

2023 SUBJECT WORKBOOK

Grade 11



A joint initiative between the Western Cape Education Department and Stellenbosch University.



BROADCAST SESSIONS

GRADE 11

ECONOMICS

Session	Date	Time	Topic
English	13/02/2023	16h00-17h00	National Accounts
Afrikaans	14/02/2023	16h00-17h00	Nasionale Rekeninge
English	18/10/2023	16h00-17h00	Multiplier
Afrikaans	19/10/2023	16h00-17h00	Vermedigvuldiger



INTRODUCTION: NATIONAL ACCOUNTS

- National Accounts deal with the calculation (recording) of:
 - ➤ Production (includes sectors of the economy: Primary, Secondary and Tertiary),
 - ➤ Expenditure (by participants in the economy) and
 - ➤ Income generated (revenue earned by resources or factors of production) by the economy.
- They are an important means to measure economic growth.
- The most important of these Aggregates being the Gross Domestic Product.

INTRODUCTION

This workbook will focus on the National Account Aggregates and the Macroeconomic Multiplier.

The focus in Grade 11 will be more on concepts and general terminology within these topics.

You are therefore expected to know and understand:

- The concepts National compared to Domestic
- Production
- Income
- Injections
- Leakages
- 2 sector versus 3 and / or 4 – sector models economies
- Investment multiplier
- Formulae to calculate the multiplier
- The Keynesian Graph
- Autonomous expenditure

Topics	Description
National Income	The total value of all the incomes earned by the citizens of the country both inside and outside of the country
AND	
The Multiplier	The Spill-over effects of how the injected expenditure will 'snow-ball', leading to economic growth.



NATIONAL INCOME TERMINOLOGY

Term

Definition

Final goods

goods that are ready for consumption by the participants in the economy

Intermediate Goods

goods that are used as inputs to produce other goods and services

Double counting

occurs when intermediate products are added to final products and will cause national accounts to reflect an incorrect

Gross Domestic Product

total number of final products produced within the borders of the country

Gross National Income

total income earned by the citizens of a country both inside and out of the country

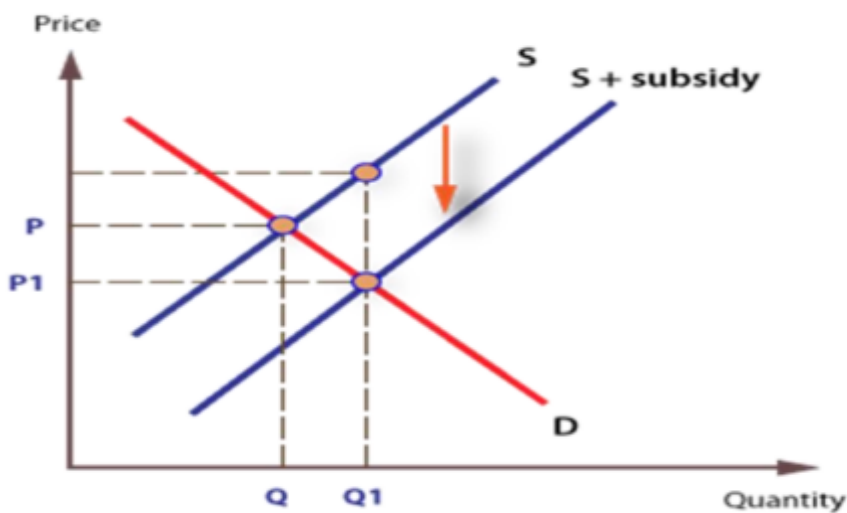
Residual item

balancing item due to errors and omissions



NATIONAL INCOME TERMINOLOGY

Term	Definition
Taxes on production	refers to taxes on production not linked to a specific product
Taxes on products	are payable per unit of some good and service e.g. VAT
Subsidies on production	are not linked to specific goods and services
Subsidies on products	financial incentives to help struggling industries produce





METHODS TO CALCULATE GDP

• PRODUCTION METHOD:

Also known as value added as the value of final goods and services is made up of the values added by each stage of production or economic sector.

Primary sector:

- deals with the extraction of raw materials

Secondary sector:

- transforms raw materials into final goods and services

Tertiary sector:

- distributes the final goods and services

INCOME METHOD:

This method looks at the contributions made by the various factors of production.

- Compensation paid to employees → Salaries & wages

✓ Key word: Compensation

- Net operating surplus → Net profit after tax

✓ Key word: Surplus

- Consumption of fixed capital → Depreciation

✓ Key words: Fixed Assets

EXPENDITURE METHOD:

This method looks at the amount spent by each of the participants within the circular flow.

- Consumer expenditure → C

- Government expenditure → G

- Investment expenditure → I

- Exports → X

- Imports → M (Z)

This is like the GDP formula taught in Grade 10.



CALCULATIONS

PRODUCTION METHOD CALCULATION

Primary sector

+ Secondary sector

+ Tertiary sector

= **GDP @ basic prices**

+ Tax on produces

- Subsidies on products

= **GDP @ market prices**

CONVERTING GDP TO GNP

GDP @ market prices

+ Primary income from the rest of the world

- Primary income to the rest of the world

- = **GNP @ market prices**

INCOME METHOD CALCULATION

Compensation paid to employees (salaries and wages)

+ Net surplus (net profit after tax)

+ Consumption of fixed capital (depreciation)

= **GDP @ factor cost**

+ Taxes on production

- Subsidies on production

= **GDP @ basic prices**

+ Taxes on products

- Subsidies on products

= **GDP @ market prices**

TAKE NOTE

IMPORTANT FACT TO CONSIDER

It is important to note that while the national income figures are not without problems. The figures are not always accurate.

For instance, the following are noted as problems in determining the calculation of national income figures:

- Double Counting
- Excluded products
- Accuracy
- Nominal vs Real national income, etc.



SESSION 1 | NATIONAL ACCOUNTS CONVERSION



WORKSHEET

NATIONAL INCOME

Complete the following activities after you have studied through your notes.

ACTIVITY ONE

1.1 Briefly explain the following concepts:

GDP @ basic price	(1)
GDP @ market price	(1)
GDP @ factor cost	(2)

1.2 What is the purpose of subsidies on products and subsidies on production? (2)

1.3 How do we convert GDP to GNP? (2)

1.4 List an example of a tax on product and a tax on production. (2)

ACTIVITY TWO

2.1 Study the information below and answer the questions that follow.

GDP according to economic activity:	R million
● Primary sector	246 380
● Secondary sector	317 965
● Tertiary sector	2 750 633
● Taxes on products	309 486
● Subsidies on products	17 558

2.1.1. Which method is used to calculate GDP? (1)

2.1.2. Calculate GDP at basic price.
Show all calculations. (3)

2.1.3. Convert GDP at basic price to GDP at market price. Show all calculations. (4)



RECAP OF TODAY'S CLASS

Summary 01

GDP is calculated according to three methods.

Summary 02

Production Method: sectors

Summary 03

Income Method: factors of production

Summary 04

Expenditure Method: spending





INTRODUCTION: MACROECONOMIC MULTIPLIER

- Also known as the Ripple or Snowball effect
- Derived from the Marginal Propensity to Consume
- More spending by one person results into an income by the other
- Two elements are important: Consumption and Savings

THE MULTIPLIER

DESCRIPTION:

- The multiplier shows how an increase in spending (injection) produces a more than proportional increase in national income.
- The multiplier effect indicates the overall change in income due to the expenditure (investment) that took place.
- It is calculated by multiplying the value of the multiplier by the total injection (investment).

Explanation:

- The initial spending becomes someone's income
- They spend some and save some
- The spent portion becomes someone else's income
- This someone spends some and saves some
- And so, it goes on ... This is known as the multiplier effect

For example, if you picked up a R100 and spend R75 and decide to save R25.

Then your marginal propensity to consume(mpc) = 0.75 and your marginal propensity to save (mps) = 0.25.

Therefore: $mpc + mps = 1$

There are only two things one can do with new income and that is spend or save it.

NOTE:

- Marginal = Additional
- Propensity = Likelihood



MACROECONOMIC MULTIPLIER TERMINOLOGY

TERM	DEFINITION/DESCRIPTION
Injections	Cash injected into the economy
Leakages	Money withdrawn from the economy
Equilibrium	equilibrium exists when Aggregate Demand (AD) is equal to Aggregate Supply (AS)
A two-sector model economy	consists of households and businesses only
Marginal Propensity to Consume	refers to that portion of disposable income that household spends instead of saving
Marginal Propensity to Save	refers to that portion of disposable income that households save instead of spend
Keynesian Line	Also known as the Line of Equilibrium or a 45-degree line or $E=Y$



WHAT YOU SHOULD KNOW

CONCEPTS TAUGHT WITH THE CIRCULAR FLOW:

INJECTIONS:

Money flowing into the economy $J = I + G + X$

LEAKAGES:

Money leaving the economy $L = S + T + M$

EQUILIBRIUM:

Where $J = L$

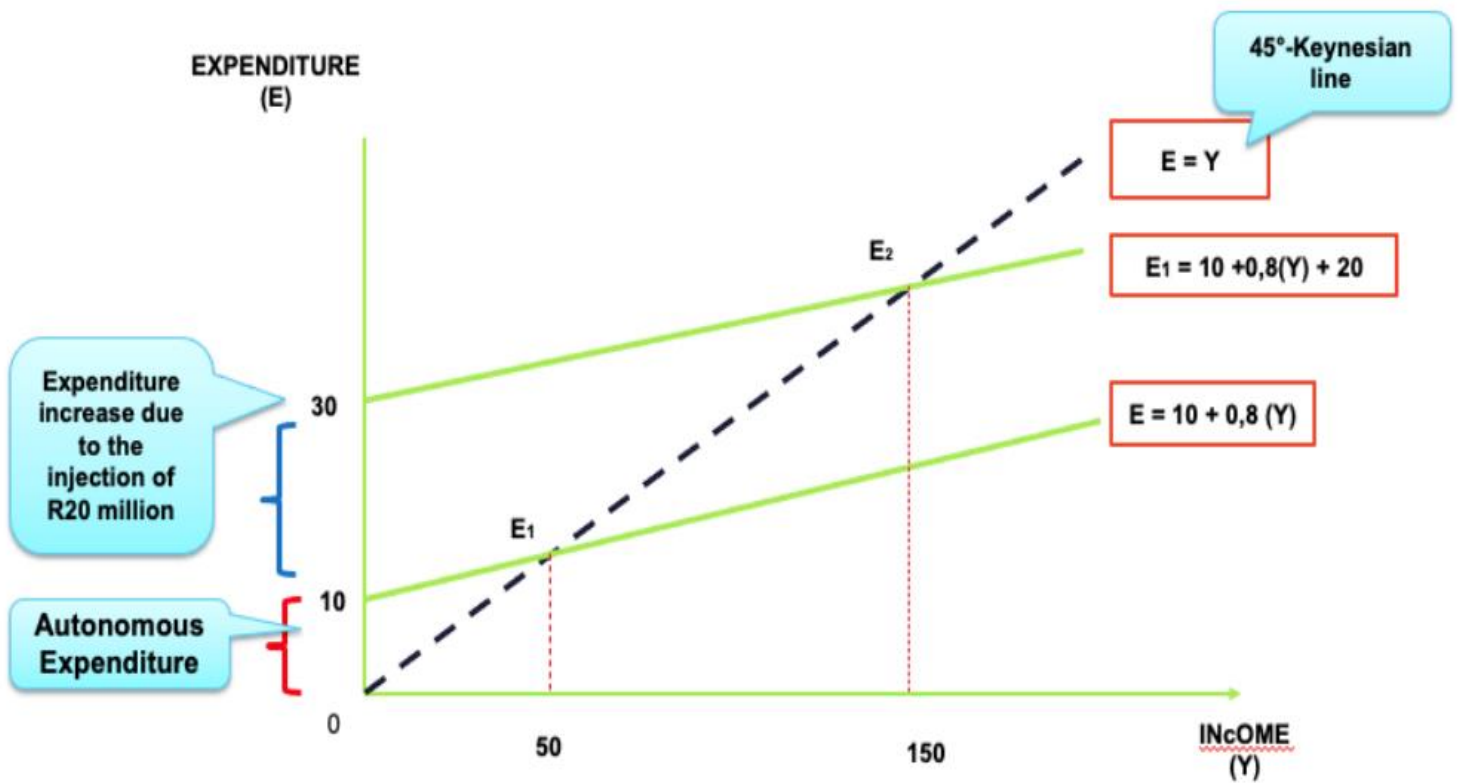
$$Y = C + I + G + (X - M)$$

- An increase in private consumer spending leads to an increase in economic activity.
- The government's main expenditure is on the salaries of civil servants and on goods and services.
- GDP is the market value of all final goods and services produced within national borders within a certain period (usually a year).
- The GDP can be calculated in three different ways.
- These ways include the following:
 - Income Method;
 - Production Method and the
 - Expenditure Method



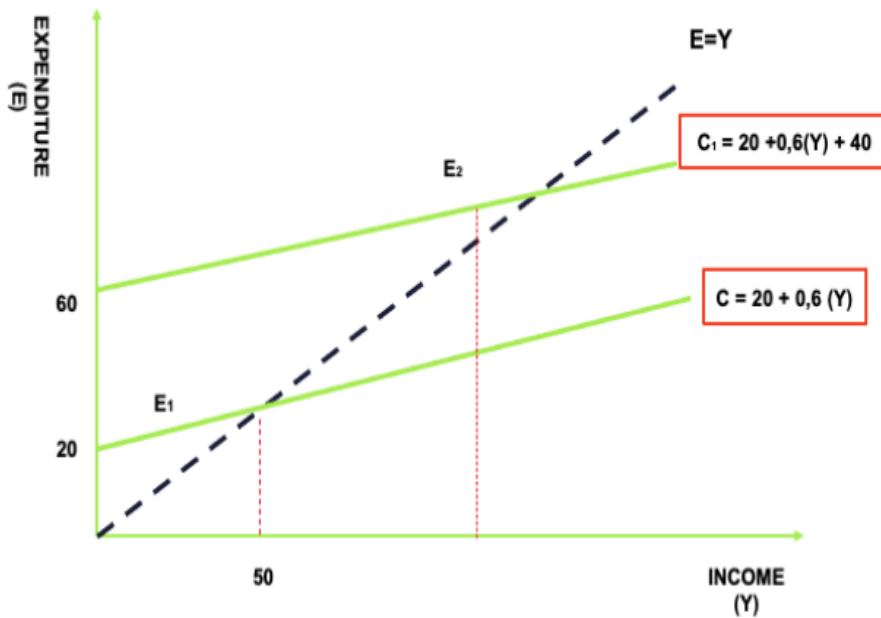
DRAWING THE GRAPH TO ILLUSTRATE THE MULTIPLIER PROCESS

The government investment of R20 million in the economy
 MPC=0.8





MACROECONOMIC MULTIPLIER



1. Name the value of autonomous consumption?
2. Identify the value of the mpc?
3. What is the value of total injections into the economy?
4. Calculate the value of the multiplier
5. Calculate the effect of the injections on the National income.

TRY AND LEARN

ACTIVITY

Study the graph and answer the questions that follow.



EQUILIBRIUM IN A TWO – SECTOR MODEL EKONOMIE

In a two-sector model, the following assumptions are made:

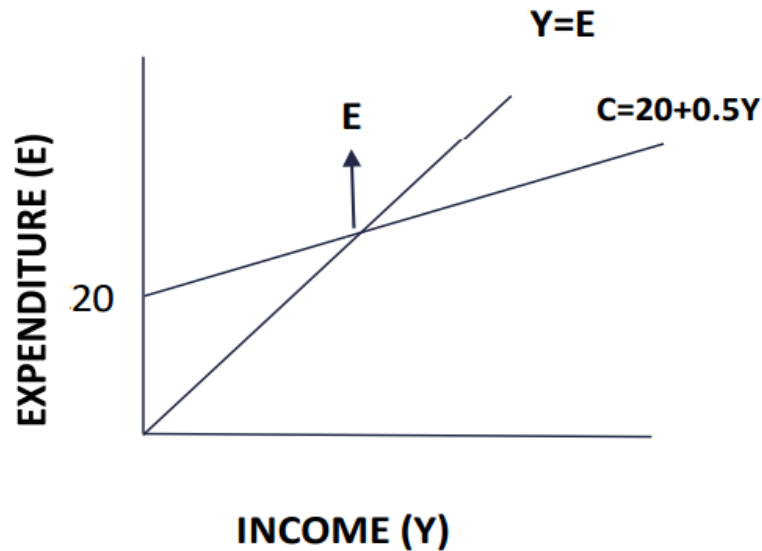
- No government present (No G)
- Households and businesses only (C + I)
- Closed economy
- No corporate savings

According to Keynes, equilibrium exists when Aggregate Demand (AD) is equal to Aggregate Supply (AS)

Keynes also assumes that all income is spent, and therefore income and expenditure are directly proportional



KEYNESIAN GRAPH EXPLAINED



- $Y = E$ is called the line of equilibrium
- E is known as the point of equilibrium
- $C = 20 + 0.5Y$ means the following:
- C is for consumption or total spending
- Therefore, it is the total spent by businesses and households.
- Businesses spent R20m
- Households spend 50% of their income
- Therefore, the $mpc = 0.5$



CALCULATING THE EQUILIBRIUM

FORMULA:

$$K = 1/1-MPC$$

$$1/0.5 = 2$$

$$2 \times 20 = 40$$

Therefore, the equilibrium point is at R40m.

ALTERNATIVE METHOD:

$$C = 20 + 0.5Y$$

C is:

- $Y = 20 + 0.5Y$
- $Y - 0.5Y = 20$
- $0.5Y = 20$
- $Y = 20/0.5$
 $= 40$



SUMMARY MACROECONOMIC MULTIPLIER

- ✓ Expenditure is never zero because there is always something we need to spend on.

- ✓ This is known as autonomous consumption / expenditure.

- ✓ This is spending that is not dependent on income.

- ✓ When calculating the multiplier, we look at the money that has been spent and not that which has been saved.
- ✓ The multiplier is derived from the marginal propensity to consume (mpc):
 - The size of the multiplier depends on the proportion of any increase in income that is spent.
 - The larger the mpc, the bigger the multiplier.
 - The smaller the mpc, the smaller the multiplier.
 - It is the money that stays in the economy.



SESSION 2 | MACROECONOMIC MULTIPLIER



WORKSHEET

MACROECONOMIC
MULTIPLIER

Complete the following activities after you have studied through your notes.

ACTIVITY ONE

Complete the following activities:

1. If $mpc = 0.1$ then mps
= _____

2. If $mps = 0.5$ then mpc
= _____

3. If $mpc = 0.3$ then mps
= _____

4. If $mps = 0.65$ then mpc
= _____

ACTIVITY TWO

CALCULATE THE VALUE OF THE MULTIPLIER:

2.1 $mpc = 0.9$

2.2 $mpc = 0.6$

2.3 $mps = 0.3$



RECAP OF THE TWO LESSONS

Summary 01

Real National Income is a measure of Economic Growth

Summary 02

To calculate the national income, we make use of 3 methods: Income, Production and Expenditure Methods

Summary 03

The Macroeconomic Multiplier is about Consumer Spending and how this injection generates more Income for the economy

Summary 04

A model developed by John Maynard Keynes, hence it is called a Keynesian Multiplier

