Boosting Intra-African Trade,"*Africa's Trade Law Newsletter, Issue: 5.
- The International Bank for Reconstruction and Development, (2003) *"World Bank Standards and Global Trade: A Voice for Africa,"* The International Bank for Reconstruction and Development, (2003).
- World Bank (2012*) "Defragmenting Africa: Deepening Regional Trade Integration in Goods and Services,"*World Bank Publication (2012).

11.1 INTRODUCTION

When South Africa became a democracy in 1994, one of the key transitions that took place was within the economic and financial sector of the country. In other words, South Africa having for many years being subjected to sanctions (and other trade barriers), found itself on the cusp of a new era – the era of global trade.

South Africans could now freely import and export goods and services from/to the rest of the world. During the apartheid era, South Africa had almost being totally isolated from the rest of the world and international trade was minimal. Since then the quantum of international trade has being steadily growing.

? THINK POINT
Learners are required to read the following extract and then answer the questions set below. What are the main determinants that can explain your country's trade patterns in recent years? What has been the volume of trade in the last decade? Review your country's trade patterns and compare them to the rest of the world.

11.2 MOTIVATIONS FOR TRADE

One of the key questions under international trade is '*why does any country trade?'* Asked differently, why do we not produce whatever we need and consume it? The merits of international trade are often questioned given there is often an inadvertent 'loss' to some member(s) of society.

For example, the merits of importing footwear and clothing from China into South Africa have often been questioned given that local industries had to close down operations, given their inability to compete with world prices. According to most economists, this argument is sadly an economic fallacy in that if a country is unable to produce something efficiently, then the opportunity costs associated with producing that item is high (meaning that resources should rather be moved to areas when one is more efficient).

Three strong economic arguments for international trade have been postulated. These are:

a) International trade allows a greater variety of good and services for the consumer,
b) A country may not have the necessary resources to produce a specific good or service, and
c) International trade leads to specialisation and overall lower prices.

Greater Variety – this argument is straightforward in that the variety of products available (as a result of trade) substantially increases when a country trades. Imagine what would happen if most of the international brands were not allowed into South Africa? The end result would be perhaps one or two (if at all) local brands being available to the consumer.

Necessary Resources – this argument is also straightforward in that if a country does not have a necessary and critical resource that is needed in the production of some good or service, then that good or service cannot be produced locally. This is the very reason why South Africa is unable to produce certain goods (e.g. specialised medical equipment) given we lack the necessary resources (skilled labour). In such cases these goods have to be imported from other countries. Coupled with this is the fact that not all countries have access to the same level of technology, or enjoy similar economies of scale.

Specialisation – a critical argument put forward for international trade is that it leads to specialisation in production. This argument is best described by introducing two key concepts in Economics, namely **Absolute Advantage** and **Comparative Advantage**.

Absolute Advantage is '*the ability of a country to produce a specific good with fewer resources (per unit of output) than other countries*' (Schiller 2013:773). Comparative Advantage on the other hand is '*the ability of a country to produce a specific good at a lower opportunity cost than its trading partners*' (Schiller 2013:772).

That being said, a country should therefore produce and export goods and services that they have a comparative advantage in producing, and import goods and services where they lack the comparative advantage in production.

Both of these terms are important and you need to understand them thoroughly as they determine the (1) direction of trade, and (2) the terms of trade.

11.3 PROTECTIONIST PRESSURES

Not everyone sees international trade as a benefit to society. As we saw under globalisation, there are also those people (called traditionalists) who are actually against international trade and prefer a country to have as little international interaction as possible. For example, labour movements are often seen as sometimes taking a hard line stance against free trade given their claim that free trade leads to unemployment and job losses.

Listed below are some of the more popular arguments cited against free trade. More information on protectionist pressures can be found in Schiller (2013, pages 775 – 78) and Janse Van Rensburg (2015).

Import – Competing Industries – When a country enters into free trade it allows the importation of goods and services into the country. When this occurs, local producers have to compete with international producers. Often local producers cannot compete (on price and/or sometimes even on quality) with the imported products. As a result, local producers shut down operations which leads to job losses and ultimately unemployment. The South African textile industry is a classic example of this with many local producers closing down given their inability to compete with cheap Chinese imports.

Export Industries – When local producers specialise in certain goods and services and export these goods abroad, this emerging pattern of trade will alter the mix of output and redistribute incomes from import competing industries to export industries. Those local producers unable to entry an export industry will then be unable to earn incomes and those in export industries will earn a major portion of the country's incomes. This potential redistribution of income and wealth can likely fuel political and economic friction.

National Security – It may not be in a country's best interest to depend on foreign suppliers of key strategic or military goods. Thus a country should ensure that it produces its own goods which are of national security. This argument is far stronger in the developed nations as opposed to SADC given that most if not all military equipment is imported into these countries.

Dumping – Another strong argument against the practice of free trade is that of dumping. Foreign producers often produce a massive quantity of a product (in order to enjoy economies of scale), consume only a portion of that good locally and then dump the remainder of the goods in foreign countries. For example, South Africa and many other African countries are recently being bombarded with cheap and often inferior quality Chinese products – cosmetics, furniture, clothing etc. Chinese producers have the comparative advantage in the manufacture of many goods and often 'dump' their 'over supply' into African markets.

Infant Industries - this argument relates to the protection of local producers who are producing at higher costs than their international counterparts. It is believe that when a producer is still new (hence the term infant) in an industry, that producer has not as yet harnessed economies of scale in production and thus needs to be protected. It is anticipated that over time and through specialisation, the producer will be able to bring his unit costs down and hence then be able to compete on an equal footing. Thus during the incubation period, the producer will need to be protected against international producers.

11.4 BARRIERS TO TRADE

Given that it is not always in the best interest of a country to allow free trade to flourish, there is a constant clamour for free trade restrictions. In this regard there are three commonly used instruments that are used to regulate free trade between countries. These instruments can either (1) prevent free trade from occurring at all (2) limit the effect of free trade.

Embargoes - A trade embargo is an absolute instrument in that it prevents any form of trade from occurring. An embargo is a prohibition of either exports and/or imports. For example, South Africans are not allowed to import any form of narcotic drugs into the country. Any person caught violating this trade embargo (apart from violating numerous other anti-narcotic laws) would face severe penalties.

Embargos also pertain to the exporting of products as well. For example, South Africans are not allowed to export any fauna and flora that are indigenous to South Africa.

Tariffs – Tariffs are a more frequent and commonly used trade barrier. A tariff is a special tax imposed on imported goods which has the effect of making these goods more expensive in the local market. As a result these imported goods become less competitive in domestic markets. Tariffs also serve another important function for governments in that it is a source of revenue for governments. While tariffs have the benefit of protecting local producers against a deluge of cheap foreign brands, it also has a 'hidden' cost in that consumer's end of paying more for a same product under a tariff scheme.

Quota – A quota works similarly to a tariff but whereas a tariff imposes a tax on an imported item making it more expensive and thus limiting the quantity imported, a quota simply limits the quantity that is allowed to be imported. In other words, quotas work more directly by limiting the quantity that can be imported.

It must be emphasised at all these barriers to trade reduces world efficiencies and also invites retaliatory action. It is for this very reason that organisations such as the WTO and GATT openly criticise any form of trade barrier. While there has been a considerable decline in the use of tariffs over the last 20 years, there has been a massive growth in nontariff barriers as well. The use of product standards, licensing agreements, restrictive procurement policies have gain popularity in the last two decades in an attempt to circumvent the issue of tariff usage.

Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on *"International Trade",* source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.

CHAPTER 12: EXCHANGE RATES

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of the functioning of exchange rate markets. Central to this issue is how changes in the demand and supply in products and resources (that is international trade) influences a country's exchange rate. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that he/she will be able to:

1. Describe the foreign exchange market.

2. Define the exchange rate and distinguish between the nominal and real exchange rate.

3. Explain the factors that influence the supply and demand of a particular currency.
   (e.g. the South African Rand)

4. Explain how the exchange rate is determined.

ESSENTIAL READING

Learners are required to read ***ALL*** *of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 36: International Finance*. (pp 790 – 806).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2011) Economics Southern African Edition Boston: McGraw Hill.*Chapter 25: Exchange Rates, the Balance of Payments, and Trade Deficits* (pp 509 – 529).

Journal Articles:

- (2008) *"Employment Relations in Zambia."* Employee Relations. 30 (4), pp 391 – 403. (available from Emerald)
- Parkin M (2010), Economics, Pearson Education South Africa, Cape Town.
- Calvo, G, A, Reinhart, C, M (2000) "*Fear of Floating*" National Bureau of Economic Research, Paper No. 7993.
- Lamy, P, (2012) "*Exchange Rates and Trade*", 27 March 2012, World Trade Organisation, (www.wto.org/english/news_e/sppl_e/sppl222_e.htm)

12.1 INTRODUCTION

As was explained in the previous section, globalisation is becoming more prevalent in modern day business. As the world adapts and modernises to ever-changing trends, products and resources tend to move over international boundaries. Implicit within this growth is the 'oil' that lubricates the massive cogs which drives international trade, and this oil can be referred to as the exchange rate. Every transaction is accompanied with a corresponding exchange of currency. It is therefore not surprising then that the value of relative currencies (the exchange rate) between trading nations has become pivotal in international trade.

THE EXCHANGE RATE: the exchange rate is simply the price at which one currency exchanges for another currency. In other words, the exchange rate is the price of one country's currency expressed in terms of another country's currency. It is the domestic price of a foreign currency. For example, if you exchange eight (8) South African Rands (ZAR) for every one (1) United States Dollar ($), the exchange rate is simply R8.00 = $1.

It must be emphasised that this exchange rate will fluctuate on a daily basis and part of an effective business leader's challenge is to anticipate or forecast future exchange rates (called the forward rate) and make decision *now* based on that forecast. For more information on these daily exchange rate fluctuations, go to the South African Reserve Bank website and click in exchange rates.

? THINK POINT

Students are required to try and answer the questions below.

Suppose the South African Rand (ZAR) and the United States Dollar (USD) is initially R8 = $1 and then changed to R10 = $1.

Is this an appreciation or depreciation of the ZAR? What impact can such a movement have in either country?

As a future business leader, what impacts can such a movement have in the organisation you currently work in?

12.2 THE FOREIGN EXCHANGE MARKET.

Exchange rates are determined in foreign exchange markets. The foreign exchange market is where the currency of one country can be exchanged for the currency of another country. It is important to realise that the foreign exchange market is not a physical place but extends beyond international boundaries. It is simply individuals (or firms) wanting to exchange one currency for another. These individuals are usually importers and exporters, banks, international travellers, and foreign exchange traders.

The foreign exchange market exists simply because there is always a demand and supply for currencies. Participants will demand and supply currency in the foreign exchange market dues to exports, imports, investments, interest rates differentials, and future expectations.

12.3 DEMAND IN THE FOREIGN EXCHANGE MARKET

People will demand foreign exchange for a number of reasons. For example, when Walmart entered the South African market, it required South African Rands (ZAR) in order to invest (and buy) in Massmart. In other words, Walmart which is American-based, needed to exchange their USD for ZAR in order to invest in South Africa.

What would happen when foreigners (people living outside South Africa) demand South African goods and services? When South Africa exports goods to Japan for example, the Japanese will need to exchange their Yen for ZAR in order to pay the South African exporter. There will also be a demand for ZAR when foreigner tourists visit South Africa. These tourists will need to exchange their foreign currency for ZAR in order to buy local products and services.

Thus, the quantity of ZAR demanded is the amount that all participants plan to buy at the prevailing exchange rate at a given point in time. This quantity will depend on a number of factors but the most common (Parkin 2010: 578) are:

The demand curve for the South African Rand (ZAR) will depend on the prevailing exchange rate. If the exchange rate depreciates, ceteris paribus, then the demand for Rands will increase and there is a downward movement along the demand curve for ZAR. If the exchange rate appreciates, then the demand for ZAR will decrease.

Both Janse Van Rensburg (2015) and Schiller (2013) provide explanations on the demand for currencies and you need to be able to explain each of these determinants.

12.4 SUPPLY IN THE FOREIGN EXCHANGE MARKET

Just as people demand ZAR in the foreign exchange market, so too will people supply ZAR into the foreign exchange market. For example, when Anglo American imports huge capital equipment from Germany earmarked for mining operations in South Africa, it would need to convert ZAR into the Euro in order to pay the German supplier.

When South African businesses want to set up subsidiary in foreign countries, they would need to convert their ZAR into the currency of that country where the subsidiary is to be opened. Similarly, when South Africans go abroad on holiday, they will need to convert their ZAR into the local currency of the country they visiting.

Thus, the quantity of ZAR supplied is the amount that all participants plan to sell at the prevailing exchange rate at a given point in time. This quantity will depend on a few factors of which the most common (Parkin 2010:580) are:

- The Exchange Rate;
- The expected future Exchange Rate;
- South African demand for imports;
- South African demand for foreign tourism;
- South African demand for foreign investments;
- Interest Rate differentials between South Africa and the world;
- Speculation.

The supply curve for the South African Rand (ZAR) will thus depend on the prevailing exchange rate. If the exchange rate depreciates, ceteris paribus, the supply of Rands will decrease and there is a downward movement along the supply curve for ZAR. If the exchange rate appreciates, then the supply for ZAR will increase.

Janse Van Rensburg (2011:516) explains how the following determinants can influence the demand and/or supply of a certain currency

- Changes in Tastes
- Relative Income Changes
- Relative Price Level Changes
- Relative Interest Rates;
- Speculation

Both Janse Van Rensburg (2015) and Schiller (2013) provide explanations on the supply for currencies and you need to be able to explain each of these determinants. Make sure that you understand how each of the determinants influence the demand and/or supply of a currency.

12.5 MARKET EQUILIBRIUM

Market equilibrium, as was the case in both the goods and factor markets, simply exists where the demand for ZAR equals the supply of ZAR. This is where the demand curve and the supply curve intersect each other. At the exchange rate there is neither a shortage nor surplus in the market.

The market is 'orchestrated' into equilibrium by the individual forces of demand and supply. This would only be the case in the absence of zero central bank intervention which is rather rare in reality. Towards the end of this Chapter we discuss exchange rate policies and explain how the central bank can influence the exchange rate should it choose to do so.

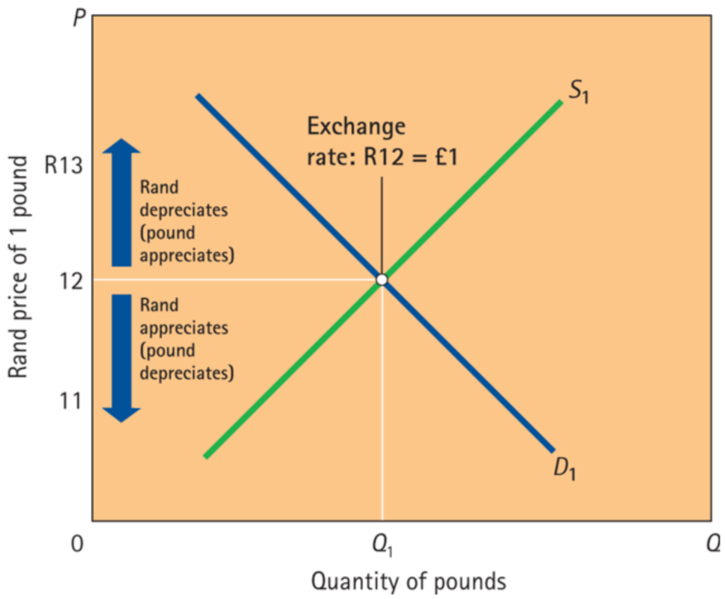


Figure 12.1 Market equilibrium

12.6 EXPORTS EFFECT

The exports effect is dependent on the relative exchange rate and simply means 'the larger the value of South African (or any other country for that matter) exports, the larger the quantity of ZAR demanded in the foreign exchange market (Parkin, 2010). It is best explained using an example.

Assume Cindy from the US wants to import a single bottle of South African wine (selling for $1 per bottle) into United States and assume that the exchange rate is $1 = R4 (notice that the dollar is expressed in terms of ZAR given that this is how Americans will express the exchange rates from their perspective). This means that Cindy will demand 4 ZAR in the foreign exchange market

(and supply 1 dollar).

If the ZAR weakened to say R8 = $1, then Cindy could now get 8 ZAR for the same $1 being spent, or spend 50 American cents and buy that same bottle of wine. If she still wanted to spend a total of $1, she could now buy two bottles of wine instead of just a single bottle! This means that the volume of exports from South Africa will increase (more wine being exported). All other factors being equal, a depreciation of the ZAR will cause exports to increase and this is called the *exports effect*.

12.7 IMPORTS EFFECT

The imports effect also relates to the relative strength of a currency and simply means the greater the value of South Africa imports, the greater the quantity of ZAR supplied in the foreign exchange market (Parkin 2010). Assume Thabo wants to import an orange from United States and assume that the selling price of this orange in United States is $1 (for the purposes of simplicity). If the Rand/Dollar exchange rate is R8 = $1, Thabo will need to supply the foreign exchange market R8, convert this to $1, and then import the orange into South Africa.

What would happen if the ZAR appreciated to say R4 = $1? If Thabo still wanted to spend R8 for oranges, he now receives $2 and can now buy 2 oranges. This means that the volume of South African imports increases with an appreciation of ZAR and this is referred to as the imports effect. In other words, a stronger ZAR will aid imports into South Africa.

12.8 CHANGE IN DEMAND AND SUPPLY

As was the case in the goods market, there are also determinants of demand and supply which may shift the demand and/or supply curve. Depending on the actual determinant under consideration, the demand or supply curve could shift thereby causing a change in the demand or supply of the currency. You need to be able to explain how the determinant will influence either the demand and/or supply curves for a certain currency.

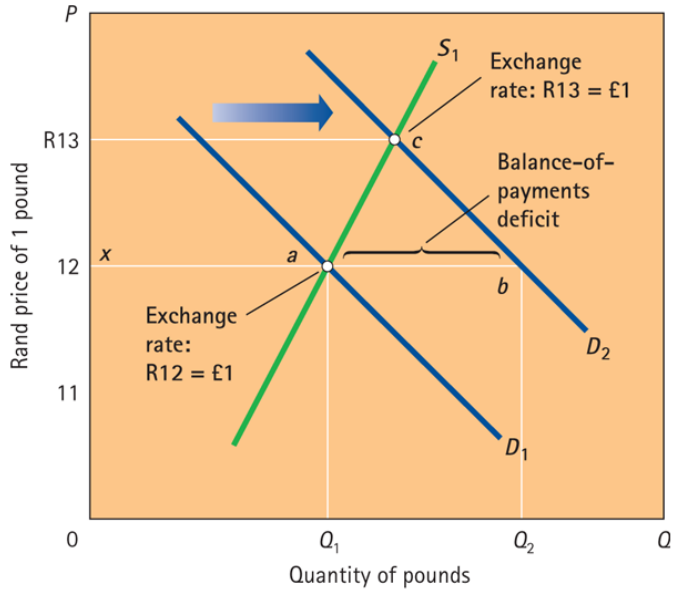


Figure 12.2

Given the macroeconomic impacts stemming from currency volatility, it is not surprising that most governments around the world have an Exchange Rate Policy. This policy is implemented when the government or central bank wishes to influence the exchange rate in some way. For example, the central bank may intervene when the exchange rate has displayed enormous volatility and wishes to 'buffer' this volatility.

12.9 EXCHANGE RATE POLICY

Both Janse Van Rensburg (2015) and Schiller (2013:800) provide explanations on exchange rate interventions and you need to understand the different types of interventions. Listed below is a synthesis of the different types of interventions.

Flexible Exchange Rate – occurs when there is minimal central bank intervention in the foreign exchange market and the exchange rate is determined mainly through the forces of supply and demand. Most countries – South Africa is among them – adopt a flexible exchange rate regime as a result of being members of General Agreement on Trade and Tariffs (GATT) and the International Monetary Fund (IMF).

Flexible exchange rates are also sometimes referred to as floating exchange rates and in recent times there has been many critics of the this system. Calvo and Reinhart (2000) presented a paper called *The Fear of Floating* where they claim that some countries – mainly the emerging market – prefers a smoother (less volatile) exchange rate to a floating exchange rate regime. This is due to many of these countries having macroeconomic shocks as a consequence of the financial crisis in last two decades.

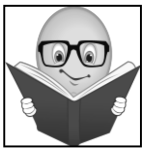
Even though these countries claim to adopt flexible exchange rate systems, they are actually reluctant to let the nominal exchange rate fluctuate in response to macroeconomic shocks.

Those in support of GATT and WTO on the other hand try and advocate a system premised on being purely flexible. They claim that a flexible exchange rate system facilitates free trade and allows international trade to flourish. Director-General Pascal Lamy, in opening the *WTO Seminar on Exchange Rates and Trade* on 27 March 2012, said that "the international community needs to make headway on the issue of reform of the international monetary system. Unilateral attempts to change or retain the status quo will not work. We need an international monetary systemthat facilitates international trade".

Fixed Exchange Rate – occurs when the exchange rate is pegged to a predetermined value set by the government or central bank. In such a case, the central bank blocks the forces of supply and demand by direct intervention in the foreign exchange market.

Interestingly, the world economy operated on a fixed exchange rate regime since the end of *World War II* right up to the early 1970's. China adopted a fixed exchange rate system until only recently. However, despite adopting a flexible exchange rate system, they do not seem in essence to really have a flexible exchange rate. They frequently try and undervalue the Yuan in an effort to influence their level of exports.

Crawling Peg – this type of intervention occurs when the central bank or government selects a target path for the exchange rate and then intervenes in the foreign exchange market to achieve this target. The crawling peg is sometimes favoured because it prevents the economy from unintended macroeconomic shocks given global financial problems (which can occur in a flexible rate regime) and also to avoid the problems of running out/stock piling of reserves under a fixed exchange rate regime.



Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on *"Exchange Rates",* source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.

QUESTIONS FOR REFLECTION

After completing your study of this section on 'Exchange Rates' reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. Changes to the exchange rate can have considerable effects on a country's trading position, and impacts on macroeconomic variables. List and explain what will likely happen to a country's balance of payments, unemployment levels, economic output, and inflation when the currency of that country appreciates/depreciates against other currencies.
2. In 2010, the Chinese government started printing Yuan to buy foreign exchange to keep the Yuan devalued. Why do you think the Chinese government voluntarily devalued their currency?
3. In the SADC region, most countries implement a flexible exchange rate system. Make a list of the member countries of SADC and check which countries adopt a fixed exchange rate system and which countries adopt a floating exchange rate system?

QUESTIONS FOR REFLECTION

After completing your study of this section on 'International Trade' reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. International trade is often seen as the 'grand leveller of all playing fields'. It has the ability to very quickly oust inefficient producers from the market. Based on this fact, any form of trade protection is considered 'inefficient' as any producer who is unable to be internationally competitive should rather move their resources into production areas where they can be internationally efficient. What are your feelings regarding this? Do you agree/disagree with the above assertion?
2. The World Bank report (2012) on global trade patterns indicate that the volume of trade into Africa has been steadily increasing in recent years. Why do you think this has been the case?
3. Suppose you are hired by a group of South African clothing manufacturers to prepare a case for the introduction of new barriers to international trade in the clothing industry. List the arguments that you would use.
4. List four possible reasons for the depreciation of the rand against the US dollar.
5. Explain how exchange rates changes can affect exports and imports.

CHAPTER 13: ECONOMIC GROWTH AND ENVIRONMENTAL PROTECTION

Specific Learning Outcomes

The overall outcome for this section is that on completion the student should be able to demonstrate a broad understanding of economic growth and environmental protection and why countries are currently rethinking production processes. This overall outcome will be achieved through the student's mastery of the following specific outcomes in that he/she will be able to:

1. Explain the link between economic growth and environmental change.
2. Discuss the latest economic ideologies concerning environmental economics.
3. Understand some of the latest efforts undertaken within environmental economics in order to rethink our current forms of production and consumption.

ESSENTIAL READING

*Learners are required to read **ALL** of the textbook chapters and journal articles listed below.*

Textbooks:

- Schiller, B.R., Hill, C.D., Wall, S.L., (2013) The Economy Today 13th Edition, Boston: McGraw Hill. *Chapter 28: Environmental Protection*. (pp 622 – 644).
- Janse Van Rensburg, J.J., McConnell, C., Brue, S., (2015) Economics Southern African Edition Boston: McGraw Hill.*Chapter 20: Government and Market Failure* (pp 415 – 430).

Journal Articles:

- *"The Dutch Disease"* (1977). The Economist, November 26, pp. 82-83.
  "*Climate Change and Economic Development*", Our Planet, UNEP, Vol 17, No 2,
- Chay, K, Greenstone, M. "*The Impact of Air Quality on Infant Mortality: Evidence from Geographic Variation in Pollution Shocks Induced by a Recession*" Quarterly Journal of Economics 118 (August 2003): 1121-1167.
- Cropper, M L. and Wallace E.O."*Environmental Economics: A Survey*," Journal of Economic Literature 30 (June 1992): 675-740.
- Hardin, G. (1968) *"The Tragedy of the Commons"*, Science, Number 13, December 1968: Vol. 162 no. 3859 pp. 1243-1248
- Kotchen, M J. "*Green Markets and Private Provision of Public Goods*" Journal of Political Economy 114 (August 2006): 816-834.
- Kyoto Protocol,(2011) United Nations Framework Convention on Climate Change (UNFCCC).
- Muller, N Z, Mendelsohn R, Nordhaus W. "*Environmental Accounting for Pollution in the United States Economy*" American Economic Review 101 (August 2011): 1649-1675.
- Stavins, R N. "*Environmental Economics*" Resources for the Future (RFF)(December 2004).
- Ward A , Chris A, (2010), The Struggle over Land in Africa Conflicts, Politics & Change, 2010. HSRC Press (free download).

13.1 INTRODUCTION

How many of you remember (or even heard of) a *Quagga*, a *Dodo*, or a *Black Terrapin*? The reason why these species would probably be unfamiliar to you is that these (and numerous others) species are sadly extinct! While many explanatory factors for the extinction of certain species have been postulated, it is without doubt that as humans modernise, there is a greater need for (1) land space – leading to land usage conflict – and (2) the production of goods and services – leading to environmental pollution and degradation.

This part of the course introduces the student to the world of environmental economics. This area of economics has become a principle concern in recent debates and it is set to dominate the political agenda of governments. This is simply due to mankind's realisation that we cannot ignore the degradation of the environment any longer. Those individuals who damage the environment through irresponsible production (and consumption) must be held responsible for the harm they cause.

Environmental economics is vast and is in fact a complete course on its own. This chapter of the module only provides a glimpse of the pertinent issues regarding environmental economics and we unfortunately cannot delve too deeply into all the issues. A more conscientious student is encouraged to read further into the recent debates should he/she desire and a reading list is prescribed at the beginning of this chapter.

Environmental economics can be broken into four large categories, namely:

a) Pollution;
b) Resource Stock and Sustainability;
c) Land Use Conflicts; and
d) Global Environmental Policy.

Before delving deeper into each of these issues, listed below is a brief explanation of some of the key environmental economic terms which you must understand and be able to explain.

EXTERNALITY – an externality is a cost or a benefit accruing to an individual or group – a third party – that is external to a market transaction (Janse Van Rensburg 2015). Stated simply, an externality is a cost or benefit not 'priced' within the conventional market mechanism of supply and demand.

PUBLIC GOOD – these are goods that have opposite characteristics to private goods and services and are distinguished by non-rivalry and non-excludability characteristics. Schiller (2013) provides a comprehensive explanation of the differences between public and private goods on pages 72 – 74.

PROPERTY RIGHTS – property rights refers to the right of ownership of a certain property (most often land is characterised as property but property can also extend to other forms e.g. intellectual property). Hardin's (1968) article provides an interesting view on property rights and must be read and understood.

? THINK POINT
Students are required to try and answer the questions set below.   Without production there is no consumption, and with production there is pollution. Do you agree with this statement? Can you offer an alternative to the above situation? If so, what do you propose? How would you make producers more accountable for their negative externalities?

13.2 POLLUTION

As mentioned above, pollution can be described as a negative externality of production. This is due to the 'hidden' costs of pollution not captured in the conventional market mechanism. The cost of polluting the environment can be described as an explicit cost – that is a cost that ought to be considered when working out the total cost of production but unfortunately is *not* considered during the calculation of total cost. In other words, only the private costs of production are considered and the social costs are ignored.

To overcome this issue, governments sometimes try and impose a tax on pollution. Suppose that government imposed a 'pollutant tax' equal to the cost of the pollution. What would likely happen to equilibrium price and quantity?

By considering the tax equal to the cost of polluting the environment as an additional cost of production, the overall cost of production increases given this new input cost. Using the conventional supply and demand mechanism discussed in the first part of this module, the supply curve shifts to the left. In doing so, output is decreased thereby curbing the pollution.

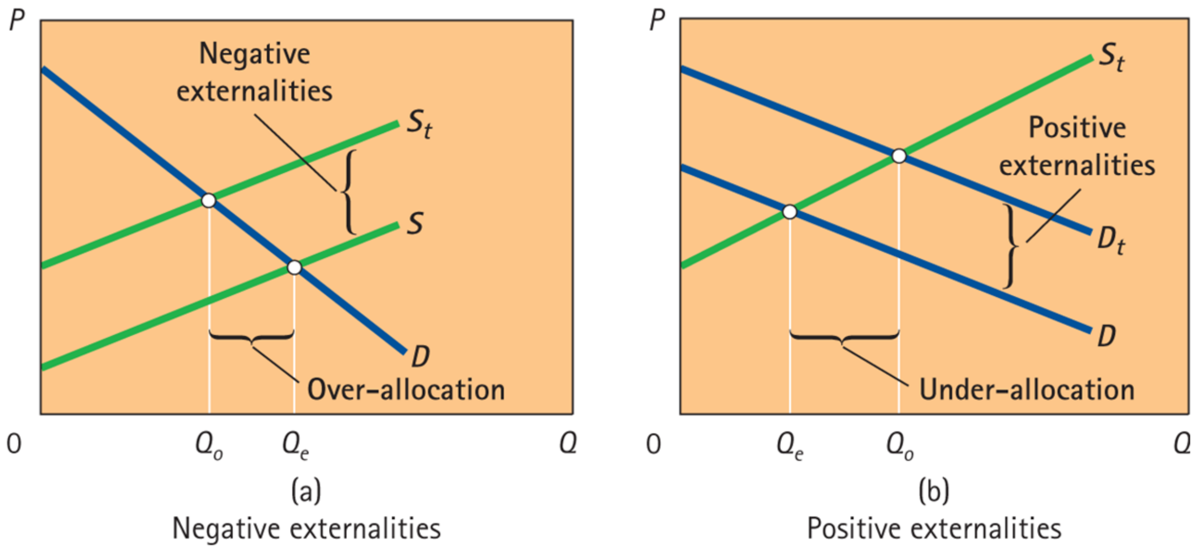


Figure 13.1

Source: Economics Southern African Edition, 2015.

You must ensure that you understand the above figure and explanations providing in Janse Van Rensburg (2015).

Many governments often try and impose an environmental tax on a polluting production process by charging an ad valorem tax per unit produced. Usually the rate of the tax is 'equivalent' to the social damage caused per unit produced and the tax revenue earned from the supplier is then allocated towards environmental protection campaigns.

In a Utopian world, these additional tax revenues are used to remedy the harm caused by the production process and in doing so leaves the environment no better or worse than before. Economists call this an *Intergenerational Argument* which explains that the current generation should leave the environment in the same condition as they inherited it to the next generation. In other words, the status quo should be maintained.

13.3 RESOURCES STOCKS

While externalities are mainly concerned with the production side of Economics, the issue of public goods are mainly concerned with the resource consumption side. Given the public goods nature of most environmental goods, no single consumer can be disallowed from consuming that public good. What this often leads to is the over-consumption and exploitation of natural resources.

Given that one cannot be disallowed from consuming a public good, and the very fact that these goods are normally free (there are cases sometimes when a government may impose a blanket tax or tariff on all citizens, for example a television licence fee) to consume, most if not all consumers will consume more than he or she really needs. Consumers acting independently and thinking rationally will act in accordance to their own self in interest and thus hoard the public good even though they fully understand that it is not in anyone's best interest in the long run.

This phenomenon, termed '*the tragedy of the commons*' was made famous by ecologist Garrett Hardin and first published in the journal Science in 1968. It is believed that Hardin expanded on the idea first sketched in an 1833 pamphlet by William Forster Lloyd which pertained to medieval land tenure in Europe. During this time individual herders shared common parcels of land, on which each was entitled to let his cows graze. This quickly lead to a situation where each herder, being motivated by his own self-interest (letting his cows graze and eat as much grass as they could), ignored the quality of the common ground(?) from being damaged through overgrazing. In the end and through overgrazing these commons became large tracts of totally barren land and hence termed the tragedy of the commons.

What this means is that there is a disjunction between *private* costs and benefits and *social* costs of benefits. Janse Van Rensburg (2015) provides an explanation on comparing marginal benefits and marginal costs of public goods and how using cost-benefit analysis could assist in such cases.

Over-usage and dependency of public goods carries with it two very concerning issues. Firstly, it means is that we are on a trajectory where we are constantly depleting our resource base. Resources have a finite base and once we consume an amount beyond this level, the end will have dire consequences. This is especially true for resources that have a finite or exhaustive base. Once the last ounce of the resource has being consumed, there is no more of it ever again in the world. In such cases there resource is totally extinct and future generations will have to live without it (if that is indeed possible?).

Most African economies based their GDP on exporting natural resources to the western world. Most economists believe this is short-sighted and problematic and will certainly lead to a case of 'Dutch Disease'. The article '*Dutch Disease*' published by *The Economist* (1977) provides further views on this subject.

Resource usage does not only pertain to land resources but also to aquatic resources. South Africa's coastline is blessed with some of the most diverse and abundant fish species in the world. Enjoying both a hot Mozambique current flowing down the east coast and a cold Benguela current flowing up the west coast of South Africa, South African waters are a popular fishing destination for many international fishing companies.

In terms of *International Maritime Law*, South Africa only has control of the ocean less than

21 kilometres from the shoreline. This means that a fishing trawler lying 22 kilometres off the coast of South Africa is in international waters and hence not subjected to the environmental laws of South Africa. What this also means that these waters become common territory and open to *tragedy of the commons*!

Over-fishing has become an everyday occurrence and motivated by profits, with international fishing trawlers harvesting as much as they can. Often totally ignoring the carrying capacity of a particular species of fish, fish stocks are depleted at a phenomenal rate. In simple terms this means that the production process is unsustainable and should not continue but despite this concern, fishing still continues on a massive scale.

The same argument can be used for most current production techniques. Current production is largely driven by fossil fuels that have existed on this earth long before mankind was first recorded. The world has an enormous dependency on crude oil and coal as the main sources of energy and consumed at an alarming rate! Our current patterns of behaviour – irresponsible production driven by profits and irresponsible consumption driven by simple avarice and greed – means that we let such practices to continue despite understanding the consequence.

13.4 LAND USE CONFLICT

At the start of this module you learnt that Economics is primarily concerned about the allocation of limited resources to satisfy unlimited needs and wants and hence choices and sacrifices need to be made. Ultimately the allocation of these resources is made through the market mechanism which allocates these resources as efficiently as possible.

While this may be true, you now have also been made aware of the fact that the market mechanism also likely ignores social costs and thus *ipso facto* the allocation of resources could actually be misallocated in terms of costs and benefits.

This means that the allocation of scarce resources can be seriously questioned. The amount of land under the control of any country is definitely limited - there is only a given amount of land available to all citizens of a country. The allocation of land to different productive and consumptive use thus becomes a central point and it is likely that issues of land use conflict would arise.

For example, should a given piece of land be used to produce more sugar cane (agriculture) or biodiversity sustainability (conservation)? How does one decide which of these two (or any other use for that matter) take precedence?

The article *The Struggle over Land in Africa Conflicts, Politics & Change* provides a nice overview of some of the issues relating to land use conflicts in Africa and you are required to understand some of the central debates relating to land use conflicts.

13.5 GLOBAL ENVIRONMENT POLICY

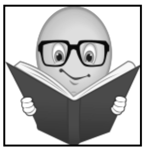
Given the above debates, business leaders are grappling with new forms of doing business. Producers are looking for techniques that pollute the environment minimally (if at all), consumers are becoming more brand conscious opting for more 'eco-friendly' brands, and governments are forming alliances to establish global environmental policies and laws. Many attempts have been made to regulate and formalise what can and cannot be undertaken.

For example, the *Kyoto Protocol* prepared by the *United Nations Framework Convention on Climate Change (UNFCCC)* sets binding obligations on industrialised countries to reduce emissions of greenhouse gases. The Protocol came into effect on 16 February 2005 and many countries around the world (currently 191 member countries) have signed and ratified the protocol.

This is seen as a global attempt by most countries around the world to commit to sustainable productive and consumptive practices. However, not all countries subscribe to this and the country with the largest contribution to global GDP and hence arguably the largest greenhouse gas effect per capita, namely United States of America, is a noticeable exclusion from the list of member countries! The US has espoused its views of the issue and you are left to read up more on it and to make your own judgements.

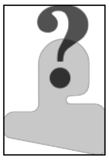
"Only when the last tree has been cut down; only when the last river has been poisoned; only when the last fish has been caught; only then will you find that money cannot be eaten".

Ancient Cree Saying, North America,



Have You Completed the 'Essential Reading' for this Section?

Now that you have been introduced to this section on *"Economic growth and Environmental Protection",* source and work through the textbook chapters and journal articles listed in the *"Essential Reading"* list at the beginning of this section. It is essential that you read ***all*** of the textbook chapters and journal articles listed.



QUESTIONS FOR REFLECTION

After completing your study of this section on 'Economic growth and Environmental Protection' reflect on the following questions. (To adequately address these questions you will need to have completed all the 'essential reading' listed at the beginning of this section.)

1. One of the ways governments can curtail pollution is by imposing an ad valorem tax per unit of output produced. This revenue from tax could then be used to rejuvenate the environment. Can such a system work in reality? What do you think are the limitations of such a system?

2. Environmentally and socially sustainable energy is essential to reduce poverty. Over 1.3 billion people are still without access to electricity worldwide, almost all of whom live in developing countries. About 2.7 billion use solid fuels - wood, charcoal, dung, other biomass, and coal - for cooking and heating. Africa faces acute energy challenges, with the lowest electrification rate of all the regions at 26% of households. About 550 million people do not have access to electricity. Without access to energy services, the poor are deprived of the most basic economic opportunities needed to improve their standards of living.

   Should this dependency continue in future? What do you think sustainable forms of future production should entail?

APPENDIX A: CASE STUDY 1: MICROECONOMICS

Answer ALL the questions.

Total Marks **(50 Marks)**

Strategies Used by Microsoft to Leverage its Monopoly Position in Operating Systems to Internet Browser Markets

MICROSOFT

Microsoft is the world's largest supplier of computer software for personal computers (PCs), may have engaged in anti-competitive conduct and created anti-competitive effects of its past unlawful conduct. Microsoft sells and licenses PC operating systems throughout the United States and the world and delivers copies of its operating systems to PC manufacturers (often referred to as Original Equipment Manufacturers or "OEMs") and retail customers across state lines and international borders. Microsoft is engaged in, and its activities substantially affect, interstate and foreign commerce.

Microsoft may possess (and for several years may have possessed) monopoly power in the market for personal computer operating systems. Microsoft's "Windows" operating systems are used on over 80% of Intel-based PCs, the dominant type of PC in the United States. More than 90% of new Intel-based PCs are shipped with a version of Windows preinstalled. OEMs have no commercially reasonable alternative to Microsoft operating systems for the PCs that they distribute.

There are high barriers to entry in the market for PC operating systems. One of the most important barriers to entry is the barrier created by the number of software applications that must run on an operating system in order to make the operating system attractive to end users. Because end users want a large number of applications available, because most applications today are written to run on Windows, and because it would be prohibitively difficult, time-consuming, and expensive to create an alternative operating system that would run the programs that run on Windows, a potential new operating system entrant faces a high barrier to successful entry.

Accordingly, the most significant potential threat to Microsoft's operating system monopoly is not from a direct, frontal assault by existing or new operating systems, but from new software products that may support, or themselves become, alternative "platforms" to which applications can be written, and which can be used in conjunction with multiple operating systems, including but not limited to Windows.

To protect its valuable Windows monopoly against such potential competitive threats, and to extend its operating system monopoly into other software markets, Microsoft may have engaged in a series of anticompetitive activities. Microsoft's conduct includes agreements tying other Microsoft software products to Microsoft's Windows operating system; exclusionary agreements precluding companies from distributing, promoting, buying, or using products of Microsoft's software competitors or potential competitors; and exclusionary agreements restricting the right of companies to provide services or resources to Microsoft's software competitors or potential competitors.

One important current source of potential competition for Microsoft's Windows operating system monopoly comes from the Internet, described by Microsoft's CEO, Bill Gates, in May 1995 as "the most important single development to come along since the IBM PC was introduced in 1981." As Mr. Gates recognized, the development of competing Internet browsers -- specialised software programs that allow PC users to locate, access, display, and manipulate content and applications located on the Internet's World Wide Web ("the web") -- posed a serious potential threat to Microsoft's Windows operating system monopoly.

Mr. Gates warned his executives: Netscape is a new competitor "born" on the Internet.. Their browser is dominant, with a 70% usage share, allowing them to determine which network extensions will catch on. They are pursuing a multi-platform strategy where they move the key API [applications programming interface] into the client to commoditize the underlying operating system.
Internet browsers pose a competitive threat to Microsoft's potential operating system monopoly in two basic ways. First, as discussed above, one of the most important barriers to the entry and expansion of potential competitors to Microsoft in supplying PC operating systems is the large number of software applications that will run on the Windows operating system (and not on other operating systems). If application programs could be written to run on multiple operating systems, competition in the market for operating systems could be revitalized. The combination of browser technology and a new programming language known as "Java" hold out this promise. Java is designed in part to permit applications written in it to be run on different operating systems. As such, it threatens to reduce or eliminate one of the key barriers to entry protecting Microsoft's potential operating system monopoly.

Non-Microsoft browsers are perhaps the most significant vehicle for distribution of Java technology to end users. Microsoft has recognized that the widespread use of browsers other than its own threatens to increase the distribution and use of Java, and in so doing threatens Microsoft's potential operating system monopoly. For this reason, a presentation to Microsoft CEO Bill Gates on 5 January 5 1997, on how to respond to the Java threat emphasized "Increase IE share" as a key strategy.

Second, Microsoft recognized that Netscape's browser was itself a "platform" on which many applications were being written -- and to which (if it thrived) more and more applications would be written. Since Netscape's browser could be run on any PC operating system, the success of this alternative platform also threatened to reduce or eliminate a key barrier protecting Microsoft's potential operating system monopoly. This is the threat that Microsoft's CEO Bill Gates referred to as the threat that Netscape would "commoditize" the operating system.

To respond to the competitive threat posed by Netscape's browser, Microsoft embarked on an extensive campaign to market and distribute Microsoft's own Internet browser, which it named "Internet Explorer" or "IE." Microsoft executives have described this campaign as a "jihad" to win the "browser war." Because of its resources and programming technology, Microsoft was well positioned to develop and market a browser in competition with Netscape. Indeed, continued competition on the merits between Netscape's Navigator and Microsoft's Internet Explorer would have resulted in greater innovation and the development of better products at lower prices. Moreover, in the absence of Microsoft's anticompetitive conduct, the offsetting advantages of Microsoft's size and dominant position in desktop software and Netscape's position as the browser innovator and the leading browser supplier, and the benefit to consumers of product differentiation, could have been expected to sustain competition on the merits between these companies, and perhaps others that have entered and might enter the browser market.

Microsoft, however, has not been willing simply to compete on the merits. For example, as Microsoft's Christian Wildfeuer wrote in February 1997, Microsoft concluded that it would "be very hard to increase browser share on the merits of IE alone. It will be more important to leverage the OS asset to make people use IE instead of Navigator." Thus, Microsoft might have begun, and might continue today, a pattern of potential anticompetitive practices designed to thwart browser competition on the merits, to deprive customers of a choice between alternative browsers, and to exclude Microsoft's Internet browser competitors.

Microsoft's conduct with respect to browsers is a prominent and immediate example of the pattern of potentially anticompetitive practices undertaken by Microsoft with the purpose and effect of maintaining its PC operating system monopoly and extending that monopoly to other related markets.

Initially, Microsoft attempted to eliminate competition from Netscape by seeking an express horizontal agreement not to compete. In May 1995, Microsoft executives met with top Netscape personnel in an attempt to compel Netscape not to compete with Microsoft and to divide the browser market, with Microsoft becoming the sole supplier of browsers for use with Windows 95 and successor operating systems and with Netscape becoming the sole supplier of browsers for operating systems other than Windows 95 or its successors.

Netscape refused to participate in Microsoft's illegal scheme. Having failed simply to stop competition by agreement, Microsoft set about to exclude Netscape and other browser rivals from access to the distribution, promotion, and resources they needed to offer their browser products to OEMs and PC users pervasively enough to facilitate the widespread distribution of Java or to facilitate their browsers becoming an attractive programming platform in their own right.

First, Microsoft invested hundreds of millions of dollars to develop, test, and promote Internet Explorer, a product which it distributes without separate charge. As Paul Maritz, Microsoft's Group Vice President in charge of the Platforms Group, was quoted in the New York Times as telling industry executives: "We are going to cut off their air supply.Everything they're selling, we're going to give away for free." As reported in the Financial Times, Microsoft CEO Bill Gates likewise warned Netscape (and other potential Microsoft challengers) in June 1996: "Our business model works even if all Internet software is free. . .We are still selling operating systems. What does Netscape's business model look like? Not very good."

But Mr. Gates did not stop at free distribution. Rather, Microsoft purposefully set out to do whatever it took to make sure significant market participants distributed and used Internet Explorer instead of Netscape's browser -- including paying some customers to take IE and using its unique control over Windows to induce others to do so. For example, in seeking the support of Intuit, a significant application software developer, Mr. Gates was blunt, as he reported in a July 1996 internal e-mail:
I was quite frank with him [Scott Cook, CEO of Intuit] that if he had a favour we could do for him that would cost us something like $1M to do that in return for switching browsers in the next few months I would be open to doing that.

Second, Microsoft unlawfully required PC manufacturers, as a condition of obtaining licenses for the Windows 95 operating system, to agree to license, preinstall, and distribute Internet Explorer on every Windows PC such manufacturers shipped. By virtue of the monopoly position Windows enjoys, it was a commercial necessity for OEMs to preinstall Windows 95 -- and, as a result of Microsoft's illegal tie-in, Internet Explorer -- on virtually all of the PCs they sold. Microsoft thereby unlawfully tied its Internet Explorer software to the Windows 95 version of its monopoly operating system and unlawfully leveraged its operating system monopoly to require PC manufacturers to license and distribute Internet Explorer on every PC those OEMs shipped with Windows.

Third, Microsoft intends now unlawfully to tie its Internet browser software to its new Windows 98 operating system, the successor to Windows 95. Microsoft has made clear that, unless restrained, it will continue to misuse its operating system monopoly to artificially exclude browser competition and deprive customers of a free choice between browsers.

Microsoft designed Windows 98 so that removal of Internet Explorer by OEMs or end users is operationally more difficult than it was in Windows 95. Although it is nevertheless technically feasible and practicable to remove Microsoft's Internet browser software from Windows 98 and to substitute other Internet browser software, OEMs are prevented from doing so by Microsoft's contractual tie-in.
Internet browsers are separate products competing in a separate product market from PC operating systems, and it is efficient to supply the two products separately. Indeed, Microsoft itself has consistently offered, promoted, and distributed its Internet browser as a stand-alone product separate from, and not as a component of, Windows, and intends to continue to do so after the release of Windows 98. For example, Microsoft will make available separately, the same Internet browser that is bundled with Windows 98, through an upgraded version of Internet Explorer 4 that will be distributed and installed wholly apart from Windows 98, including for non-Windows, non-Microsoft operating systems. In addition Microsoft already plans to introduce a subsequent version of IE (Internet Explorer 5) that also will be distributed and installed separately from Windows 98, including for non- Windows, non-Microsoft operating systems.

Microsoft's tying of its Internet browser to its potential monopoly operating system reduces the ability of customers to choose among competing browser products because it forces OEMs and other purchasers to license or acquire the tied combination whether they want Microsoft's Internet browser or not.

Microsoft's tying -- which it can accomplish because of its monopoly power in Windows -- impairs the ability of its browser rivals to compete to have their browsers preinstalled by OEMs on new PCs and thus substantially forecloses those rivals from an important channel of browser distribution.

Microsoft executives have repeatedly recognized the significant advantage that Microsoft (and only Microsoft) receives by tying its Internet browser to its operating system, rather than having to compete on the merits. As Microsoft Senior Vice President James Allchin wrote to Microsoft Group Vice-President Paul Maritz on January 2, 1997: You see browser share as job 1 . . . . I do not feel we are going to win on our current path. *We are not leveraging Windows from a marketing perspective*. . . . *We do not use our strength -- which is that we have an installed base of Windows and we have a strong OEM shipment channel for Windows*.

Pitting browser against browser is hard since Netscape has 80% market share and we have < 20% . . . . *I am convinced we have to use Windows — this is the one thing they don't have* ...(emphasis added)

Fourth, Microsoft has possibly misused its Windows operating system monopoly by requiring PC OEMs to agree, as a condition of acquiring a license to the Windows operating system, to adopt the uniform "boot-up" sequence and "desktop" screen specified by Microsoft. This sequence determines the screens that every user sees upon turning on a Windows PC. Microsoft's exclusionary restrictions forbid, among other things, any changes by an OEM that would remove from the PC any part of Microsoft's Internet Explorer software (or any other Microsoft-dictated software) or that would add to the PC a competing browser (or other competing software) in any more prominent or visible way (including by highlighting as part of the start-up sequence or by more prominent placement on the desktop screen) than the way Microsoft requires Internet Explorer to be presented.

Virtually every new PC that comes with Windows, no matter which OEM has built it, presents users with the same screens and software specified by Microsoft. As a result of Microsoft's restrictive boot-up and desktop screen agreements, OEMs are deprived of the freedom to make competitive choices about which browser or other software product should be offered to their customers, the ability to determine for themselves the design and configuration of the initial screens displayed on the computers they sell, and the ability to differentiate their products to serve their perceptions of consumers' needs. These restrictive agreements also maintain, and enhance the importance of, Microsoft's ability to provide preferential placement on the desktop (or in the boot-up sequence) to various Internet Service Providers ("ISPs") and Internet Content Providers ("ICPs"), in return for those firms' commitments to give preferential distribution and promotion to Internet Explorer and to restrict their distribution and promotion of competing browsers.

As a result, these restrictions further exclude competing Internet browsers from the most important channels of distribution, substantially reduce OEMs' incentives and abilities to innovate and differentiate their products in ways that could facilitate competition between Microsoft products and competing software products, and enhance Microsoft's ability to use the near-ubiquity of its Windows operating system monopoly to gain dominance in both the Internet browser market and other software markets.

Fifth, Microsoft has entered into anticompetitive agreements with virtually all of the nation's largest and most popular ISPs, including particularly Online Service Providers ("OLSs"), firms which provide the communications link between a subscriber's PC and the Internet and sometimes related services and content as well. Windows 95 (and soon Windows 98) presents PC users with "folders" or lists including the names of certain of these ISPs that have entered into agreements with Microsoft and enable users readily to subscribe to their services. Because Windows is preinstalled on nearly all PCs in the United States, inclusion in these folders and lists is of substantial value to ISPs. As a result, almost all of the largest and most significant ISPs in the United States have sought placement on the Windows desktop.

Microsoft's agreements with ISPs allow Microsoft to leverage its operating system monopoly by conditioning these ISPs' inclusion in Windows' lists on such ISPs' agreement to offer Microsoft's Internet Explorer browser primarily or exclusively as the browser they distribute; not to promote or even mention to any of their subscribers the existence, availability, or compatibility of a competing Internet browser; and to use on their own Internet sites Microsoft-specific programming extensions and tools that make those sites look better when viewed through Internet Explorer than when viewed through competing Internet browsers.
Microsoft's anticompetitive agreements with ISPs have substantially foreclosed competing browsers from this major channel of browser distribution. Over 30 percent of Internet browser users have obtained their browsers from ISPs. Microsoft has recently modified certain of its ISP agreements to reduce some of these restrictions.

However, the modifications do not affect Microsoft's illegal agreements with On-Line Service Providers (e.g. America Online, CompuServe), that serve the majority of Internet users in the United States; even the modified agreements remain unlawful in other respects; the modifications do not address the anticompetitive effects such agreements have already caused; and there is no assurance that Microsoft will not re-impose the restrictions in the future.

Sixth, Microsoft has entered into anticompetitive agreements with Internet Content Providers ("ICPs"). Prominent "channel buttons" advertising and providing direct Internet access to select ICPs appear on the "Active Desktop" feature that is shipped with the Windows operating system. Microsoft's agreements condition an ICP's placement on one of these buttons on the ICP's agreement to not pay or otherwise compensate Microsoft's primary Internet browser competitors (including by distributing their browsers) for the distribution, marketing, or promotion of the ICP's content; to not promote any browser produced by any of Microsoft's browser competitors; to not allow any of Microsoft's primary browser competitors to promote and highlight the ICP's "channel" content on or for their browsers; and to design its web sites using Microsoft-specific, proprietary programming extensions so that those sites look better when viewed with Internet Explorer than when viewed through a competing browser. These illegal agreements further inhibit competition on the merits between Internet Explorer and other Internet browsers

As with some of its restrictive ISP agreements, Microsoft has recently announced certain modifications of its anticompetitive ICP agreements. However, these modifications do not remedy the anticompetitive effects such agreements have had and do not prevent Microsoft from entering into the same or similar agreements in the future.

Collectively, Microsoft's contracts with OEMs, ISPs, and ICPs may have unreasonably restrained and may continue to unreasonably restrain competition in the market for Internet browsers. They artificially increase the share of the market held by Microsoft's Internet Explorer, and they threaten to "tip" the market permanently to Internet Explorer, not because OEMs or PC customers have freely chosen Microsoft's product in a competitive marketplace, but because of the illegal exercise of monopoly power by Microsoft.

This case challenges Microsoft's concerted attempts to maintain its monopoly in operating systems and to achieve dominance in other markets, not by innovation and other competition on the merits, but by tie-ins, exclusive dealing contracts, and other anticompetitive agreements that deter innovation, exclude competition, and rob customers of their right to choose among competing alternatives.

Microsoft's conduct may adversely affect innovation, including by impairing the incentive of Microsoft's competitors and potential competitors to undertake research and development, because they know that

Microsoft will be able to limit the rewards from any resulting innovation; impairing the ability of Microsoft's competitors and potential competitors to obtain financing for research and development; inhibiting Microsoft's competitors that nevertheless succeed in developing promising innovations from effectively marketing their improved products to customers; reducing the incentive and ability of OEMs to innovate and differentiate their products in ways that would appeal to customers; and reducing competition and the spur to innovation by Microsoft and others that only competition can provide.

The purpose and effect of Microsoft's conduct with respect to Internet browsers have been and, if not restrained, might be to preclude competition on the merits between Microsoft's browser and other browsers; to preclude potential competition with Microsoft's operating system from competing browsers and from other companies and software whose use is facilitated by these browsers; to extend Microsoft's Windows operating system monopoly to the Internet browser market; and to maintain Microsoft's Windows operating system monopoly.

Adapted: Baye M and Scholten P (1994), Strategies used by Microsoft to leverage its Monopoly Position in Operating Systems to Internet Browser Markets.

QUESTION ONE **(25 Marks)**

1.1 With reference to the above Case Study, discuss the high barriers to entry in the market for PC operating Systems and also highlight the most significant threats to Microsoft's Operating Systems monopoly. **(15 Marks)**

1.2 Critically evaluate the pattern of potentially anti-competitive activities by Microsoft towards its competitors. Do you think that the government should always try to eliminate monopoly power? Substantiate your solution with facts in the Case Study. **(10 Marks)**

QUESTION TWO **(25 Marks)**

2.1 Describe and explain how the internet browsers pose a competitive threat to Microsoft's potential operating system monopoly. **(15 Marks)**

2.2 "Our business model works even if all internet software is free ……. We are still selling operating systems. What does Netscape's business model look like? Not very good." Critically evaluate how Microsoft's anticompetitive behaviour hinders innovation or development of advanced technological products. **(10 Marks)**

APPENDIX B: CASE STUDY 2: MACROECONOMICS

Answer ALL the questions

Total Marks (50 Marks)

SHORT RUN STABILIZATION AND LONG RUN COMPETITIVENESS: THE LATVIAN CASE

Growth of a young country

Latvia – a small, young country on the east coast of the Baltic Sea – has recently earned the title of ‘‘tiger’’. After gaining its independence from the Soviet Union in 1991, the country embarked upon a challenging road of transitioning from a planned to a market economy. The first decade proved to be tough: the beginnings of free market reforms were met by a harsh contraction of the economy, and only in the mid-1990’s the country began to grow slowly. Inflation soared, especially in the first years of life of the Latvian Lat (the local currency). A banking crisis struck in 1995 and the country was hit hard by the Russian financial crisis in 1998. The new millennium was thus met with an income per capita level barely one sixth of the level of the rich European countries.

Just as the country entered its second decade of independencethough, things began to look rather optimistic. The economy started growing steadily at 6-8 percent, the budget deficit was massively reduced to desirable levels, and inflation was finally low. External trade was growing steadily and gained ever bigger momentum. The economy began to regain confidence in the banking sector as it received more stringent regulation and supervision. In 2004, Latvia was officially admitted to the European Union along with the other two Baltic States (Estonia and Lithuania) and several other post-Soviet countries. Optimism culminated and growth flourished: pegging the Lat to the Euro in 2005 with prospects of adopting the Euro as the national currency fuelled even more confidence and encouraged more trade. The next few years after admission to the EU saw double-digit economic growth, flagging Latvia as the fastest growing economy in Europe. The banking sector, dominated now by Scandinavian banks, unleashed massive lending to businesses and households: the prospects looked good, expectations were high, and consumer confidence was at its peak.

The credit bubble continued to expand and the realization that it was built upon unrealistic expectations for economic growth came too late. The massive lending that took place in a matter of a couple of years increased consumption, yet it did not equally improve the future prospects of production. In late 2007 and in 2008, it became apparent that the economy was overheating.

The fall of the "Baltic Tiger"

The fast growth of the economy created significant macroeconomic imbalances. The consumption boom in the country built grounds for the strong growth of imports, which led to a massive current account deficit of a staggering 25 percent of GDP already in 2006 (Hansen, 2010).The overheating housing market was accompanied by imbalance and tensions in the labour market as well. The demand for labour in the booming economy was high, yet the supply was decreasing due to large-scale emigration after joining the EU in 2004. Thanks to such pressure, Latvia hit another record number for the EU: an annual wage increase up to 30 percent. The wage growth by far exceeded productivity growth, forcing companies to increase prices, leading to 17.9 percent y-o-y price inflation in May 2008.

As a consequence, Latvia's currency sharply appreciated, sending worrying signals about the decreasing competitiveness of the country (Hansen, 2010). These large macroeconomic imbalances, worries about sustainability of credit growth rates, inflation, property price bubble as well as the high risk of deterioration in the quality of loan portfolio *motivated Scandinavian banks to finally tighten the lending standards (Klyviene and Rasmussen, 2010). Once the credit from the Nordic countries froze and housing prices started to fall, construction and retail sectors stagnated. Pessimism replaced unwarranted optimism, negatively impacting consumption and suppressing the entire economic activity (Hansen, 2010).*

The "Baltic Tiger" crashed, and it crashed hard. The most rapidly developing economy among the EU countries, experiencing a double-digit growth of 12.2 percent in 2006, was shaken by the steepest GDP contraction of 18 percent in 2009.Unemployment peaked at 20.7 percent, consumption dropped by 22.4 percent and gross fixed capital investments plunged by 37.7 percent.

In December of 2008, the IMF provided a 1.68 billion Euro rescue package to help Latvia fill in the gaping hole in its budget deficit and calm its capital markets. Even though the injection may have convinced the markets for a while, in June 2009 the Central Bank of Latvia had to sell almost 1 billion Euro in exchange of Lats in order to defend the currency.

Is the government to blame?

Even though before the accession to the EU Latvia was undergoing a period of intensive reforms, due to successful growth of the economy the policy-makers lost the urgency to reform as everything already seemed to be heading in the right direction (Erixon, 2010). Due to the currency's peg to Euro, the monetary policy in Latvia was restricted; hence the supply of credit was out of control.

Therefore, only fiscal policy tools could be used to regulate the economy. However, it seemed that instead of using this tool wisely the government further fuelled overheating through massive public spending (Klyviene and Rasmussen, 2010).

Tax revenues were growing as the economy expanded. Instead of following the standard counter cyclical fiscal policy in a time of favourable macroeconomic environment and decreasing fiscal expenditure in order to accumulate a budget surplus, Latvia chose to follow a pro-cyclical fiscal policy (Hansen, 2010). Government spending relative to GDP increased from 35.6 to 37.7 percent over 2005-2007 (Karlsson, 2009). Not surprisingly, such pro-cyclical fiscal policy increased the demand for credit, consumption and supported the biggest boom in the EU. Excessive government spending did not allow accumulating a budget surplus which could serve as a buffer in times of crisis.

In 2007 the Latvian government adopted a ‘‘Stabilization plan’’ aimed at developing the budget surplus, reviewing effectiveness of government spending and implementing reforms necessary for increasing long run productivity and competitiveness (Gerhards, 2008). The plan came too late. By 2009 even the Latvian president Valdis Zatlers was questioning the appropriateness of the actions taken and the fate of the country: ‘‘We had no political will, we lacked economic and entrepreneurial foresight, the government was pathetic. Now we face the existential question: will Latvia survive?’’ (Hansen, 2009).

Policy decisions today

A. Should the Lat be devalued. . …….

For countries with a fixed exchange rate regime, devaluation is roughly the only monetary policy tool that can be considered for targeting economic stability. A deliberate devaluation of the Lat would make the currency cheaper. Consequently, imports would become more expensive and exports to other countries – cheaper, thus reducing the trade deficit. By the end of 2009, the international community was voicing a strong opinion that Latvia should devalue. For some economists (including Professor Paul Krugman) it looks like a case of Argentina: a fixed exchange rate, an excessive current account deficit, substantial foreign bank lending, and a burst of an overheated economy. They believe that there is no other way for Latvia to regain competitiveness without a devaluation.

Devaluation, however, might turn out to be very costly and may not be as effective as intended. During the credit boom, Scandinavian banks provided cheap capital with considerably lower interest rates for loans denominated in Euro as compared to loans in Lat. As a consequence, in 2008 around 70 percent of bank deposits and nearly 90 percent of loans were issued in Euro. Devaluation of the Lat would thus pose a serious risk of insolvency.

B. . . .Or should Latvia take the ''hard road'' instead?

As an alternative to external devaluation, Latvian politicians have started to talk about an ''internal devaluation'': keeping the currency fixed to Euro, but undergoing structural reforms to improve productivity and public sector efficiency, and reducing wages. While currency devaluation can happen overnight, internal devaluation may take months or years of structural reform and may lead to public unrest.

As a matter of fact, the government started to introduce austerity measures already in 2007 12 percent (or 115) state schools were closed, because budget financing was shifted from inputs-based (number of teachers) to output-based (number of students). In 2008 the government abolished half of state agencies, which reduced the number of civil servants by 30 percent. In October 2009, the government slashed budget deficits to meet targets imposed by the European Union for an additional €7.5 billion support package. About 75 percent of the expenditure cuts were thus done in 2009, bringing some positive hopes that austerity measures were carried in time.

Internal devaluation, however, does not receive much public support on the international level. The experience of Argentina seems too painful: the society was making one sacrifice after another and was slowly tortured by never-ending public spending cuts and rising unemployment. The country suffered a break-through of riots and violence, consequently forcing itself into devaluation of the local currency.

Moreover, in case of a successful internal devaluation, the economy may be pushed into a vicious cycle of deflation, yet having no option to increase money supply through monetary policy decisions. Keeping the exchange rate fixed and facing a deflationary cycle would be extremely hard to cure. Internal devaluation thus requires a well thought-through policy and strong political will.

Thoughts on long run strategy: global competiveness is at halt

As if instability due to macroeconomic imbalances were not enough, the competitiveness of Latvia in the global arena looks gloomy as well. As of 2010, the Soviet Union heritage is still deeply embedded in the economy. Although many may be happy about the progress the country has made since the regaining of independence, there are many cracks in the foundations. Right after the break down of the Soviet Union, national assets were privatized by businesses (in most cases backed-up by foreign capital), which usually used illegal practices and only later became legitimate. The country still has not imposed a significant property tax or progressive taxation, because the bargaining power of oligarchy has been strong and the level of corruption has decreased only marginally. Labour unions are just a nice expression, implying little (if not nothing) when it comes to wage setting. Hence, companies can cut wages rather freely. Finally, there are only a few politicians who understand economic market forces. Many of them have lived their lives under planned economy and have little idea how the economy should be run under free market rules.

In 2009, Latvia ranked as the 29 out of 183 countries according to the ease of doing business criteria (‘‘Doing business’’, The World Bank, 2010), which was three positions lower as compared to 2008. The ranking indicates that the business environment in general is favourable and above the world average. Yet, Latvia still needs to address several issues if it wants to join the ranks of the rich. In particular, according to World Bank (2010), legislation relating to investor protection, construction permits and employment procedures seems to be of particular concern.

The Enterprise Perception Survey 2009 has pointed out that the top constraints to investments in Latvia are tax rates, political instability, tax administration, access to finance, informal sector and inadequately educated workforce (‘‘Business environment’’, The World Bank, 2011).

In addition, in 2009 Latvia ranked 45 out of 179 countries according to the economic freedom index acknowledging the country’s openness to foreign trade and the efficiency of entrepreneurship regulations. Latvia is still perceived as a rather corrupt country. In 2009, it placed the 69 position out of 203 in the world’s Control of Corruption Indicator of the World Bank Group. In addition, the country’s judicial system is relatively inefficient and subject to long delays, and enforcement of intellectual property protection laws is weak. These factors pose challenges to Latvia’s economic freedom and long run competitiveness (‘‘Latvia’’, Heritage, 2011).

Adapted: Vala, M; Drasutyte, K; Mazulyte, E and Daunys, L (2012), Short Run Stabilization and Long Run Competitiveness: Latvian Case, Emerald Emerging Market Case Studies

QUESTION ONE **(25 Marks)**

One of the main macroeconomic objectives of any country is economic growth as measured by the gross domestic product (GDP) per capita from one year to the other. However, the fast growth rate of the Latvian economy created significant macroeconomic imbalances.

1.1 Discuss the costs and benefits for Latvia following the transitioning from a planned to a market economy. **(10 Marks)**

1.2 Critically evaluate the economic imbalances that Latvia's economy experienced and recommend the policy options that could have been adopted in order to manage each of them. **(15 Marks)**

QUESTION TWO **(25 Marks)**

Assume you have been appointed as the Prime Minister of Latvia and you understand that there is much to handle to stabilize the economy and restore competitiveness, both of which deteriorated significantly over the last decade. Unfortunately, you have no time to evaluate future prospects of the country – after the weekly board meeting you have received a formal request from your advisors that Latvia should carry out currency devaluation or an internal devaluation.

2.1 Critically evaluate the type of devaluation Latvia should carry out and why and recommend the policy options that could be adopted in order to ensure a successful development path for Latvia in the long run. **(10 Marks)**

2.2 Evaluate the critical constraints to investments in Latvia and highlight how they challenge Latvia's economic freedom and long run competitiveness. **(15 Marks)**

END