GRADE 12

ECONOMICS

UNIT MODULE 2

GOVERNMENT ECONOMIC POLICY STRATEGIES

ACKNOWLEDGEMENT

We acknowledge the contributions of all Secondary Teachers who in one way or another have helped to develop this Course.

Our profound gratitude goes to the former Principal of FODE, Mr. Demas Tongogo for leading FODE team towards this great achievement. Special thanks to the Staff of the English Department of FODE who played an active role in coordinating writing workshops, outsourcing lesson writing and editing processes, involving selected teachers of Central Province and NCD.

We also acknowledge the professional guidance provided by Curriculum and Development Assessment Division throughout the processes of writing, and the services given by member of the English Review and Academic Committees.

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DIANA TEIT AKIS

PRINCIPAL

Flexible Open and Distance Education
Papua New Guinea

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SECRETARY'S MESSAGE

Achieving a better future by individual students and their families, communities or the nation as a whole, depends on the kind of curriculum and the way it is delivered.

This course is a part of the new Flexible, Open and Distance Education curriculum. The learning outcomes are student-centred and allows for them to be demonstrated and assessed.

It maintains the rationale, goals, aims and principles of the national curriculum and identifies the knowledge, skills, attitudes and values that students should achieve.

This is a provision by Flexible, Open and Distance Education as an alternative pathway of formal education.

The course promotes Papua New Guinea values and beliefs which are found in our Constitution, Government Policies and Reports. It is developed in line with the National Education Plan (2005 -2014) and addresses an increase in the number of school leavers affected by the lack of access into secondary and higher educational institutions.

Flexible, Open and Distance Education curriculum is guided by the Department of Education's Mission which is fivefold:

- To facilitate and promote the integral development of every individual
- To develop and encourage an education system satisfies the requirements of Papua New Guinea and its people
- To establish, preserve and improve standards of education throughout Papua New Guinea
- To make the benefits of such education available as widely as possible to all of the people
- To make the education accessible to the poor and physically, mentally and socially handicapped as well as to those who are educationally disadvantaged.

The college is enhanced to provide alternative and comparable pathways for students and adults to complete their education through a one system, many pathways and same outcomes.

It is our vision that Papua New Guineans' harness all appropriate and affordable technologies to pursue this program.

I commend all those teachers, curriculum writers, university lecturers and many others who have contributed in developing this course.

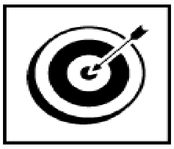
UKE KOMBRA, PhD

Secretary for Education

12.2.1: GOVERNMENT ECONOMIC POLICY STRATEGIES

UNIT INTRODUCTION

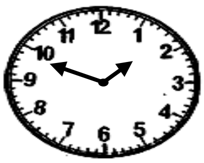
Government Economic Policy Strategies highlight the broader economic issues surrounding the concepts of economic growth and key economic policies, such as budgetary (fiscal) and monetary policy which the government uses to regulate the economy. Students focus on analysing the effects of government policies on the economy and identify possible solutions to tackle problems such as inflation, unemployment and unequal distribution of income associated with economic growth.



Broad Learning Outcomes

On successful completion of this module, students will be able to:

- explain the nature and operation of government macro-economic policy and evaluate its effectiveness in achieving the macro-economic objectives of Papua New Guinea
- identify the range of macro-economic issues currently impacting on the economy of Papua New Guinea and link appropriate macro-economic management strategies to those issues.



Time Frame

This unit should be completed within 10 weeks.

If you set an average of 3 hours per day, you should be able to complete the Unit comfortably by the end of the assigned week.

Try to do all the learning activities and compare your answers with the ones provided at the end of the Unit. If you do not get a particular exercise right in the first attempt, you should not get discouraged but instead, go back and attempt it again. If you still do not get it right after several attempts then you should seek help from your friend or even your tutor. Do not skip any question without solving it first.

12.2.1: MONEY AND BANKING

Specific Learning Outcomes

On successful completion of this topic, students will be able to:

- identify characteristics of modern money
- explain what money is
- identify and explain functions of modern money
- describe the composition of the money supply in PNG and identify and explain factors that affect the money supply
- explain Quantity Theory of Money
- use the credit creation process to illustrate how banks create money out of initial deposit
- explain the functions of Central Bank (Bank of Papua New Guinea) and differentiate with commercial banks' functions

Most nations have their own system of money and print their own currency. Made of paper, these pieces of currency have very little intrinsic value. As fiat money, however, the paper notes represent a specific monetary value decreed by the government and accepted by the people.

What is Money?

Money is anything which is generally accepted as payments in exchange of goods and services and settling debts. In other words, money is a **legal tender** which means it must be accepted if offered as payments for goods and services. Money comes in the form of notes and coins. Below are pictures of PNG money.

K2 Note

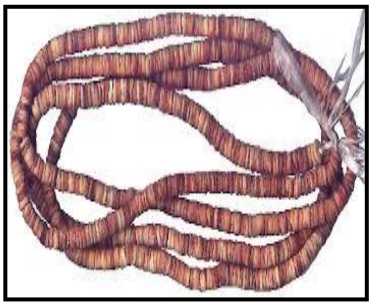
K10 Note

50 toea coin

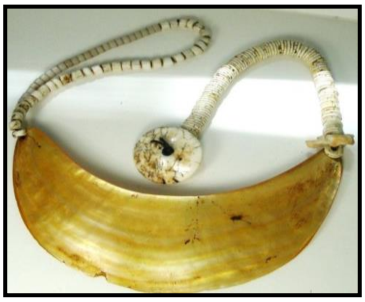
Traditional money and barter in traditional economy

In traditional (subsistence) economy there were exchanges of goods and services to satisfy peoples' needs and wants. The concept of money is not new, it has existed in the traditional economy but traditional money was used in some areas in the country. For instance, the Tolai people were using Kina shells (Tabu) and it is still accepted as a form of payment today. Pig tasks were used up in the highlands however, most of the exchanges were in terms of barter system that is exchanging (swapping) goods for goods. Below are some examples of traditional money used in the past.

Pig's teeth



Shell money (tabu)



Kina shell

The system of barter, however, had some problems. Barter depends on 'double coincidence of wants'. For example, a fisherman who wishes to exchange fish for banana must first find a person who wishes to exchange. But if the fisherman is not able to find a person who wants his fish, then, he is not able to satisfy his needs and wants. This is one of the problems in the traditional economy. There were also other problems of barter such as goods were not easily divisible (cannot be broken into smaller units), portable (not easy to carry) or durable (not long lasting).

12.2.1.1: Characteristics and Functions of Money

The important features or characteristics of money are listed below. They are:

1. **Scarcity** - money is scarce or in limited supply.
2. **Easily recognisable** - it can be easily identified.
3. **Portable** - easy (convenient) to carry around.
4. **Divisible** - it can be easily broken down into smaller units.
5. **Acceptability** - it must be generally acceptable in payments for goods and services.
6. **Uniformity** (homogeneity) - standard units are easily identified, for instance, 10 toea coin can be easily identified from a 20 toea coin.
7. **Durable** –long lasting/ used over a longer period of time.

Functions of Money

1. The four (4) main functions of money are:
2. **Medium of Exchange** - it is offered as payment for goods and services.
3. **Measure of Value** - it is used to measure the value of things in a standard way.
4. **Store of Value** - it means keeping away wealth for later use.
5. **Standard of deferred payment** - it necessitates payments (contracts and loan repayments,) to be made at a later date.

Problems in traditional economy

The use of money helps to overcome the following problems in subsistence economy related to barter system.

1. Double coincidence of wants
2. Limited specialisation
3. Low productivity
4. Problem of divisibility
5. Problem of portability
6. Problem of storage
7. Problem in agreement on the value of goods

Modern money and trade in the modern economy

In modern economy money (currencies) were introduced to necessitate the increasing trade within and between countries. For example, the currency for PNG is Kina, Australia is Dollar, India is Rupees, Japan is Yen and Europe is Euro Dollar. Countries trade based on the exchange rates depending on the individual country's method of exchange rate. For instance, PNG is using a managed float exchanged rate method (refer to exchange rate for further explanation).

Types of Money

1. **Metal Coins** – are generally used for smaller units of currency. For example, K1, 50t, 20t, penny and cents.
2. **Notes** - are larger denominations of currency, for example, K2, K5, K10, K20, K50 and K100.
3. **Commodity Money** – has a commodity value that is used as money, for example, gold and silver.
4. **Token Money** – refers to coins without commodity value. For instance, money exchanged for token money to play video games.
5. **Currency** – refers to notes and coins, for example, Kina and toea.
6. **Bank Deposits** – are cheque (current or demand) deposits, savings deposits, and term (time) deposits in fixed accounts. The cheque itself is not money (not a legal tender) but it is a sign of availability of money.

12.2.1.2: Money Supply and Factors Affecting the Size of the Money Supply

Other countries have their own way of measuring money supply. PNG measures its money supply in three (3) main ways:

1. **Narrow money supply** (M1*)

Currency in circulation- It includes cash (notes/coins) and cheque (current/demand) deposits that are very liquid (very easy to convert into cash).

2. **Broad money supply** (M3*)

Quasi money- It includes M1* and savings and term (time) deposits that are fairly liquid, (but not as liquid as cheque deposits), plus foreign currency deposits

3. **Total money supply** (M3)

It includes M3* and the bank deposits of the stabilisation funds. (This tends to change in response to export earnings).

Asterisk (*) denotes (shows) that M1* and M3* do not include the bank deposits of the stabilization funds. The commodity stabilization fund deposits constantly change overtime in response to changes in export earnings. M3* is a fairly stable short term measure of money supply and for this reason it is regarded as the best measure of the money supply in PNG.

Factors affecting the size of the money supply

The size of the money supply is influenced by factors which can either expand or contract the economy. If the money supply grows too fast this can lead to excess demand for goods and services and may result in high inflation rate. On the other hand, it is possible that economic growth and standard of living could fall if the money supply was restricted.

The four (4) main factors which can affect the money supply or the size of the economy are;

1. Balance of Payments
2. The Government Budget (expenditure)
3. Open market operation (OMO) by the Central Bank
4. Lending by Commercial Banks

Stabilization funds:
Bodies that seek to "iron out" changes in producers incomes over time by collecting a levy from producers during times when commodity prices are above average, and pay this money back as a bounty during times when prices are below average.
Stabilization funds operate for copra, cocoa, coffee and oil palm.

Balance of Payments

It is a record of all money coming in (cash inflow) and leaving (cash outflow) of a country in a year.

The effects of export and import on the money supply;

- *Exports* – the sale of exports is an important source of income to Papua New Guinea producers. Much of this income is deposited in the bank accounts within Papua New Guinea. Money supply in the country increases.
- *Imports* – payments for imports result in money leaving Papua New Guinea. Money is paid to overseas countries so money supply decreases.
- *Foreign Investment* – foreigners doing business in Papua New Guinea increases M3 while residents (Papua New Guineans) investing overseas reduces money M3.
- *Capital inflow* (aid received/borrowing) from other countries increases the money supply while Capital outflow (aid given/loan repayment) reduces money supply.

Money enters and leaves a country in ways such as foreign investment, aids, loans and movements from business activities.

The Government Budget (expenditure)

Changes in government taxation, spending and borrowing policies affect the money supply.

- Increase government expenditure (G) leads to rise in money supply (M3) and decrease in government spending leads to reduction in M3.
- Increasing/imposing tax reduces M3 and decreasing/abolishing tax leads to rise in M3.
- Borrowing increases M3 and repaying loan decreases M3.*(refer to Fiscal Policy.pp 38)*

Open Market Operation (OMO) by the Central Bank

It is buying and selling of government securities (GS) by the Central Bank (Bank of PNG-BPNG).

- Selling government securities to the public (individuals and firms) reduces M3.
- Buying back government securities from the public increases M3.

Government securities are a piece of official document issued to investors in return for money borrowed. Government securities is a monetary tool the government utilise (use) to borrow fund from the domestic market whenever it is in need of additional funds. It is a form of investment for those who lend money to the government by buying the government securities because they will get it back with interest when the government buys back the government securities. . *(refer to monetary Policy.pp26)*

Lending by Commercial Banks

- Increased lending leads to rise in M3.
- Decreased lending results in fall in M3.

12.2.1.3: Quantity Theory of Money

Quantity Theory of Money states that the government can control inflation by the amount of money they spend in the economy. The **Quantity Theory of Money** also states that the value of money is determined by the relationship between its demand and supply.

A group of economists known as **Monetarists** led by Milton Friedman argued that there should be less government intervention in the economy and let the market forces of demand for and supply of money to determine the money supply and the value of money. However, the opposing group of economists known as **Keynesians** argued that there should be much government involvement in regulating the economy.

Let us assume that, **M** represents the amount of money we have in the economy.

M = quantity of money in the economy (Money supply)

The amount of money can be used many times – velocity of circulation (**V**). This means each year the unit of money may be used many times. For example, if the total value of transactions = K5 million and M = K1 million, V = 5 (i.e. each unit of money changed hands 5 times during the year, each K1 has bought goods and services worth K5 during the year). So we have **M x V** must equal to the total amount of money spent during the year.

Now, we have **P** = the average price level, **T** = the total amount of goods and services produced during the year. Then **P x T** must equal the total amount of goods and services bought or sold during the year.

So **M x V = P x T**, thus, **MV = PT**

Then if **V** is constant, an increase in **M** will lead to an increase in **P** or **T** or both.

If all resources are already fully employed it is not possible to increase **T**, so that an increase in **M** will lead to an increase in **P**.

Monetarists like Milton Friedman believe that the major cause of inflation in many countries is due to too much government involvement in the economy. They argue that less government involvement will be necessary in those economies if they are able to reduce inflation.

12.2.1.4: Banking and Credit Creation

A **liquid asset** is something that can be quickly changed into cash. Commercial banks are required by the bank of Papua New Guinea to keep a certain proportion of their assets as liquid assets. This is sometimes known as the **LGS ratio** (liquid assets and government securities ratio) or **liquid asset ratio.**

Much of the money that banks accept as customer deposits is lent to other people. After the borrowed money has been spent, most of the money returns to the bank in the form of increased deposits, therefore further increasing the banks' ability to lend. This process of making more money available for spending through loans is known as **credit creation**.

Assets are things of value **owned** by an individual or an organisation.
Liability is something **owed** to an individual or an organisation.

Major Liabilities of Commercial Banks

The major liabilities of commercial banks are customers' deposits. It is a liability of commercial banks because it is a sum of money the commercial banks owe to the person depositing it. This money belongs to the customers who deposit so whatever they demand, it shall be paid to them.

Major Assets of Commercial Banks

These include loans and advances to customers, reserve assets, landing, buildings and office equipment.

Reserve Assets

Reserve assets consist of liquid assets and government securities (LGS) and Statutory Reserve Deposits (SRD). In PNG SRD is known as Special Deposit. Reserve assets refer to any assets that banks are required to keep against their deposit liabilities.

Liquidity

It is a measure of how quickly an asset could be changed into cash. The most liquid asset is cash.

Liquid Assets of Commercial Banks

These include cash in hand or in branches, money deposited with the central bank in the exchange settlement account and a variety of government securities.

Liquid Assets Ratio

Liquid assets and government securities ratio is the ratio of LGS to the total deposits of trading banks (or commercial banks).

Reserve Asset Ratio

It is the ratio of LGS and SRD to total deposits.
The need for (reason to keep) liquid assets:

i. In order to meet customers demand for withdrawals.
ii. As an instrument of monetary policy to control money supply.

Credit Creation

Credit creation is a process by which an initial increase in the value of bank deposits may lead to an even larger increase (or multiplied effect) in the money supply.

Credit

Credit is money which is made available for spending through loans.

The Multiplier

A multiplier effect is the process by which an initial change in something will later lead to an even larger (multiplier) change in others. One example of a multiplier effect is in relation to credit creation. That is, an initial increase in bank deposit will lead to a much greater increase in the total money supply.

Bank Credit Multiplier

It is the reciprocal of the LGS ratio, for example, LGS ratio is 10%, the credit multiplier is 100 divided by 10 equals to 10, (100 ÷ 10 = 10).

Formula for calculating the multiplier effect is:

The Multiplier Effect = New Deposit x Credit Multiplier

Balance Sheet

A balance sheet is drawn to show the financial position of a business. A balance sheet has two parts; assets and liabilities. The asset side is listed all assets of the bank. On liability side is listed all liabilities of the bank. **Total liabilities and assets must always be equal.**

Formula for calculating the **additional credit created** is:

Additional credit created $(Acc) = D \times \frac{A}{L}$

Where, **D = new deposits (percentage)**
A = the proportion of the total deposit that must be lent (percentage)
L = the proportion that must be retained as LGS assets

Let us now proceed to look at an example of credit creation.

We assume that the banking system is in equilibrium with the initial deposit of K200m. The LGS ratio is 20%.

i. Prepare an **initial** balance sheet.

Liabilities		Assets		
Deposits	*K200m*	*Liquid Assets* *Loans and Advances*	*K40m* *K160m*	*(20% x K200m)* *(80% x K200m)* *(100-20=80)*
Total	*K200m*	*Total*	*K200m*	

ii. With a **new** deposit of K20m, calculate the additional credit created (ACC).

$$
\begin{aligned}
Acc &= D \times \frac{A}{L} \\
&= 20m \times \frac{80/100}{20/100} \\
&= 20m \times \frac{80}{100} \times \frac{100}{20} \\
&= K80m
\end{aligned}
$$

Note: A fraction divided by a fraction, always multiply by its reciprocal.

iii. Draw a **final** balance sheet showing additional credit created (ACC).

Liabilities		Assets		
Deposits: K200m + K20m + K80m =	*K300m*	*Liquid Assets:* *Loans and Advances :K160m + K80m =*	*K40 + K20m =*	*K60m* *K240m*
Total	*K300m*	*Total*		*K300m*

iv. What is the **Bank Credit Multiplier**

$$\textit{Credit multiplier} = \frac{100 \leftarrow \textit{Always}}{20 \leftarrow \textit{LGS Ratio}} = 5$$

v. Calculate the **Multiplier Effect**

Multiplier effect = new deposit x credit multiplier = K20m x 5 = K100m.

vi. Draw a **final** balance sheet showing the multiplier effect.

Liabilities	Assets
Deposits K200m + K100m = K300m	*Liquid Assets K60m (20% x K300m)* *Loans and Advances K240m (80% x K300m)*
Total K300m	*Total K300m*

12.2.1.4: Bank of Papua New Guinea

The Bank of Papua New Guinea (BPNG) is also called the **Central Bank**. The BPNG aims to ensure that the nation's monetary policies are carried out in the most efficient way and to promote monetary stability and a sound and efficient financial structure.

The functions of the Central Bank (BPNG)

1. Issue of currency – issues foreign currencies to commercial banks.
2. Banker to the government – providing banking facility to the government e.g. Open market operation (OMO), monetary policies.
3. Banker to the commercial banks – for example, Central Bank keeps Special Deposits (or SRD) from commercial banks in the Exchange Settlement Account.
4. Management of international (foreign) reserves – keeps account of foreign reserves.
5. Control over foreign capital inflow and outflow – keep records to prepare balance of payment.
6. Provide forward exchange facilities to importers and exporters – determine standard exchange rates for importers and exporter to use for currency conversion.
7. Management of exchange rate – monitor changes in exchange rate.
8. Supervision of the financial system – regulate the financial system via setting financial regulatory policies.
9. Registration of savings and Loans Societies – approving establishments of savings and loans societies.
10. Economic reporting – publishing progressive economic reports on quarterly basis within the year.
11. Implementation of monetary policies via control over commercial banks:

a) LGS ratio

b) Lending policy

c) Interest rate policy

The functions of the Commercial Banks

1. Accepting deposits – allow customers to save (deposit) their money.
2. Honouring cheques and effecting payments by other means – accepting and exchanging cheques into cash.
3. Making loans available – give loans and advances (bank overdraft) to those who need additional finance.
4. Exchange of foreign currency to and from customers – exchange PNG currency into foreign currency or vice versa.
5. Giving advice, providing safe custody for valuables, acting as executors and trustees – provide additional financial advice to customers, safe keeping of money as deposits on the basis of trust.

YOU HAVE COME TO THE END OF TOPIC 1. YOU MAY NOW READ THE SUMMARY ON THE NEXT PAGE.

Summary 12.2.1

- Money is anything which is generally accepted for exchanging goods and services and settling debts.
- Characteristics of money: Scarcity, easily recognisable, portable, divisible acceptable, durable and uniformity.
- The four functions of money are: medium of exchange, measure of value, standard of deferred payments and store of value.
- Money supply is the total amount of money circulating in the economy.
- The three ways used to measure money supply in PNG are Narrow money, Broad money and Total money supply.
- Factors affecting the size of the money supply are; balance of payment, the government budget, open market operation, lending by commercial banks.
- The Quantity Theory of Money explains the relationship between money supply and price level.
- Formula for calculating the multiplier effect is; The **Multiplier Effect = New Deposit x Credit Multiplier**
- Credit creation is a process of providing multiple amounts of credits using the customers' deposits received by the banking system.
- Credit multiplier shows number of times, total deposits can be turned into credits.
- **The functions of the Central Bank (BPNG) are**; Issue of currency, Banker to the government, Banker to the commercial banks, Management of international (foreign) reserves, Control over foreign capital inflow and outflow, Provide forward exchange facilities to importers and exporters, Management of exchange rate, Supervision of the financial system, Registration of savings and Loans Societies, Economic reporting and Implementation of monetary policies via control over commercial banks.
- **The functions of the Commercial Banks are**; Accepting deposits, Honouring cheques and effecting payments by other means, Making loans available, Exchange of foreign currency to and from customers, Exchange of foreign currency to and from customers and Giving advice, providing safe custody for valuables, acting as executors and trustees.

NOW DO STUDENT LEARNING ACTIVITY 12.2.1 ON THE NEXT PAGE.

Student Learning Activity 12.2.1

1. List two problems faced in the traditional subsistence economy that are results of no modern money being used.

   a. ____

   b. ____

2. Explain the problem of ‘double coincidence of wants’.

   ____

   ____

   ____

3. How does modern money assist business activities and satisfy needs and wants of people?

   ____

   ____

   ____

4. State for each of the following whether they should be regarded as (i) money or (ii) near money:

   a. A current account held at ANZ bank.________________________

   b. Term deposit (e.g. IBD) held with BSP. ______________________

   c. Shares held in Niugini mining. _____________________________

   d. Deposits held in a savings account. _________________________

   e. Government securities. __________________________________

   f. Bank notes ____

5. State whether (a) to (f) below perform the functions of being:
   i. Medium of exchange
   ii. A store of value
   iii. A unit of account

a) A K100 note ____

b) Shares in Oil Search Company ____

c) An unused, valid, airline ticket from Madang to Port Moresby _______________________

d) A K1 coin ____

e) Pay for cigarettes ____

f) Deposits held in a commercial bank ____

6. What are the items included in the money supply in PNG?

____

____

____

____

7. Distinguish between savings account and demand deposits.

____

____

____

8. Which is the best measure of money supply in PNG?

____

____

____

9. Describe how lending by commercial banks affect the money supply?

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____

____

10. What is 'Government Securities'? Explain how buying and selling of it impacts on the money supply?

____

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____

____

11. Assume that the amount of money in the economy is K5 million and the velocity of circulation is 10.

a. Calculate the total amount of money spent during the year. (*Show working out*)

b. How many times K1 changed hands?

____

c. Given that the velocity of circulation is constant, what effect will increase in money supply have on:

i. Price level?

____

____

ii. The total amount of goods and services bought or sold during the year?

____

____

12. What are the opposing views of Monetarists and Keynesians group of economists?

____

____

____

____

13. A banking system is in equilibrium with an initial deposit of K500m, liquid assets of K100m and loans and advances of K400m

a. Draw an initial balance sheet to represent the above information.

b. Calculate the liquid asset ratio (LGS) using the data provided in the above balance sheet.

c. Calculate the bank credit multiplier.

d. Assume that the liquid asset ratio (LGS ratio) does not change. Calculate the additional credit created (ACC) with new deposit of K50m.

e. Draw a final balance sheet showing additional credit created (ACC).

f. Calculate the multiplier effect.

g. Draw a final balance sheet showing the multiplier effect.

14. Distinguish between BPNG and Commercial banks in terms of their ownership and functions.

____

____

____

15. Is Micro-bank a commercial bank? Why?

____

____

16. Give some examples of commercial banks in Papua New Guinea.

____

____

NOW CHECK YOUR ANSWERS AT THE END OF THE UNIT

12.2.2: MONETARY POLICY

In this unit we will discuss the monetary policy carried out by the government through the Bank of Papua New Guinea. We will look at how the Bank of Papua New Guinea controls the amount of money in the economy and the way in which money is used.

Monetary policies are set by the Central Bank (BPNG) on behalf of the Government. The aim of the monetary policy is to control:

i. the amount of money in the economy (money supply), and
ii. the way in which that money is used

Instruments (tools/weapons) of Monetary Policy

These are factors or policies used to achieve the aims of the monetary policy.

1. Interest Rate Policy
2. Liquid Asset Ratio (LGS)
3. Special Deposit (S.R.D.)
4. Open Market Operation (OMO)
5. Control over Lending
6. Moral Suasion

Specific Learning Outcomes

By the end of this topic students can be able to:

- define monetary policy.
- identify the instruments or tools of monetary policy.
- explain how each instrument can be used to contract or expand the economy.
- describe the aims of monetary policy and state its overall effects on the economy.
- describe problems encountered in implementing monetary policies in developing countries.
- distinguish types of monetary policies and their effect on the economy.
- how monetary policy instruments are used to control the money supply.

12.2.2.1: Interest Rates Policy

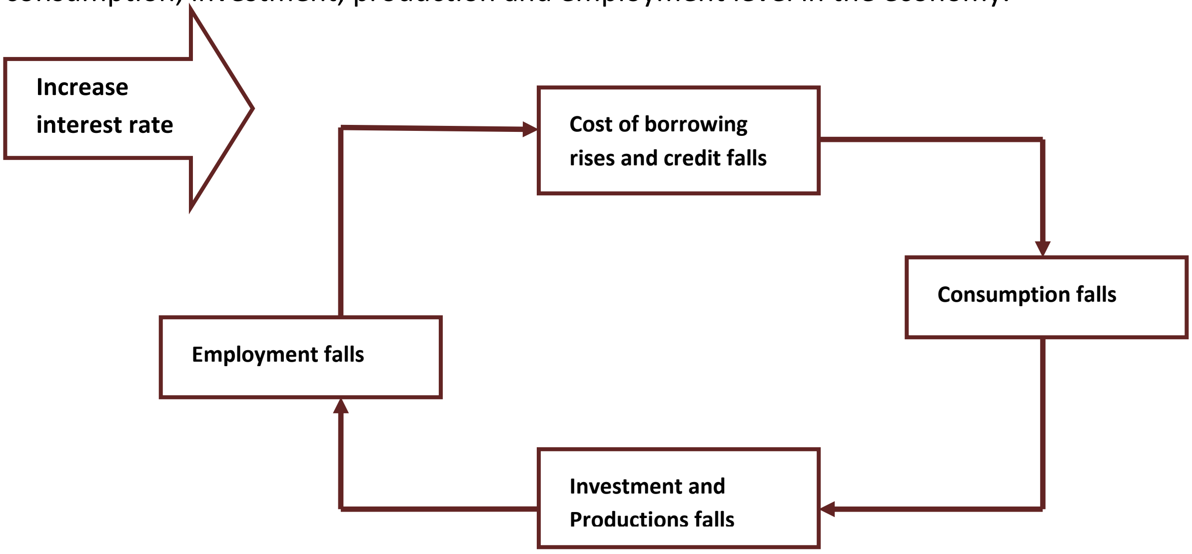
Interest is the payment for the use of money borrowed, payment received for money lent. Interest rates are determined by the supply and demand for loanable/lending funds.

Interest rate is the percentage (%) of interest charged on the amount borrowed (loans). In other words, it is the cost of borrowing. For example, when you borrow from a commercial bank, you pay an extra amount on top of what you borrow.
The Central Bank simply increases or decreases the interest rate charged by commercial banks on lending to influence money supply in the economy.

Interest rate has an inverse or indirect relationship with lending (borrowing).

- Higher interest rate discourages borrowing which leads to reduction in consumption, increased savings and reduced investment. This results in a decrease in the money supply and thus contracts the economy.
- Lower interest rate encourages borrowing which leads to increased consumption and investment. This results in an increase in the money supply thus expending the economy.

The flowchart below shows the effect of higher interest rates on borrowing, lending, consumption, investment, production and employment level in the economy.



***Source**: UPNG Open College. (2011). Introduction to economics, Course No. 6. 00301.*

The flowchart above shows that increased interest rate results in rising cost of borrowing and thus lending (credit) falls. Consequently, less money or financial shortage results in falling consumption (aggregate demand), investment, production and ultimately employment falls.

12.2.2.2: Liquid Assets Ratio

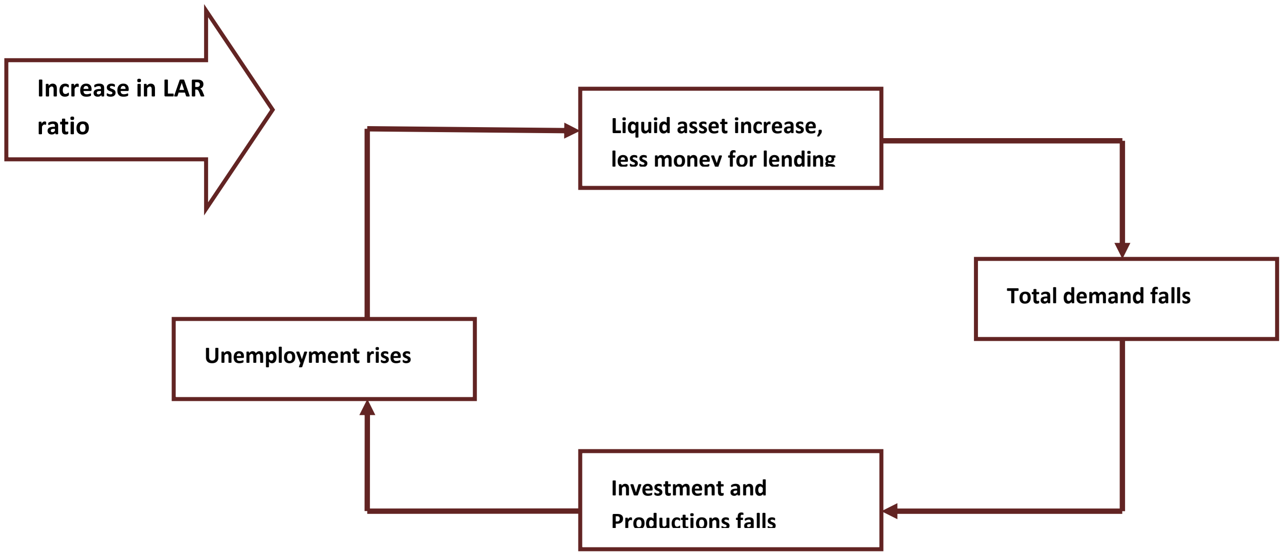
It is the proportion of the total bank deposits put aside for meeting customer's demand for withdrawal. (The rest of the total deposits are for loans and advances).

For example the total bank deposit is K100m, 40% of the 100m is kept in the bank.

Increase in LGS ratio reduces the ability of the banks to create credit (loans and advances) and deflates (contracts) the economy. For instance, if 40% has now increased to 50%.

Decrease in LGS ratio increases the ability of the banks to create credit (loans and advances) and expand the economy. For instance, 40% has decreased to 30%.

The flowchart below shows the effect of increase in LGS (liquid asset and government securities) ratio on liquid asset, loans and advances, aggregate (total) demand, investment, production and unemployment.



***Source**: UPNG Open College. (2011). Introduction to economics. Course No. 6. 00301.*

The flowchart above shows that increase in LGS ratio increases liquid asset portion of the commercial banks and lessen money available for loans and advances. Decreased lending results in fall in demand, investment and production and so increases unemployment.

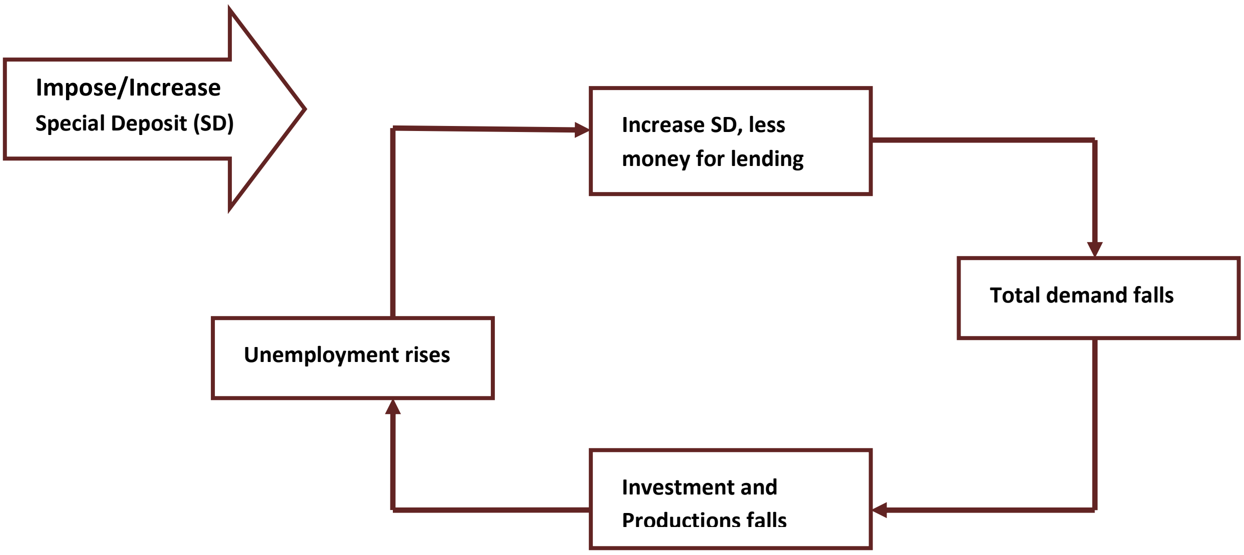
12.2.2.3: Special Deposits and Moral Suasion

Commercial banks are required to hold a certain percentage of their deposits as 'special deposits' with the Central Bank. This Special Deposit is not available for lending. Special Deposits are also called Statutory Reserve Deposits (SRD) in other countries.

Imposing or increasing special deposit can decrease lending and be used as part of a policy to deflate (contract) the economy.

Abolish or decreasing special deposit can increase the ability of commercial banks to increase lending and stimulate (expand) the economy. This policy is not widely used in PNG.

The flowchart shows the effect of imposing or increasing special deposit on lending, aggregate demand, investment, production and unemployment level.



Source: *UPNG Open College. (2011). Introduction to economics. Course No. 6. 00301.*

The flowchart above shows that when central bank increases or imposes special deposit on commercial banks it reduces money available for lending. This results in fall in consumption, investment, production and ultimately unemployment rises due to less working opportunities or workers laid off because of decrease in production level.

Moral Suasion

This refers to the mutual co-operation between the Central Bank and commercial banks in implementing the monetary policies set by the Central Bank. For instances, Central Bank may persuade the commercial banks to reduce interest rates to increase lending in order to stimulate the economy and the commercial banks cooperating in implementing the policy.

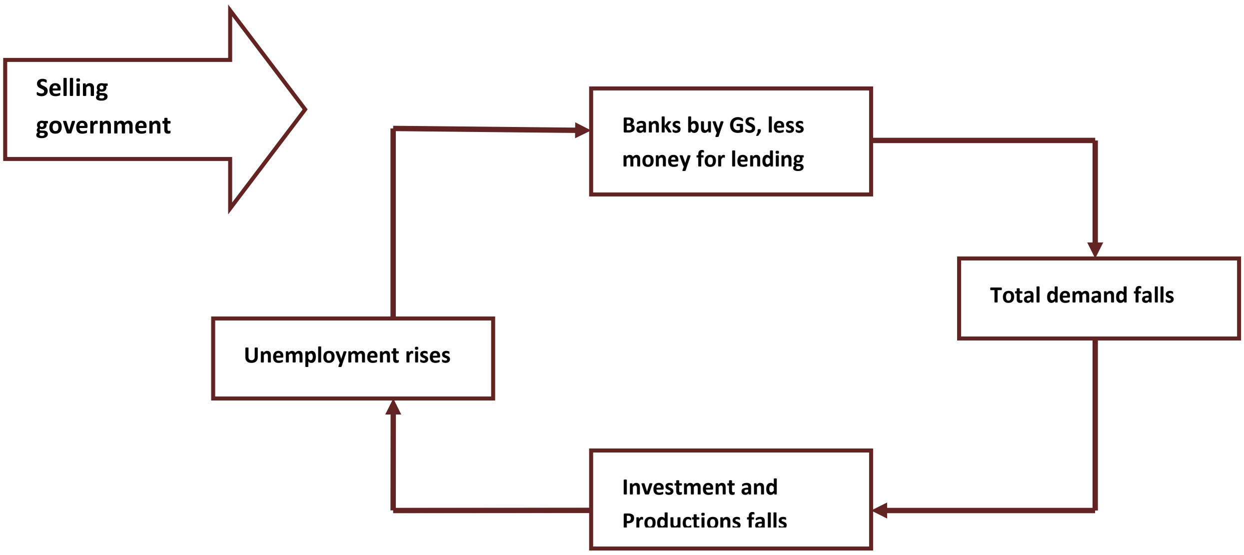
12.2.2.4: Open Market Operation (OMO)

This refers to buying and selling of government securities (treasury bills/bonds and government inscribed stocks) as an instrument of monetary policy.

Government securities are simply a piece of an official document (paper) sold by the government. The government agrees to buy back the government securities on a certain date and pays an agreed rate of interest. In PNG, most government securities are bought by the banks, and become part of their liquid assets (therefore, their liquid asset ratio includes liquid assets and government securities).

Selling government securities reduces money supply and contracts the economy and vice versa, buying back government securities increases money supply and expands the economy.

The flowchart below shows the effect of selling government securities on lending, consumption, investment, production and unemployment level.



***Source**: UPNG Open College. (2011). Introduction to economics. Course No. 6. 00301.*

The flowchart above shows that when the central bank (BPNG) on behalf of the government sells government securities, the commercial banks buy most of it. The commercial banks use the money supposed to be for lending to borrowers to purchase government securities and so reduces their lending. Reduced lending results in individuals and firms having less money or facing financial problem so results in decreased demand, investment, production and ultimately laying off employees resulting in increased unemployment.

12.2.2.5: Monetary Policy in Developing Countries

Developing countries are yet to reach the stage of industrialisation. Therefore, implementation of monetary policies is not very effective in developing countries. They lack of expertise, do not have advanced technology and system in place for quick, accurate data collection and analysis, existence of informal sector which is large economic activities not accounted for. Hence, implementation of monetary policies in developing countries such as PNG experiences drawbacks (problems): such as;

- Central Bank (BPNG) does not have full control over lending by non-bank financial institutions, like savings and loan societies.
- The use of interest rate is not very effective in developing countries.
- Problems with the time lag, for example, time lag before authorities have sufficient data to assess the state of the economy and the time lag between the time policies are implemented and those policies have an effect on the economy.

Types of Monetary Policies

There are two types of monetary policies:

i. Restrictive/tight monetary policy
ii. Expansionary/stimulative monetary policy

Restrictive/tight monetary policy aims to restrict credit and limit the growth of money supply. It is used to contract the economy.

Expansionary/stimulative monetary policy aims to increase the availability of credit and increase the money supply. It is used to expand the economy.

A tight or restrictive monetary policy is suitable during inflation by;

- increasing the required LGS ratio
- increasing interest rate
- reducing lending by commercial banks
- selling government securities
- introducing/increasing special deposits with the central bank

All the instruments of monetary policy are aimed at reducing money supply and contract the economy.

An expansionary monetary policy is suitable to stimulate an economy during recession by.

- reducing LGS ratio
- decreasing interest rate
- increasing lending by commercial banks
- buying back government securities
- abolishing/decreasing special deposits with the central bank

All the instruments of monetary policy are aimed at increasing the money supply and expand the economy.

There are two types of control in lending known as **Quantitative** and **Qualitative** control.

i. Quantitative control refers to controlling the volume of loans to be given.
ii. Qualitative control refers to controlling the type of loans to be given and not to be given in a particular area of a country.

YOU HAVE COME TO THE END OF TOPIC 2. YOU MAY NOW READ THE SUMMARY ON THE NEXT PAGE.

Summary 12.2.2

- Monetary policy is a policy formulated by the central bank (BPNG) to control the amount of money in the economy and the way it is used.
- The instruments of monetary policy are; interest rates, liquid assets ratio, special deposits, moral suasion, open market operations and control over lending.
- Interest rate is the additional per cent charged on the amount borrowed or it is the cost of borrowing.
- High interest rates discourage borrowing which leads to a decrease in the money supply thus reducing economic activities.
- Low interest rates encourage borrowing which leads to an increase in the money supply thus increasing economic activities.
- Liquid Assets Ratio is the proportion/percentage of the total bank deposits put aside for meeting customer’s demands for withdrawal.
- Increase in Liquid Assets Ratio **reduces** the ability of the banks to give out more loans to create more credit. This will reduce the money supply and economic activities decrease.
- Decrease in Liquid Assets Ratio **increases** the ability of the banks to give out more loans to create more credit. This will increase the money supply and economic activities increase.
- Special Deposits refers to a certain percentage of deposits in the commercial banks which are kept aside and is not for lending. This policy is not widely used in PNG.
- Imposing or increasing special deposits reduces the ability of the commercial banks to increasing lending thus **decreasing** economic activities.
- Releasing or decreasing special deposits increases the ability of the commercial banks to increase lending thus **increasing** economic activities.
- Moral Suasion refers to the policies between the central bank and commercial banks to control the supply of money in the economy.
- Open Market Operation is the buying and selling of government securities to control the money supply.
- Selling government securities reduce the money supply thus deflating the economy.
- Buying government securities increases the money supply thus stimulating the economy.

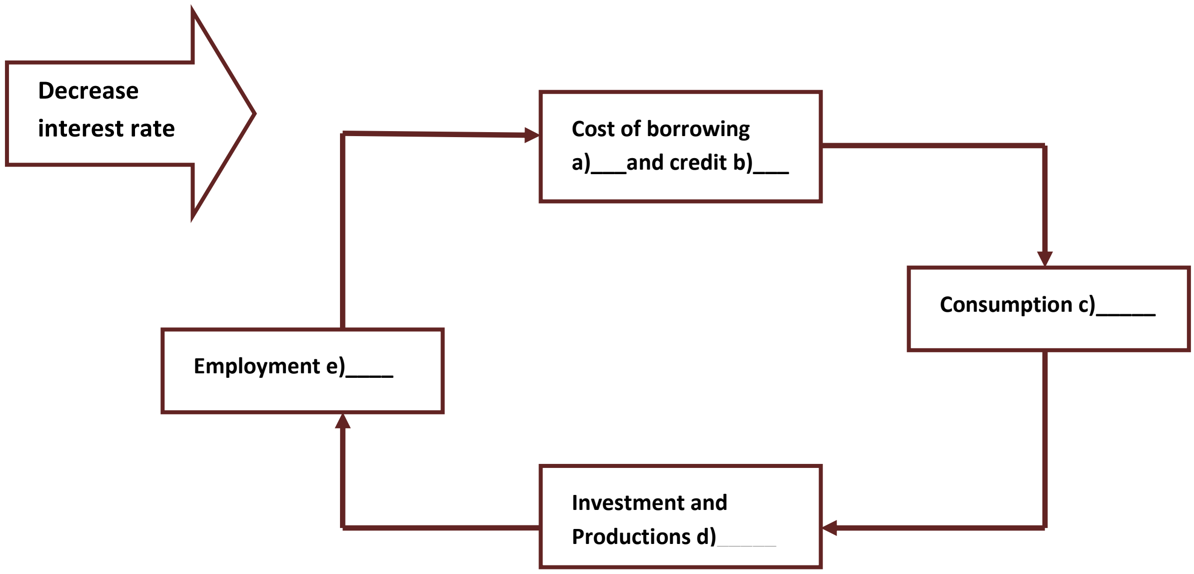
NOW DO STUDENT LEARNING ACTIVITY 12.2.2 ON THE NEXT PAGE.

Student Learning Activity 12.2.2

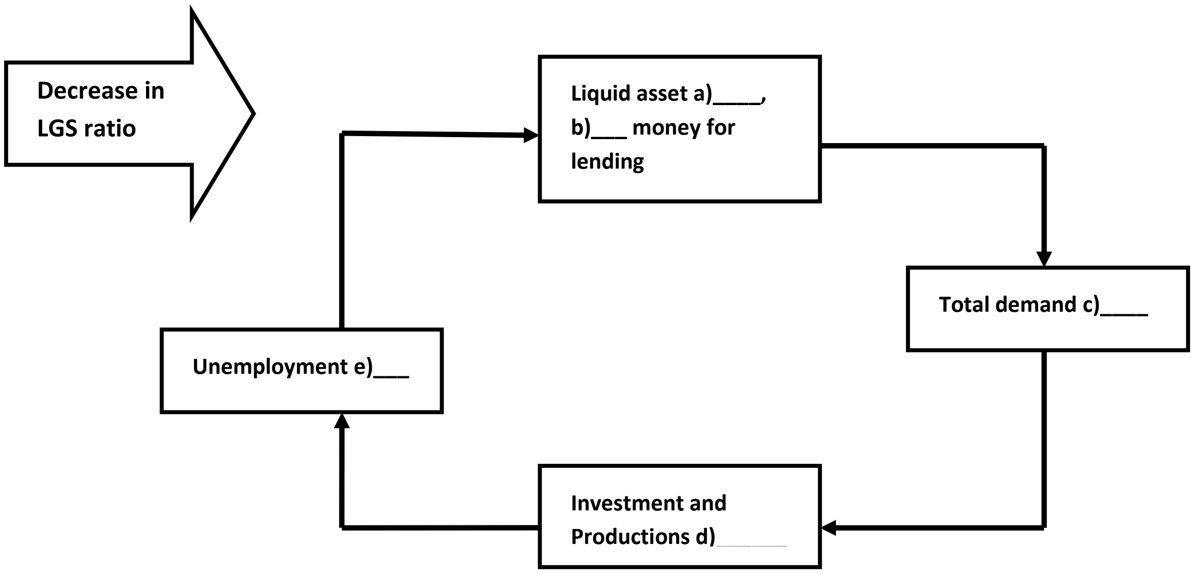
Instruction to candidates:
Below are flow charts of different monetary policies that the government uses to control the money supply in the economy.

1. Complete the following flow charts by stating whether there's going to be an increase/rise or a fall/decrease/contraction next to the spaces given

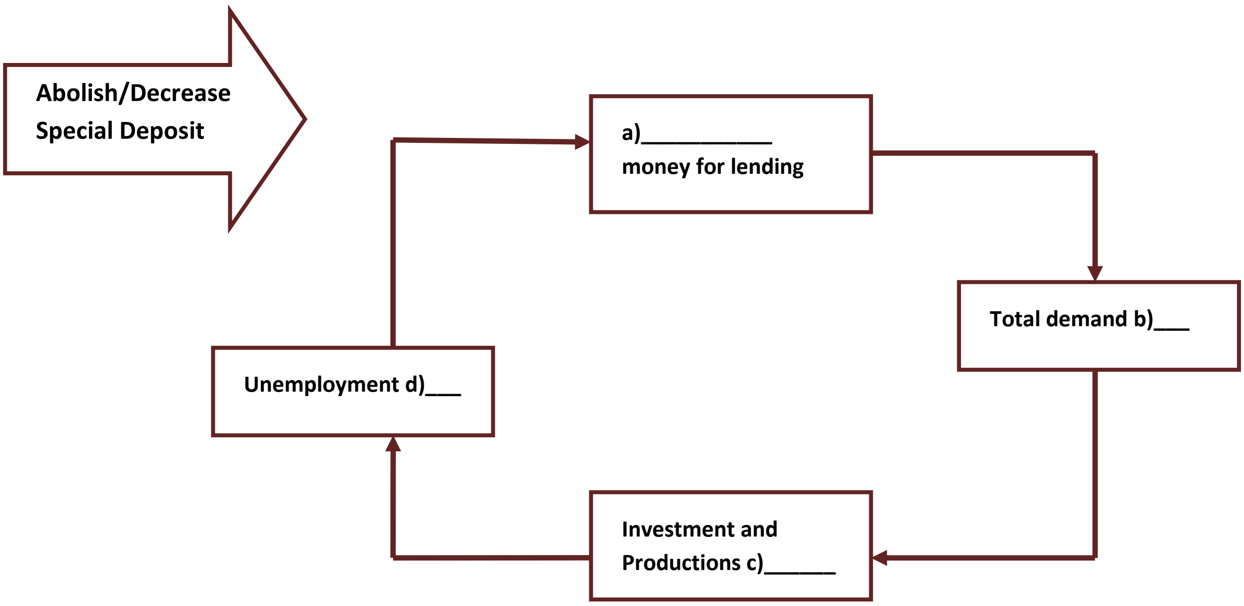
a). **Flow chart 1**



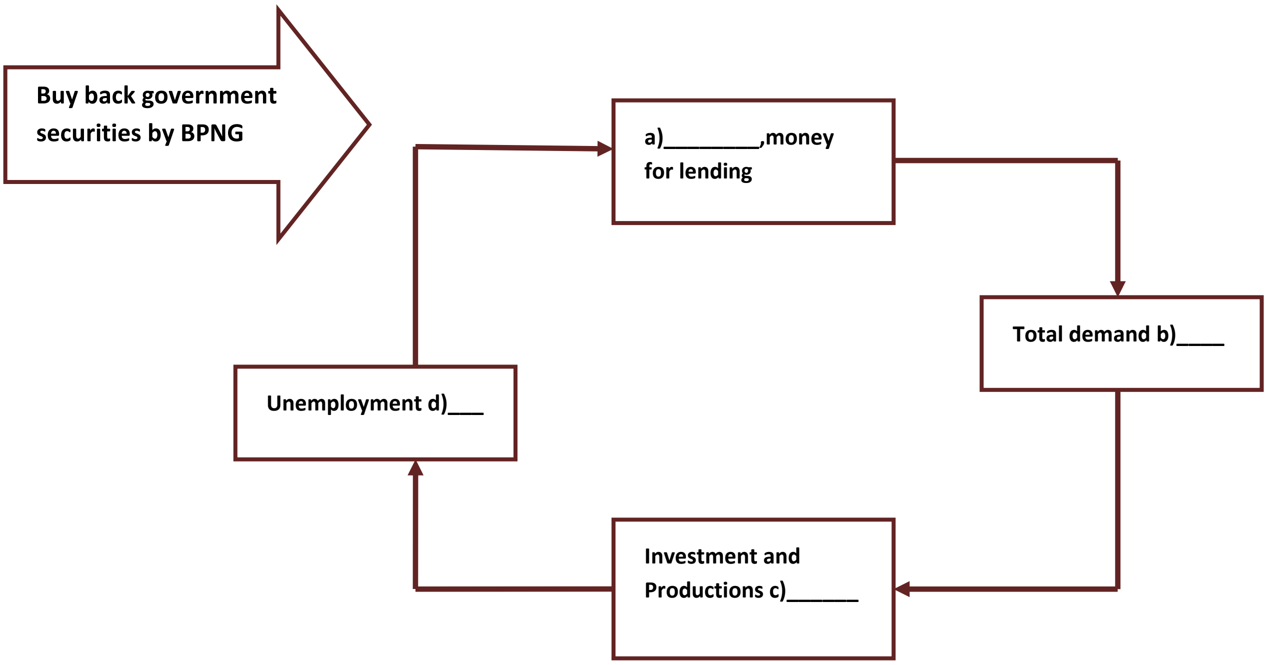
b). **Flow chart 2**



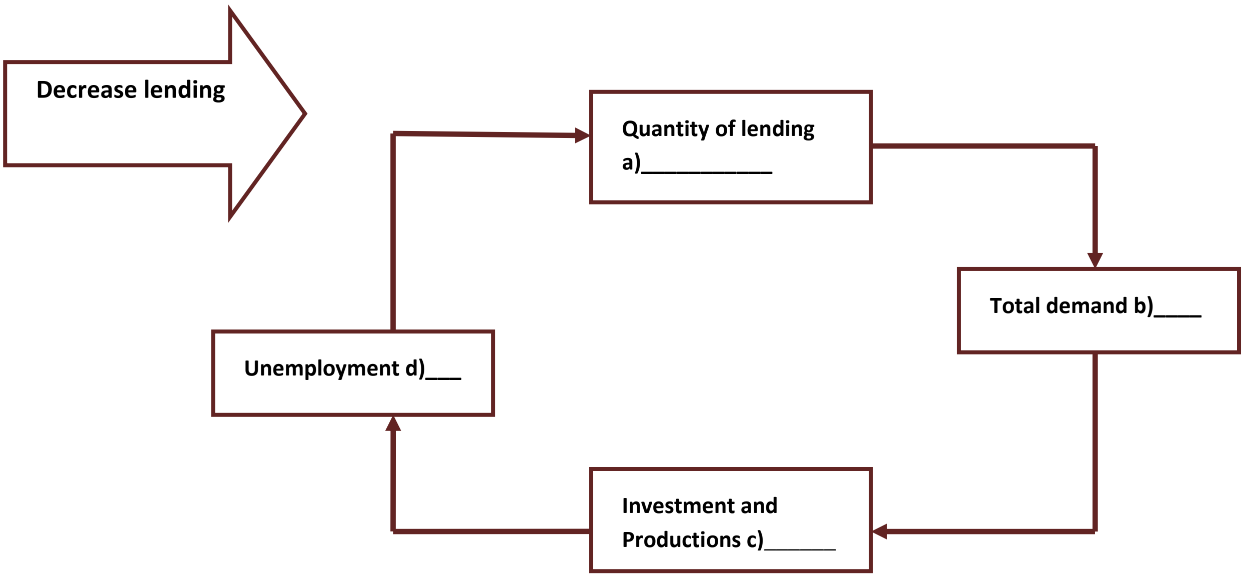
c). **Flow chart 3**



d). **Flow chart 4**



e). **Flow chart 5**



2. Differentiate between Quantitative and Qualitative control over lending by Central Bank.

____

____

____

3. What is Special Deposit called in other countries?

____

____

____

4. State the two aims of monetary policy.

a. ____

b.____

5. Differentiate between Restrictive and Expansionary monetary policies.

____

____

____

NOW CHECK YOUR ANSWERS AT THE END OF THE UNIT

12.2.3: FISCAL POLICY

The previous unit (monetary policy) highlighted one type of economic policy that the government uses to control the money supply (M3). Now, we will look at another type of policy the government uses to regulate the economy through varying rates of taxation and level of government spending/expenditure called **fiscal policy**. The fiscal policy is also known as **budgetary policy.**

Specific Learning Outcomes

By the end of this topic students can be able to:

- define fiscal/ budgetary policy
- list the main tools/instruments used in fiscal policy
- explain the effects of fiscal policy on the economy
- identify the main aim of fiscal policy on the economy

12.2.3.1: Fiscal Policy and Budgets

Let us now begin by looking at the definition of fiscal policy.

Fiscal policy refers to the way the government adjusts the level and composition of taxation and public (government) expenditure to achieve its economic objectives. The fiscal policies are usually passed in the Parliament by the legislative arm of government (which are the elected members of parliaments).

Fiscal policies are carried out through:

i. control over the level of government spending and
ii. rates of taxation

What is fiscal policy concerned with?

Fiscal policy is basically concerned with raising money to finance government expenditure through taxation and other means, such as borrowing and foreign aid. However, the core **instruments/tools of fiscal policy** are:

1. Taxation(T)
2. Government Expenditure (G)

For instance, while taxation and borrowing by the government diverts funds from the private sector to the public sector, public or government expenditure diverts fund from the public sector to the private sector. The flow of funds in an economy can influence the volume of output, income and employment.

The government is a large employer, producer and consumer in most countries including PNG. Changes in government expenditure (G), taxation (T) or borrowing will affect aggregate (total) demand and total income (Y), output (O), consumption (C), employment, savings (S) and Investment (I).For example, an increase in G is likely to lead to an increase in aggregate (total) demand and stimulate the economy. A decrease in G is likely to lead to a decrease in aggregate demand and **deflate** the economy.

The budget is an annual exercise in PNG and in most countries, in which the government sets out its expenditure plans for the following year and the ways it intends to raise money from taxes and other means (borrowing and overseas aid) to finance the budget.

One instrument or tool of fiscal policy is the government expenditure passed through annual budget.

A budget is a plan giving details of expected income and expenditure for a given period of time.

The reasons for careful budgeting include:

- efficient use of resources
- avoid wasting of resources
- avoid duplication of effort
- avoid conflicting goals
- to achieve economic policy objectives

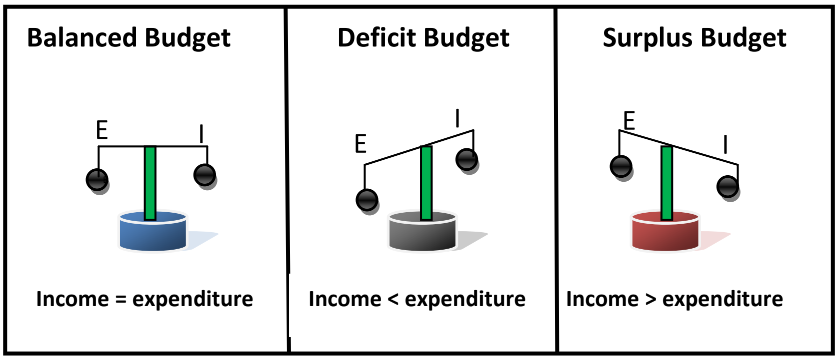
The main objectives/aims of budgetary policies are:

- to provide essential services
- to regulate the activities of individuals and businesses with the idea of creating employment opportunities, maintaining stable prices and ideal economic condition for investments.
- increase the efficiency of productive resources (or increase productivity)
- ensure equitable (fair) distribution of wealth and income
- maintain price stability
- increase employment opportunities

Types of Budget

There are three (3) types of budgets:

1. Deficit budget
2. Surplus budget
3. Balanced budget



1. Deficit Budget

Where the government's income is less than its expenditure (Y < G), in other words, government's expenditure is greater than its income (G > Y).

The aim of the deficit budget is to increase employment and stimulate the economy during economic recession. The methods (ways) used to achieve this aim is through:

- increasing government spending
- increasing money allocated to provinces

The Effects of Deficit Budget on Aggregate Demand

Aggregate demand is the total of all the demands in an economy. It is the total consumption (total expenditure) that exists in an economy.

A budget deficit represents an increase in government spending. If the government spends money on projects it will create employment opportunities. This means that income will increase. An increase in income will increase the level of consumption in the economy. If aggregate demand has increased, production will increase. More people will be employed and income will increase again and the whole process starts again.

When the government fall-short of money to finance the deficit budget, it borrows from;

- the Central Bank
- the commercial banks
- the public through open market operation
- overseas

Note: The government borrows from the Central Bank, commercial banks and the public through open market operation by selling government securities (Domestic borrowing).

A deficit budget is an expansionist budget which increases income, consumption, demand and employment. The disadvantage of deficit budget is that it causes inflation.

2. Surplus Budget

Where the government's income is greater than its expenditure (Y > G), in other words, the government's expenditure is less than its income (G < Y).

The aim of the surplus budget is to reduce money supply to control inflation. The methods (ways) used to achieve this aim is by:

- reducing government expenditure
- limiting money allocated to provinces

Effects of Surplus Budget

The problem with surplus budget is that it causes unemployment. This is because the income earned that was supposed to be spent to increase employment opportunities is held back in trust accounts which results in shortage of fund for projects, investments and rise in unemployment.

A surplus budget is a restrictive or tight budget which reduces the money supply in the economy and contracts (deflates) the economy. This results in decreased income, consumption, demand and employment.

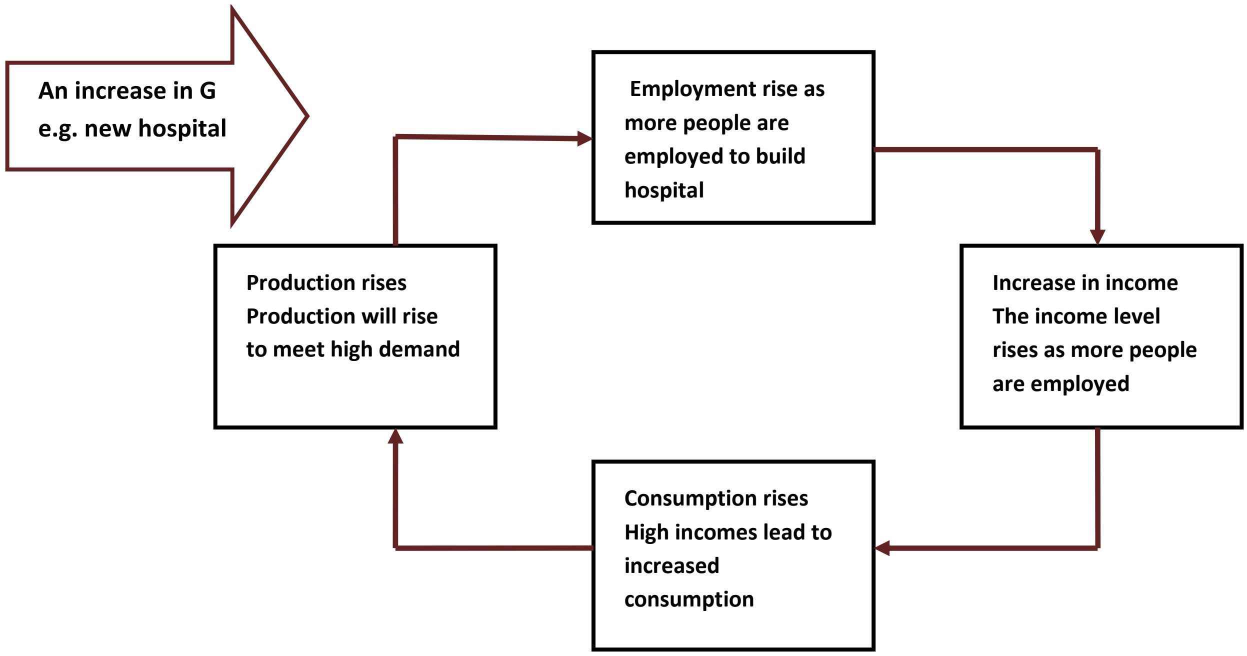
3. Balanced Budget

Where the government income is equal to government expenditure (Y = G), in other words, there is no budget surplus or deficit. All revenue earned during the year is all spent through the annual budget.

A balanced budget is appropriated in an economy where there is no need to change the level of economy, for instance, control of inflation or unemployment.

The flowchart on the next page summarises the effect of increased government spending on the economy in terms of economic variables factors such as employment, income, consumption and production.

EFFECT OF INCREASED GOVERNMENT SPENDING ON THE ECONOMY

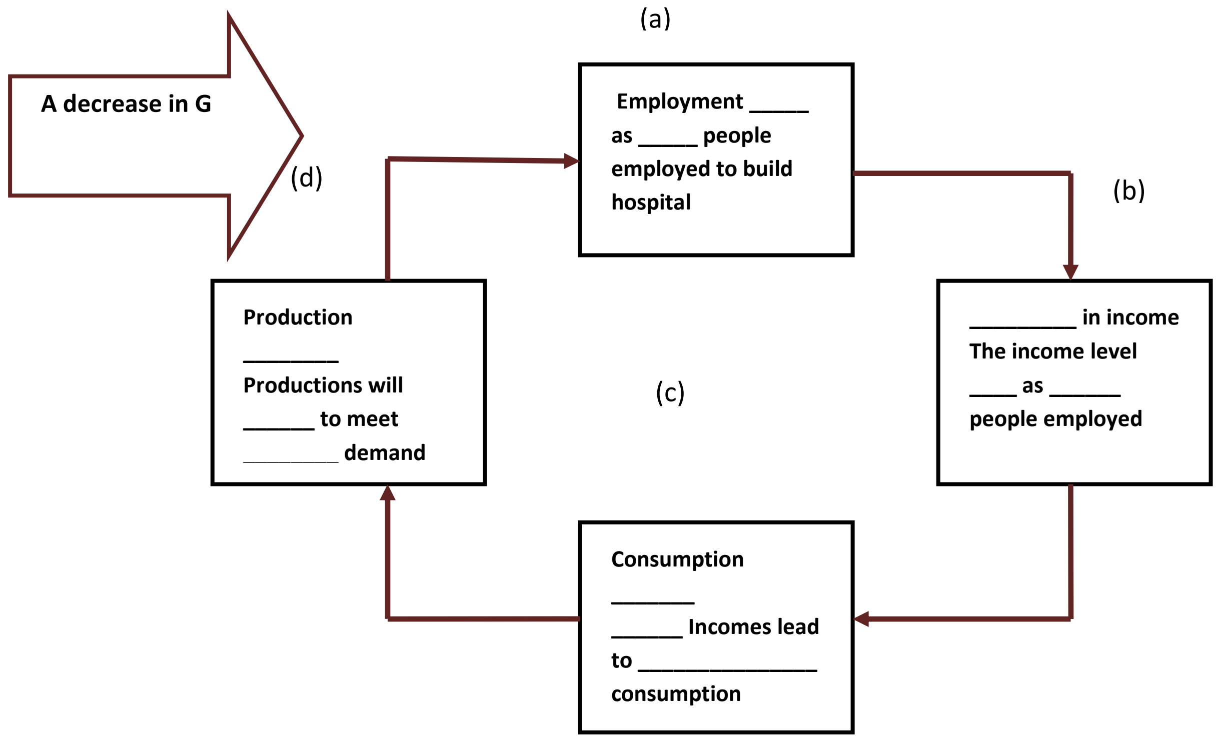


***Source**: UPNG Open College. (2011). Introduction to economics. Course No. 6. 00301.*

The flow chart above shows an increase in government expenditure (G) which boosts investments in the economy and creates employment opportunities, so employment level rises. When more people are employed and earn income it increases aggregate demand and consumption. Hence, production rises to meet increasing demand and consumption.

Student Learning Activity 12.2.3

1. Complete the flowchart below to show the effects of decrease in government expenditure (G) on the economic variables in the economy.



2. Define fiscal policy.

____

____

____

3. State the instruments of fiscal policy.

i. ____

ii. ____

4. Identify each type of budget and describe it.
   i. ____

      ____

   ii. ____

      ____

   iii. ____

      ____

5. What is the aim of the following types of budget?
   i. Deficit Budget

      ____

      ____

   ii. Surplus Budget

      ____

      ____

CHECK YOUR ANSWERS ON PAGE 52

12.2.3.2: Taxation

In our previous lessons we discussed budgetary policy which is one of the instruments of fiscal policy. In this section we will discuss tax as another tool of fiscal policy.
Taxes are used to raise government revenue and carry out government economic and social policies. An increase in taxation could be used as part of an anti-inflationary policy, while a decrease in tax rates could stimulate an economy.

What is tax?

Tax can be defined as a compulsory transfer of wealth (or funds) from the private sector (individuals and firms) to the public sector (government).

Reasons for Taxation

The main reasons why governments levy (impose) taxes are to:

a) raise revenue to finance its budget expenditure
b) discourage the production and consumption of certain goods and services
c) redistribute income
d) manage demand

1. To raise revenue to finance its budget expenditure

- The government needs money to implement its planned budget e.g. public services such as education and law and order and repay its debts.
- Raising revenue via taxation instead of excessive borrowing.

2. To discourage the production and consumption of certain goods and services

- Increasing taxation discourages production and consumption of certain unpleasant/dangerous goods and services.
- Increasing import tax may reduce import to avoid balance of payment deficit problem and protect the local producers from international competition.

3. To redistribute income

- The higher the income the more taxation revenue is raised from the rich than from the poor and redistributed through the national budget.

4. To manage demand

- Raising or lowering tax rate determines the disposable income which in turn regulates (influences) the aggregate demand in the economy.

Tax base refers to the item being taxed.

The **impact of a tax** refers to the point at which the effects of a tax are first felt. That is, the person from whom a tax is initially collected is said to bear its impact.

The **incidence of a tax** is the point at which the tax burden is ultimately felt. That is the person who ultimately pays the money he or she is said to bear its tax incidence.

Tax rate refers to the amount levied, usually expressed as a percentage of the price of goods, services and income being taxed. For example, value added tax (VAT) is 10% of the total value of a good or service purchased.

Marginal tax rate is tax levied on additional income earned, for instance, housing and traveling allowances, boarding duty allowance and **Consumer Price Index**

Types of Tax

1. Direct taxes
2. Indirect taxes

Let us describe the two types of taxes listed above:

Direct taxes
It is a tax paid straight to the government by the tax payer. Its impact and incidence are on the same person, e.g. personal income tax, company profit tax.

Indirect taxes
It is tax paid through increased prices of goods and services, e.g. customs duty, excise duty, VAT. They are called 'indirect tax' because consumers usually end up paying them indirectly. The revenue authority (IRC) collects tax from the sellers and the sellers usually pass the tax burden on to the consumers by increasing the price of their goods and services.

Therefore, impact of tax is felt by the seller and the incidence of tax is carried by the consumer.

Indirect taxes can either be:

a. **Ad valorem** tax is the amount of tax as a percentage of the value of the good or service bought, e.g. GST or VAT (10%) i.e. 10% of every Kina spent is 10 toea, or

b. **Specific tax** refers to the amount of tax as a set sum of money per unit of the good or service bought regardless of its value, for example, K30 per civil registration, K100 per pass port processing fee.

Ad valorem taxes are preferable to specific taxes because they keep pace with inflation. That is, it increases as the cost of goods or services rise.

Five important sources of tax revenue in PNG

1. Personal income tax is a direct tax levied on wages and salaries.
2. Import tax (duty/tariff) is the tax on imported goods.
3. Stamp duty refers to the tax on document or transaction which may require handling by the government, e.g. tax levied on cheque payments.
4. Excise duty is the tax on locally produced goods, e.g. locally made cigarettes
5. Export tax is the tax on exports, e.g. export of fish, timber.

Impacts of Tax on the Economy

On behalf of the government Internal Revenue Commission (IRC) is the statutory organisation that formulates and implements taxation policies in the country. The government can vary (increase or decrease) the rate of tax to regulate (influence) the economic activities in the economy. Taxation is considered a leakage from the circular flow of income. That is, it withdraws income and contracts the economy.

1. **Increase in tax rate** reduces disposable income, aggregate demand, consumption, production and employment.
2. **Decrease in tax rate** raises disposable income, aggregate demand, consumption, production and employment.

Tax imposition or increasing of tax rate is considered as tight or **restrictive** fiscal policy of the government which aims at contracting the economy. In other words, it results in decrease in economic activities and falls in aggregate demand, production, investment, employment level. and faces decline in economic growth.

Tax abolition or decrease in tax rate is considered a **stimulative** fiscal policy of the government which aims at expanding the economy. In other words, it results in increase in economic activities and rises in aggregate demand, production, investment, employment level and achieves economic growth.

Methods of Calculating Tax in relation to Income Tax

There are three (3) methods in calculating tax:

1. Proportional rate of tax
2. Progressive rate of tax
3. Regressive rate of tax

1. Proportional Rate of Tax (Flat Rate Tax)

A constant percentage of income is paid in tax regardless of different income levels. It means all incomes are charged at the same tax rate. For instance, a tax of 10% is applied on all income levels.

Arguments in support of proportional tax rates are:

- encourages people to work harder
- a simple method of taxation

Arguments against proportional tax rate are:

- people are not paying tax according to their ability to pay
- it does not create social and economic equality

2. Progressive Rate of Tax

The tax rate increases as income increases. For example, a person who earns K500 pays a 5% tax but as income increases beyond K500 he or she pays a 7% tax. The philosophy (idea) behind progressive tax is that people should pay taxes according to their ability to pay. Income tax in PNG is progressive while company profit tax is proportional.

Arguments in support of progressive tax rate are:

- it is based on the ability of people to pay (i.e. tax rate rises as income rises)
- it is an efficient way to redistribute wealth from the rich to the poor (higher income earners pay more tax than the lower income earners)
- it helps to reduce inequalities of income in the society

Arguments against progressive tax rate are:

- it discourages people from working hard
- it discourages savings and encourages spending
- it encourages submission of false returns, concealment (cover-up) of properties, etc.

3. Regressive Rate of Tax

The tax rate decreases as income increases. For example, a person who earns K100 pays 10% tax (K10) while a person who earns K200 pays 5% tax (K10). It means that the amount paid in tax remains the same whatever be the income.

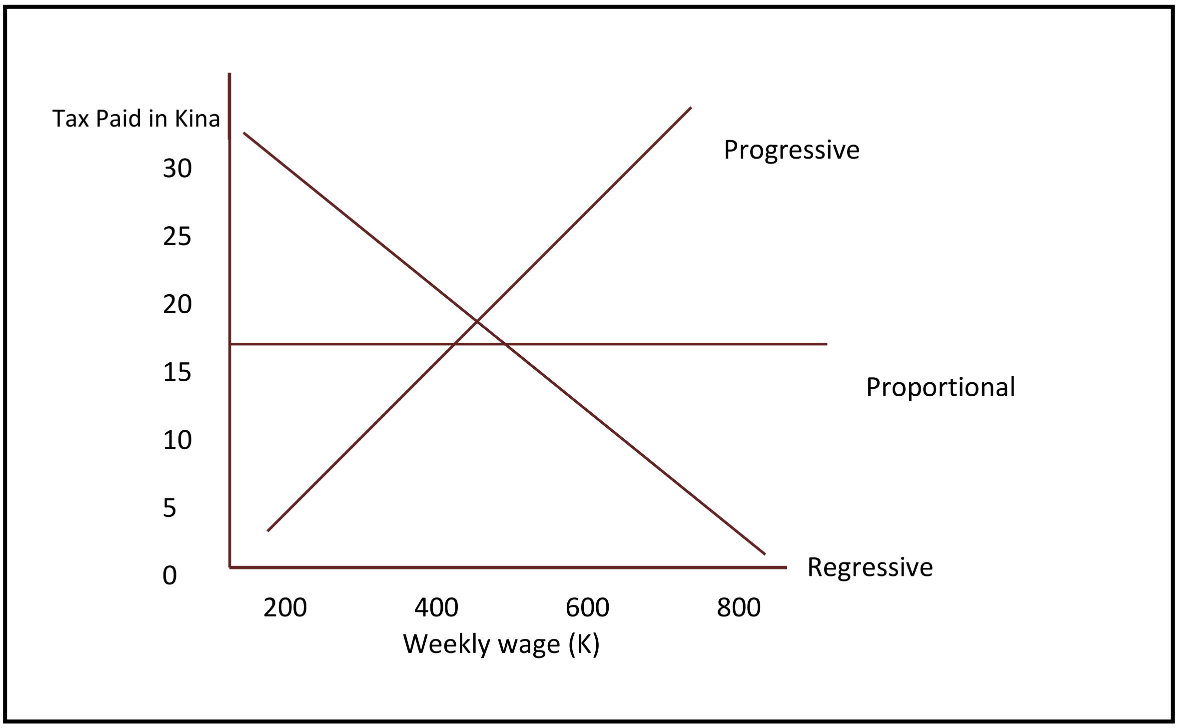
Arguments in support of regressive tax rate are:

- it is a simple method of taxation
- it encourage people to work hard (because lower tax rate at higher income)

Arguments against regressive tax rate are:

- it falls more heavily on the poor
- it is not based on their ability to pay (because tax rate falls as income rises)

The graph drawn below illustrates the **three methods of tax rates** discussed



Source*: UPNG Open College. (2011). Introduction to economics. Course No. 6. 00301.*

12.2.3.3: Taxation in Developing Countries

Developing countries including Papua New Guinea use taxation as a method of fiscal policy. Tax is a major source of revenue for developing countries which contributes most to the annual budget of the country. For instance, in PNG, tax revenue accounted for 78 – 81 per cent in recent years (2010 – 2012) of the government revenue. Tax revenue includes the taxes levied on incomes and profits, goods and services (internal and international trades).

The two revenue collecting agencies are;

1. Internal Revenue Commission (IRC) and
2. Customs (PNG Customs)

IRC collects all internal taxes whereas PNG Customs collects taxes on international trade.

Developing countries utilise taxation policies to regulate their economies in terms of achieving redistribution of income, maintain economic stability and encourage economic growth.

For instance, the PNG government in 2012 provided a tax relief to lower income earners by increasing the tax free threshold from K7000 to K10 000. This means individuals earning less than K10 000 are no longer required to pay income tax. Fortunately, it will help the lower income earners to have more in their pockets to pay for basic needs and wants which helps to improve living standards and alleviate poverty in the society.

However, PNG's income tax is a progressive method of tax rate and people pay more as income increases which redistributes income.

Developing countries use the taxation policies to either expand the economy or contract the economy. For instance, in times of higher inflation a rise in income tax would decrease demand and money supply in the economy to achieve lower inflation rate. Decreasing tax rate can result in increased economic activities and achieve economic growth.

Developing countries also use taxation policies such as tax holiday, tax exemption and tax concession to regulate the industries. In other words, the government of developing countries use the above taxation policies to create an ideal or favourable economic environment for increased economic activities to achieve economic growth.

Tax holiday allows certain firms to invest in the country without paying tax such as company profit tax for a certain agreed period of time so that firms can use the supposed tax money to re-invest in expansion of business.

Tax exemption is especially granted to Non-Government Organizations (NGO) such as church organizations providing essential services such as education, health and childcare and counselling services.

Tax concession fiscal policy allows a reduced tax rate to certain firms or organisations which are providing essential goods or services to the people.

The developing countries also impose higher tax rates to demerit goods or harmful goods and services such as alcohol, smoke and pokies to discourage consumption and production.

Like any other developed countries, developing countries utilise taxation policies to solve economic problems and achieve economic goals of the government.

Answers to Self-Assessment Questions

1. A decrease in G,
   - **a)** falls/decreases; less
   - **b)** falls/decreases; falls/decreases; less
   - **c)** falls/decreases; low; fall/decrease
   - **d)** falls/decreases; falls/decreases; low

2. Fiscal policy refers to the way the government varies the level and composition of taxation and public (government) expenditure to achieve its economic objectives.

3. Fiscal policies are carried out through:
   - **a)** control over the level of government spending and
   - **b)** rate of taxation

4. What is the aim of the following type of budget?
   - **a)** Deficit budget is when the government's income is less than is expenditure in other words, government's expenditure is greater than its income
   - **b)** Surplus budget is when the government's income is greater than the government's expenditure in other words the government expenditure is less than its income.
   - **c)** Balanced budget is when the government income is equal to government expenditure, in other words, there is no budget surplus or deficit.

5. A deficit budget is an expansionist budget which aims to;
   - **a)** Increase income, consumption, demand and employment.
   - **b)** Whereas the aim of the surplus budget is to reduce money supply to control inflation through reduction in government expenditure and limit money allocated to provinces

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YOU HAVE COME TO THE END OF TOPIC 3. YOU MAY NOW READ THE SUMMARY ON THE NEXT PAGE.

Summary 12.2.3

- Fiscal policy is the use of government spending and taxation to influence the economy. It is formulated by the government by adjusting the rate of tax and the level of government expenditure through the annual budget.
- The three types of budgets are surplus, deficit and balanced budgets.
- Surplus budget is when the government's income is more than its spending.
- A surplus budget is a restrictive policy used to control inflation and deflate economic activities..
- Deficit budget is when the government's income is less than its spending.
- A deficit budget is used to control employment and increase economic activities.
- Balanced Budget is when the government's income is equal to its spending.
- A balanced budget is appropriate in an economy where there is no need to change the economic activities.
- Taxation is the compulsory transfer of wealth from the private sector to the government.
- Governments impose tax to raise revenue, to discourage production and consumption of certain goods and services, to redistribute income and to manage demand.
- The three methods of tax rate are proportional, progressive and regressive.
- In Papua New Guinea, income tax is progressive while company profit tax is proportional.
- Taxation is a leakage from the circular flow of income which decreases economic activities.
- Increasing income tax decreases disposable income, decreases consumption and deflates the economy.
- Decreasing income tax increases disposable income, increases consumption and stimulates the economy.

NOW DO STUDENT LEARNING ACTIVITY 12.2.3 ON THE NEXT PAGE.

Student Learning Activity 12.2.3

1. How is a deficit budget financed?

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2. Identify the problem with the following types of budgets.

   a. Deficit budget

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   ____

   b. Surplus budget

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3. When is it appropriate to pass a balanced budget?

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4. What are the effects of the following budgets on income, aggregate demand, consumption, production and employment?

   a. Deficit budget

   ____

   ____

   b. Surplus budget

   ____

   ____

5. State the reasons for taxation.

   a. ____

   b. ____

   c. ____

   d. ____

6. State the three methods of tax rate.

a. ____

b. ____

c. ____

7. Identify the methods of tax rate used for income tax in PNG.

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8. Examine the income tax schedule below and calculate their rates. Then state the type of tax rate. The first one has been done for you, complete the rest.

Annual Income (Kina)	Tax A (Kina)	Tax rate (%)	Tax B (Kina)	Tax rate (%)	Tax C (Kina)	Tax rate (%)
500	25	**5**	50	?	100	?
1000	100	?	100	?	150	?
2000	400	?	200	?	200	?
5000	2000	?	500	?	200	?

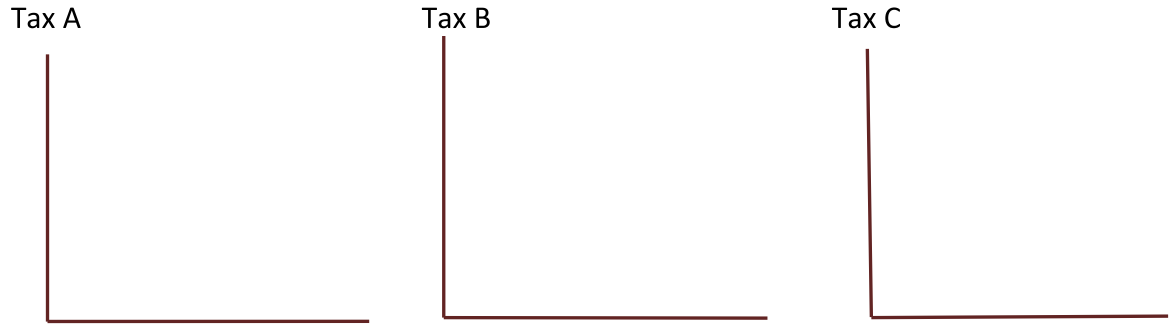
Tax A is: ____

Tax B is: ____

Tax C is: ____

Formula: percentage of tax/taxable income x 100
Example Tax A: 25/500×100/1= 5%

9. Sketch a graph illustrating each method of tax rate. Make sure to label all the axis and give a title to each graph.



10. What is meant by the phrase '*broadening the tax base*'?

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11. Why do you think the PNG government wants to increase the tax base?

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NOW CHECK YOUR ANSWERS AT THE END OF THE UNIT

TOPIC 4: INCOMES AND WAGES POLICY

In PNG, salaries and wages of public sector employees (public servants) are determined by salary fixation agreement by the government and the trade unions. Salaries and wages of private sector employees (those people working in private companies) covered by the contract are determined by the trade unions and the employers. Hourly paid workers' minimum wage rate is determined by the Minimum Wage Board (MWB). Those who are not employed earn income such as rent, profit and royalties. irrespective of the source of income, the available income for consumption and savings is determined by the disposable income. **Disposable income** is the gross income minus the income tax.

Specific Learning Outcomes

By the end of this topic students can be able to:

- define wage indexation
- differentiate between full wage indexation and partial wage indexation
- define minimum wage
- identify the current minimum wage rate of Papua New Guinea
- describe the relation between prices and income
- identify the reasons why the government intervenes in altering the incomes

12.2.4.1: Determination of Wage Rates and Indexation

Wage indexation refers to fixation of wages on the basis of inflation rate that is, changes in the Consumer Price Index (CPI). The idea behind this arrangement is that the employees should receive wages in line with changes in the cost of living. In other words, rise in inflation rate increases cost of living so wages should be increased. Thus, wage indexation or wage increase is done in two ways as full wage indexation or partial wage indexation.

1. Full wage indexation is increasing wage according to inflation rate. For instance, if inflation rate is 10% then, increase wage by 10%.
2. Partial wage indexation is increasing wage is less than the inflation rate. For instance, if inflation rate is 10% then, increase wage by 7%.

Below are sections of two articles taken from Encarta which is related to wage indexation.

……The country's system of 'indexation', originally established to offset rising living costs, was cast as a villain in the inflationary spiral. Virtually all salaries and wages and some rents are indexed, rising automatically at rates matching and sometimes exceeding the cost-of-living index. With such rises occurring four and five times a year, strong protests have come from industrialists forced to raise wages while keeping prices down. Some industry groups have called for a limited, once-a-year raise. But the Belgian unions, representing three out of five workers, regard the indexation plan as one of their major achievements; and although labor leaders agreed to hold talks on the subject, no substantial change in the system was expected……..

Source*: Encarta (Collier's Year Book), 1975: Belgium.* *Politics and government.*

……The year was also marked by continuing disagreement between the government and the Conciliation and Arbitration Commission over the future of quarterly wage ' indexation'. The government urged repeatedly that consumer-price-index increases should not 'flow on' to the work force in the form of fatter wage settlements. While several times imposing 'ceilings' on such increases, thus preventing the full indexation of incomes of better-paid workers, the commission took the overall view that its prime function was the mediation, arbitration, and prevention of industrial disputes, not the circumvention of the indexing system. In reply, Treasurer Howard charged in his budget speech that the Conciliation and Arbitration Commission's actions had 'been costly to the Australian community both in terms of inflation and unemployment…….

Source*: Encarta (Collier's Year Book), 1978: Australia.* *Politics and government.*

12.2.4.2: Minimum Wages

Minimum wage is the lowest hourly or daily or monthly wage rate that an employer may legally pay to workers. In others words, it is the lowest wage at which workers may sell their labour.

Minimum wage rate is fixed either by a collective bargaining agreement or by governmental enactment law as the lowest wage payable to specified categories of employees. In general, the setting of a minimum wage does not prevent the right of employees to demand wages above the established minimum.

The first minimum wage law was enacted by the government of New Zealand in 1894. A subsequent law enacted by Victoria State, Australia, in 1896 established wage boards on which workers and employers were represented in equal numbers, with power to fix minimum wages enforceable on the employer. This innovative law served as the model for the British Trade Boards Act of 1909.

From time to time, the Minimum Wage Board, on the advice of the government, review and determines a new minimum wage rate based on the economic situation such as rising costing of living.

The new minimum wage rate in Papua New Guinea is K3.20 equivalent to US$1.30 per hour and is effective as of July 3, 2014 under Section (10) of the Industrial Relations Act, Chapter No. 174. Read the newspaper article below about the new minimum wage rate.

PNG'S new minimum wage rate to comply with

From *POST COURIER/PACNEWS*
Wed 06 Aug 2014

PORT MORESBY, PNG ----All companies operating in Papua New Guinea should now comply with the new minimum wage of K3.20 (US$1.30) per hour set up by the minimum wage board last month.

This follows a public notice in the daily newspapers advising all employers, employees and the general public of the new minimum wage determination No.1 of 2014 which became effective as of 03 July, 2014.

The determination shall remain in operation until superseded by a future minimum wages board constituted under section (10) of the Industrial Relations Act, chapter No.174 makes a new determination.

The notice advised the public that there will be a three months grace period from the date of gazettal notice for the agriculture sector and businesses struggling to pay their employees.

This period will allow for the applications from the employers in those sectorial categories for their requests to be processed.

Thereafter, the Department of Labour and Industrial Relations will be conducting inspections to ensure there is compliance by all employers. This means that the department of labor will ensure that the employers must use this rate.

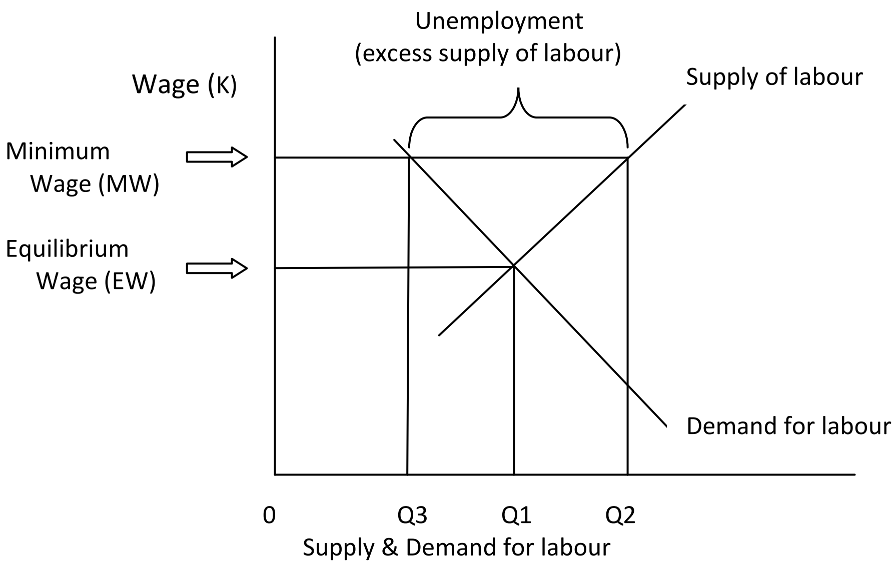
However, a security guard who wishes to remain anonymous and works for a security firm in Port Moresby told the Post-Courier that since the changes were effected for the last two fortnights, their pay package has remained the same.

He said the cost of living in cities like Port Moresby, Lae and other urban areas is skyrocketing and this new minimum wage will greatly sustain the livelihoods of the labour force, especially the security guards.

The security guard said that the firm has been promising them for a wage increase but so far the security guards have yet to see any changes in their pays.
He is hoping that the firm will back date them for the last two fortnights.

Meanwhile in the ensuring days, the Arbitration office will be sending out invitation letters to the partners to send in their nominations to constitute a committee that it will be
Chairing, to give them the appropriate exemptions before the actual implementations are allowed to take place.

Effects of minimum wage laws on labour supply and demand



The equilibrium wage rate determined by the market forces is **EW** and equilibrium quantity of labour (labour hours) is **Q1**.The immediate reaction to the introduction of minimum wage rate **MW**, is an increase in the labour supply from **Q1** to **Q2** and a reduction of labour demanded from **Q1** to **Q3**

12.2.4.3: Prices and Incomes Policy

The goods and services purchased from the income are determined by the general price level. The general price level indicates the level of inflation. As price rises, income earners can purchase only a fewer items of goods and services. For instance, when the price of 1kg rice is K4 the consumers can purchase 5 of them. However, if price of 1kg rice rises to K5 the consumers would purchase only 4 of them. Therefore, when general price level increases the wages are increased to cater for the rising cost of living.

Income and Wages Policy

The sources of income for households and individuals are:

- wages and salaries
- government transfer payments
- income from business, trade or profession
- property incomes (rent, interest, and dividends) and superannuation

The most important source of household income in PNG comes from **wages and salaries**, which are factor payments to labour. Wages include not only a direct payment per hour or per week, but other benefits derived through employment including holiday pay, long-service leave and sickness benefits.

Reasons for government intervention in the incomes

The government intervenes (gets involved) to affect the growth and distribution of income for three broad reasons:

- Redistribution of income to achieve equity (fairer distribution) through progressive taxation and transfer payments.
- Facilitate (help) resolution of disputes over income between employees and employers by determining reasonable wage rise in consultation with the industrial relation commission and Trade unions. (Employers Federation represents the employers).
- To control and regulate cost-push inflation pressure on price. (*Refer to effect of Wage-price spiral.)*

By Law, the government does not have authority to directly regulate prices and wages. Therefore, it must use indirect methods to try to moderate (reasonable) labour costs and reduce cost-push inflation.

- Regulate wage by appropriate method of tax rate via (through) Internal Revenue Commission (IRC).
- Set up a Price Surveillance Authority (ICCC) to control pricing of essential goods and services.
- Allow reasonable wage increases through reaching agreement with Trade Unions and Employers Federations. It includes minimum wage increases and wage indexation policies.

Trade Unions are labour movement organisations which fight for the rights and well-being of employees. They usually push for better working conditions for employees.

Employers Federation is formed by employers and it fights for the rights of employers. The government through the **Labour Department** takes a neutral position to facilitate the dispute resolution between the employees and employers via their representative organisations.

YOU HAVE COME TO THE END OF TOPIC 4. YOU MAY NOW READ THE SUMMARY ON THE NEXT PAGE.

Summary 12.2.4

- Wage indexation is fixing or adjusting wages of employees according to the changes in the inflation rate.
- Wages are adjusted to make sure the employees receive wages that match the cost of living.
- Full wage indexation is increasing employee's wage in line with or equal to the inflation rate.
- Partial wage indexation is when the increase in employee's wage is less than the inflation rate.
- Minimum wage is the lowest wage rate for an hour, a day or a month that is paid to the employee.
- The goods and services purchased from the income are determined by the general price level. Price increase, consumers buy fewer goods and price decrease consumers buy more goods.
- Government intervenes in the income of employees to;
  - ✓ Redistribute income equally through progressive taxation
  - ✓ Solve problems of minimum wages between employers and employees
  - ✓ Control cost push inflation
- Trade unions care for the rights and well-being of the employees. They support the views of the employees for better working conditions.
- Employer Federation is the organisation formed by the employers to serve their rights.

NOW DO STUDENT LEARNING ACTIVITY 12.2.4 ON THE NEXT PAGE.

Student Learning Activity 12.2.4

1. Define these terms:
   a. Income

   b. Wage

   c. Wage indexation

   d. Minimum Wage

2. Differentiate between full wage indexation and partial wage indexation.

3. Explain the relation between prices and incomes.

4. State reasons for government intervention in the income distribution.

5. Describe Trade Unions and Employers Federation and their roles.

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NOW CHECK YOUR ANSWERS AT THE END OF THE UNIT

TOPIC 5: EMPLOYMENT IN PAPUA NEW GUINEA

Employment is the state of having a paid job or the fact of being paid to work for a company or an organisation.

One of PNG's most pressing needs is creating jobs and income earning opportunities for the young population or the school-leavers. In PNG nearly half of the school-aged children have never had the chance to attend school. This hinders the country's development focus and performance.

PNG has a mixed economy, with urban and enclave industries on one side, and agriculture and the rest on the other. But now this duality is becoming accentuated (expanded), even three speed, with the development of LNG mining projects.

Once the construction phase was completed (ended 2014), direct employment from LNG dropped back to merely some 500 direct staff. By their nature, mineral/hydrocarbon extraction is of limited duration, although LNG and some mines, like Lihir, have relatively long lives (e.g. 30 years).

Specific Learning Outcomes

By the end of this topic students can be able to:

- differentiate between labour force and workforce
- identify the factors affecting the labour force
- describe the rate of employment between the formal and informal sectors
- differentiate between unemployment and underemployment
- identify and explain the effects of unemployment
- identify ways in which the government can lower unemployment

12.2.5.1: Papua New Guinea's Workforce

What is labour force?

Total Labour force in Papua New Guinea was last measured at 3, 281, 168 in 2013, according to the World Bank. (It refers to all people who supply labour for the production of goods and services during a specified period.) Total labour force comprises people ages 15 and older who meet the International Labour Organisation definition of the economically active population.

In 2013, the former Prime Minister Grand Chief Michael Somare set the retirement age to 72 years. The labour force of PNG can be referred to those people who are between the ages of 15 and 72 years old. However, due to economic hardships most developing countries including PNG children as early as 10 years are forced to work for money. The labour force in PNG is defined as those people who are 10 years and above who are willing and able to work to earn an income.

What is work force?

It refers to those people who are actually employed and working for a particular industry, firm or an organisation, in general. Workforce does not include those who are in the labour force but are unemployed. This is known as the economically active population. Hence, workforce refers only to those who are willing and able to work.

The Changing Structure of the PNG Labour force in Papua New Guinea

The labour force in PNG has grown as fast as the population growth and possibly faster since Independence. Since the 1980s, the labour force grew by around (3%) three per cent per annum, according to figures from the 1980 and 1990 censuses.
In the decade of the 1990s, labourforce growth was slightly more than three per cent per annum.

The female labour force grew twice as fast as the male labour force between 1990 and 2000. Between the two censuses, female labour forces participation rates have increased while the male rates have dropped sharply. In 2000, there was very little difference between male and female labourforce participation rates. The relatively high female participation rates in PNG reflect the fact that most women have access to agricultural land and are responsible for growing food for the household. Men have traditionally been engaged in cash agriculture, and in non-agricultural activities. How can we explain the sharp decline which has taken place in male labourforce participation rates between 1990 and 2000?

The figures show that many men withdrew from the labor force into the housework and other categories. What does this really mean? Are they discouraged workers, who have given up looking for work because they do not think jobs are available? Have they withdrawn through ill health? Or do the figures imply that more men are shifting into illegal activities, which are not included in conventional labour force estimates?

The survey carried out by Levantis in 1995 highlighted the attraction of illegal activities for young people in urban areas. He estimated that around 32,000 people in urban areas, almost 15 per cent of the urban labour force, were involved in some form of criminal activity (Levantis 1997). The earnings of young people from criminal activity were found to be higher, than earnings from wage employment. Illegal activity like prostitution was also widespread among young women in urban areas. It was increasingly seen by the authorities as contributing to the spread of AIDS.

Factors affecting the size of the Labour force

- the size of the population
- the working age population
- the labour force participation rate
- allowance for female participation in the workforce
- the time spent in schools for studies (the longer the students are in the school the size of labour force decreases)

The rest of the eligible population who are not in the labour force include:

- fulltime students
- retirees
- sporting groups
- full-time homeworkers
- people with special needs (disabled)

12.2.5.2: Employment by Sectors of Papua New Guinea's Economy

It is widely believed that Gross Domestic Product (GDP) per capita and National Income have changed little since independence. Agriculture and forestry are substantial contributors to GDP which are key sources of export earnings that provide occupation for more than 80% of the population. Contribution of agriculture and forestry to the economy relies on continued access to natural forest lands for development purposes.

Most people live and work in rural areas. They produce food for consumption at home and agricultural products for cash sales in the domestic and export markets. Some people rely on jobs in plantation, agriculture, forestry and rural service industries for cash income. Others are engaged in various informal business activities such as trading, processing and selling rural products. The number of people in paid employment in urban areas and with mining companies is relatively small.

On the other hand, growth based mainly on mining, manufacturing and construction, is unlikely to have a dramatic impact on employment. This is because these sectors are capital-intensive and employ only a small percentage of the labour force.

According to the 2000 census, these sectors (mining, manufacturing and construction) accounted for fewer than five per cent of total employment, while the agricultural sector accounted for over 70 per cent, and services 24 per cent.

Agriculture, whether for subsistence or for cash, has always been, and continues to be, the main source of employment for the great majority of people in PNG.

Refer to the table below to see the different sectors and their percentage of employment.

PERCENTAGE OF THE EMPLOYED LABOUR FORCE BY INDUSTRIES AND PRODUCTIVITY

Industries	Percentage of the Labor Force		Relative Labour Productivity	
	1990	2000	1990	2000
Agriculture	80.2	72.3	0.4	0.4
Mining	0.3	0.3	33.8	70.7
Manufacturing	1.2	1.1	8.4	7.7
Utilities	0.3	0.1	5.0	12.6
Construction	1.9	2.1	2.7	1.9
Services	16.1	24.0	2.3	1.2
Total	100.0	100.0	1.0	1.0

Sources: *UNDP/ILO (1993), Table 2.7; National Statistical Office (2002), Table D.4*

Formal and Informal Sectors

PNG is an economy comprising of a formal and an informal sector. Subsistence farming accounts for the bulk of economic activity. The formal sector provides a narrow employment base, consisting of workers engaged in mineral production, a relatively small manufacturing sector, public sector employees and service industries including finance, construction, transportation and utilities. The majority of the population is engaged in the informal sector.

Informal sector refers to the sector of the economy where people are engaged in informal employment and earning income on irregular basis. It comprises of self-employed people such as vendors, cash cropping, trade store owners, arts and crafts sellers.

Meanwhile, the majority of PNG's population of 7 million people practice subsistence agriculture in rural communities, many in locations remote from road and transport networks and public service delivery. More than half of all income sources, including fresh food production, are part of the informal economy.

Garden produce on sale at Gordon market, Port Moresby

Crafts market, Boroko, Port Moresby

Formal sector refers to the sector of the economy where people are engaged in formal employment and earning regular income. It comprises of businesses and the government (public) sector. Examples of people employed in the formal sector of the Economy are given below.

Tavolo Community School

PNG Defence Force Delta Company

Papua New Guinea requires a diversified and competitive economy, including active agriculture sector and domestic processing to provide growing and sustainable opportunities. The problem is that, PNG is a developing country and has high cost compared with most competitors from developed countries whether supplying agricultural products, manufacturing or with tourist products.

Below are some ways which can make Papua New Guinea more competitive and attractive for investors (including shareholders):

- improving roads and other infrastructure and utilities
- affordable telecommunication access
- improving ports and shipping services
- seriously addressing crime
- vocational and professional training
- Provide credit scheme to help finance small business projects
- Provide market information, technical and extensions services to improve business productivity.

The formal and informal economies' needs are shared except that small or micro investors have specific needs for access to micro-finance, suitable venues for selling, making or repairing products.

12.2.5.3: Unemployment and Underemployment

Underemployment is when people seem to be working but not for full hours as expected and produce lower productivity than their capability. In other words, these people employed as part-time or casual workers, they look for more hours to work. Those who are underemployed do not fully contribute to the economy. Underemployment signifies that there is lack of working opportunities or no suitable job for their qualification. For instance, a Plant Protein extraction scientist working as a First Secretary for IPBC, because he cannot find a suitable job in PNG.

Unemployment is when people are willing and able to find a gainful employment but cannot due to some reasons. In other words, these are people who are included in the labour force who are actively looking for work but have not yet found one. The indicator that measures the unemployment is the **unemployment rate**. It indicates the number of people as a percentage of labour force.

$$\textbf{Unemployment rate} = \frac{\textbf{No. of people unemployed}}{\textbf{Labour force}} \times 100$$

Types of Unemployment

One way to classifying the unemployed is by identifying the major reasons for their unemployment. They are:

1. Frictional unemployment
2. Cyclical unemployment
3. Structural unemployment
4. Seasonal unemployment
5. Hard-core unemployment

Let us discuss each of them in terms of their reasons or causes.

1. Frictional unemployment
It refers to those that leave their job and search for new jobs. Those who change jobs every now and then

2. Cyclical unemployment
It refers to unemployment resulting from downturn in economic activities such as economic depression/recession.

3. Structural unemployment

This type of unemployment occurs when the skills and experience possessed do not match requirement to fill the position vacancies due to technological change (e.g. automation/mechanisation of production processes can cause loss of job for people) or restructure of organisations and phasing out unproductive tasks , retrenching workers not needed anymore. results in structural unemployment. In structural unemployment there is **labor mismatch**: the supply of labour does not match the type of labour demanded.

4. Seasonal unemployment

It arises because production is not continuous or regular over the year. Especially, in agriculture sector seasonal employment occurs during harvesting and processing time more labour is required but when latter period is over labours are laid off. Some seasonal unemployment also occurs in tourism sector where more labour is required during holiday period to serve guests and when holiday period is over labours are laid off.

5. Hard-core unemployment

Unemployment resulting from lack of skills or experience, or possess skills redundant (skills no more required), or have personal and attitude problem, or geographical immobile that prevent people from obtaining employment.

Unemployment and underemployment are a major concern in urban centres in Papua New Guinea. The main cause of this problem is rural-urban drift (migration). Increasing number of people are migrating to urban centres in search of job opportunities and better life in towns and cities. However, due to lack of employment opportunities many people find themselves being unemployed or underemployed.

Effects of Unemployment

Unemployment imposes costs on the individual affected, upon the community and the government.

- Lost output and income
  An opportunity to produce output to earn income by that unemployed person is lost as he/she is unemployed.
- Cost to the budget (Government)
  Rise in unemployment means government needs to spend more to take care of unemployed.
  There is a Loss of income tax revenue when increasing number of people became unemployed.
  Government needs to increase funding to create employment opportunities for those unemployed.
- Human resource depreciation (Decrease in labour supply)
  The longer time a person is not employed, he/she tends to lose the benefits of his/her work skills, on-the-job- experience and training.

- Growing poverty and inequality
  Growing unemployment is associated with increasing numbers in poverty and growing inequality in the distribution of income. This tends to widen the gap between 'haves' and 'have nots' in the community.
- Rising social costs
  Unemployment is associated with increasing crime, domestic violence, health problems and family break-up. People who are long-term unemployed often suffer from loss of self-esteem (self- worth/pride) and motivation.

Role of the government to control unemployment in Papua New Guinea

With regard to the current labour market situation, the restructuring of PNG's labour force needs to be initiated by the government through the establishment of a manpower export industry. The government has a moral and legal obligation to create employment opportunities for unemployed urban youth in most of the urban centers.

Youth capacity building is also lacking in PNG, where the government should provide technical training centers and connect with small medium entrepreneurs and involve unemployed youth with them.

Rural service delivery should also be encouraged to retain rural youth migrating into the urban areas like establishing a youth council system in the districts and provinces to provide small entrepreneurship in the rural areas.

The labour force of PNG is stagnated and the number of urban youth unemployment is increasing at a good phase. People occupying those established positions are still holding onto their positions even though their retirement ages are over. Government also experience budget shortfalls when it retrenches 'old aged workers' who are working in the government departments.

Some government departments are occupied by 'old aged workers' who should be retrenched by the government to make ways for the new graduates but because of budget shortfalls, they are still occupying these jobs. That is one reason why urban youth unemployment figure is increasing at a faster rate in PNG.

The following are some ways in which the government can lower unemployment (or increase employment level) in the economy:

- Increase government spending
- Accept higher inflation rate (Trade off illustrated by Philip's curve))
- Cutting tax rates
- Establish credit schemes at lower interest rates
- Support small farming and businesses through financial assistance
- Lower interest rate on borrowing and increasing lending

Urban Youth Unemployment

Urban youth unemployment is the state of urban youth being jobless. Urban youth unemployment condition in PNG has increased in an alarming rate and is affecting the lives of many young people. Poverty which is one of the effects of unemployment, contributes to social related problems like squatter settlements, criminal activities, street vending, malnutrition, and low literacy. Employment is such an important part of our personal life plan to survive so to be unemployed is to be out of our personal life plan to survive.

When the education system could not accommodate everyone into the mainstream, limited jobs available meant that most young people turn to activities that would earn them a living for survival. This situation has forced young females to participate in prostitution while some young males survive by involving in criminal activities.

The law and order situation in the country is bad. Main centers like Port Moresby, Lae and Madang are far more worse.
worse. The government is ignorant to critically address these situations and put in place measures that can effectively reduce the associated problems.

Concerned individuals and groups have become vocal about the issues for many years but little has been done. Government departments and non-government organisations have been instrumental in drafting policies, programs, implementation and achievement of the desired results. Negative attitudes shown towards implementing of policies and programs and level of funding by those responsible, only creates frustrations among the youth community and as a result it forces some of them to engage in.

Causes of Urban Youth Unemployment

Urban youth unemployment is caused by several factors. These are;

1. economic
2. political
3. social
4. technological invention
5. environmental
6. cultural
7. financial
8. defective educational system and many others.

Graduates are also joining the urban youth unemployment caused by these factors. The PNG government has realized the causes of urban youth unemployment but the decisions to solve the issues of unemployment are **dysfunctional** or failed state mechanisms.

The economic, social, political, technological invention, defective educational system and financial causes of unemployment usually arise due to a nation state's failing to address them at the first instance. **Calamities** crisis like economic and financial crisis political difference between governments and oppositions, ethnic clashes, rascalism, corruption and nepotism that result in poor and feeble management occurs at the end of the school year when a large number of new graduates look for jobs. The defective educational system contributes to the youth unemployment problems because of the 'mismatch' between education and industry in relation to human resource development.

Our colleges and universities have been turning out graduates who do not fit the needs of the labour market, or in some cases, for being responsible in the 'over supply' or 'under supply' of skills made available to business and industry.

Another major policy issue is the relation of urban youth unemployment to inflation. In theory, when demand for labour rises to the point at which unemployment is low and employers find it difficult to hire qualified workers and graduates, wages increases, pushing production costs and higher prices and thus, contributing to inflation.

Effects of Urban Youth Unemployment

The unemployment problem in the country is affecting not only the individual, but also the family and the nation.

If the individual has no financial reserves on which to draw from to meet the essential requirement of life, the feeling of rejection and personal life plan failure is felt. This feeling of deprivation as a result of unemployment may lead to hopelessness, causing depression and emotional distress.

Children are leaving school at an earlier stage of their school life because they lack the necessary support to continue their studies. Some of them become open to various types of diseases because of poor health.

Prolonged unemployment of many young people is one of the causes of social movement, rascal activities and political unrest in PNG. Urban youth unemployment for a long period of time may lead to deterioration of both the physical and psychological health of the individual causing levels of heart disease, alcoholism and in extreme cases forming rascal groups.

Urban Youth Underemployment

Urban youth underemployment is evident in the urban centers. It arises when an individual is employed in a type of job that does not use his or her maximum knowledge, ability, training and experience. In societies like PNG. Most young people, especially the marginalised group, can earn a living only by working for others (for example, selling *buai* and raising poultry). Being unable to find a job is a serious problem, because of its human costs, the extent of underemployment should be looked into by the government with the assistance from Aid programs.

Today, it is not surprising to find out that there are a lot of young sales girls and other employees in various department stores who are graduates of universities and colleges whose knowledge, training and experience are not directly related to the nature of tasks they perform every day.

There is lack of job experience, a requirement for the position, hinders the hiring in the public service, and failure to pass the prescribed test for the position and poor communication skills. On the other hand, the findings on underemployment reveals that applicants have no alternative but to accept any job opportunity that is available to survive. Failure to pass the test for the position applied for may not be related to their courses and they do not want to fall under the category of urban youth unemployed graduates.

Issues of Urban Youth Unemployment and Underemployment

Both issues of urban youth unemployment and underemployment are prevalent in these urban centres. The issues on urban youth unemployment and underemployment are varied however, higher education and the labour market seem to be the focal point.

For the past decade, the young graduates were busy searching for solutions to problems of unemployment, underemployment, the educated employed, and the mismatches in the labour area. The influence of education has always been looked upon as the driving force that can best offer a guarantee for success in solving or at least minimising the negative impact of these problems to national economic development.

The mismatch between the supply of and demand for educated and skilled manpower has become common among various graduates of PNG tertiary level education.

An important aspect worth looking into the unemployment and underemployment problem is an analysis of the mismatch that calls for an assessment of the relevance of training and specialisation needed on the job.

If education has to serve its meaningful purpose, perform its role in nation building and contribute its share in economic development, it has to look more closely into various degree, diploma technical and vocational programs that relate to the requirements of business and industry.

YOU HAVE COME TO THE END OF TOPIC 5. YOU MAY NOW READ THE SUMMARY ON THE NEXT PAGE.

Summary 12.2.5

- Labour force refers to people who are eligible to work for the production of goods and services during a specified period.
- Workforce refers to those people who are willing and able to work and are actually employed and working for an industry, firm or an organisation.
- The structure of labour force in Papua New Guinea has changed with female participation rates increasing very quickly.
- Employment is when people are engaged in a regular paid job
- Most people in Papua New Guinea work in the agriculture industry but the productivity is very low compared to other industries.
- Employment in the mining, manufacturing and construction industries are very low due to the fact that most of the work is done by machines which results in very high productivity.
- Papua New Guinea has two sectors in the economy;

- The **formal** sector of the economy comprises of businesses and the government where people are engaged in formal employment and earning regular income
- The **informal** sector of the economy comprises of self-employed people on irregular incomes who make ends meet for their survival.

- Unemployment is a situation where people are able and willing to work but cannot find gainful employment or a paid job.
- Underemployment is when people seem to be working but not for full hours. They are part-time and casual workers
- Types of unemployment; frictional, cyclical, structural, seasonal and hard-core
- Effects of Unemployment; lost output & income, cost to the budget, human resource depreciation, growing poverty & inequality and rising social cost.
- Ways in which the government can lower unemployment: increase government spending, accept higher inflation rate, credit schemes at lower interest rates, support small farming and businesses through financial assistance and lower interest rates on borrowing and increase lending.

NOW DO STUDENT LEARNING ACTIVITY 12.2.5 ON THE NEXT PAGE.

Student Learning Activity 12.2.5

1. Describe the trend of Papua New Guinea's labour force.

2. Which sector of the economy is the main source of employment for many Papua New Guineans? Why?

3. Differentiate between Unemployment and Underemployment.

4. Describe an effect of unemployment.

5. How can the government of Papua New Guinea solve the unemployed and underemployed problem?

NOW CHECK YOUR ANSWERS AT THE END OF THE UNIT

TOPIC 6: INFLATION

Inflation is the general, long-term increase in the average price level of goods and services. It is also referred to as **price stability** which aims to keep the increase in prices as small as possible. Controlling inflation is also one of the economic goals of the PNG to lower the rate of inflation so that the cost of living can be lowered. The people, especially the lower income earners can afford their basic needs and wants to improve their standard of living. However, high inflation can have adverse (bad) impact on the economy. That is, as price rises people find that they will be able to buy less goods and services with the same amount of money**. Real** income and real savings will fall.

Specific Learning Outcomes

Upon the completion of this topic students should be able to:

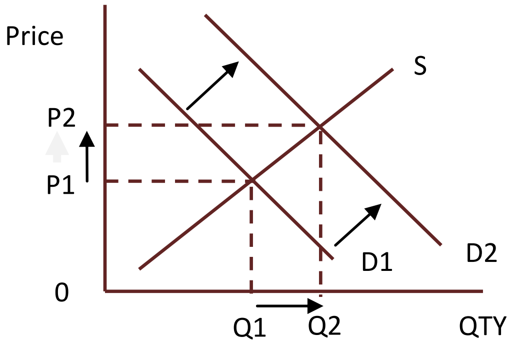
- define inflation
- list types of inflation and explain their causes
- explain the effects of inflation on the economy
- measure inflation and propose policies to control inflation in the economy
- apply and evaluate inflation in Papua New Guinea

12.2.6.1: Types and Causes of Inflation

There are three (3) types of inflation:

1. Excess demand (demand pull) inflation
2. Cost push inflation
3. Imported inflation

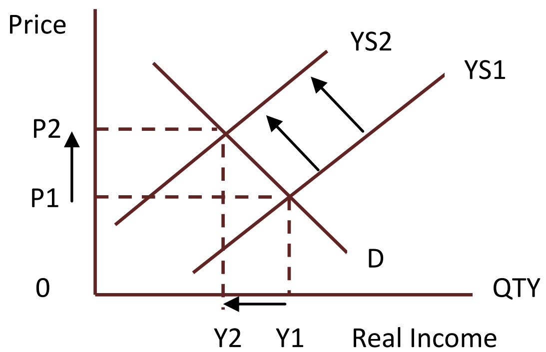
1. Excess-demand inflation is caused by increase in demand. Increase in income leads to increase in demand which leads to demand pull inflation.



D1 = original demand
D2 = new demand
S = supply
P1 = original price
P2 – new price

2. Cost push inflation is caused by increase in the cost of production (e.g. increase in wages or cost of raw materials and fuels.) which are passed onto consumers in the form of increased prices.

The most common example of this is **wage price spiral** (*refer to figure: 1.1, on the next page*) where wage earners often seek (ask for) higher wages during times of inflation in order to maintain real incomes. This results in increased cost of production which producers will pass on to consumers through further increase in prices, thus starting the wage price spiral.



Y = real income
S = supply
YS = real income supply
D = demand for wage

3. Imported inflation is caused by increase in the cost of imported raw materials or finished products which lead to a rise in the cost (price) of items in the domestic (local) market (own country). PNG has experienced the three (3) types of inflation. (*Read more under 'Inflation in PNG: Page 87).*

A wage-price spiral

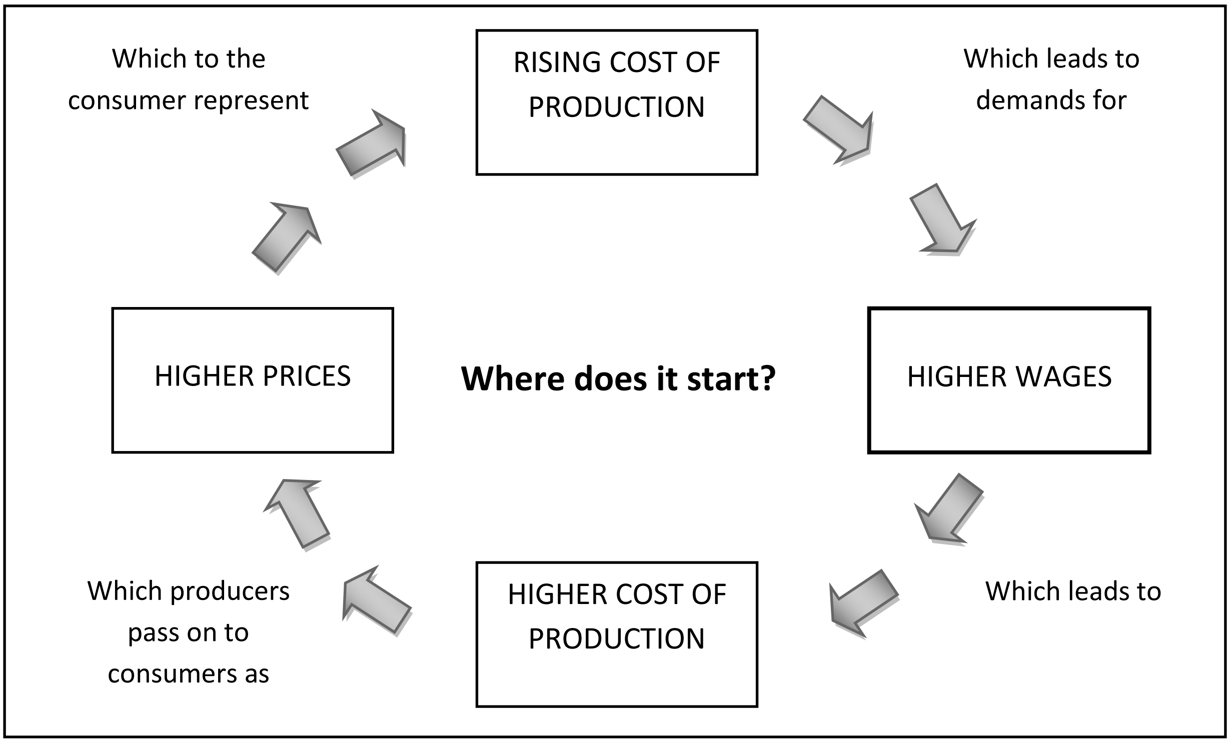


Figure: 1.1

12.2.6.2: Effects of Inflation on the Economy

Inflation reduces the purchasing power of money income and reduces the living standards of those on fixed income. In other words, the real value of money income decreases as inflation rate rises.

For example, if you receive K500 per week and inflation rate is 10% the **real value** (purchasing power) of your income is K450, despite the money or **nominal value** of your income remaining at K500.

- Nominal income (wage) is the actual money received in terms of currency (kina).
- Real income (wage) is income (wage) adjusted to inflation to maintain the real value of money income.

People who suffer as a result of inflation are:

a) people on fixed income
b) people who save money
c) creditors – people who lend money
d) wage earners
e) producers

People who gain as a result of inflation are:

a)shopkeepers and those who have stock of goods
b)debtors- people who have borrowed money
c)shareholders – dividends and shares of the profits increase due to increased revenue and profits resulting from increased prices
d)government – as property owners they receive more in rent as price increase, they also borrow (debtor) lots of money and receive taxes

Other impacts of inflation are:

a) reduced confidence in holding currency
b) redistribution of income
c) investment uncertainty (discourages investment)
d) increased borrowing
e) higher interest rate
f) reduced international competitiveness
g) bracket creep

Bracket creep is when income tax rates are set for nominal income levels. With inflation, nominal wage rates increase and, as a result, many persons move into a higher income tax bracket. They are forced to pay a higher marginal tax rate and a higher average tax rate.

12.2.6.3: Measuring and Controlling Inflation

Measuring Inflation

The rate of inflation is measured by the **Consumer Price Index (CPI**). This is a measure used to show changes in the average price of goods and services over time. The CPI is calculated by looking at a wide range of commonly used goods and services.

The CPI is calculated as follows:

1. Select a regimen - select a wide range of commonly used goods and services. Also referred to as 'basket of representative goods and services'.
2. Give weighting – give each item in the regimen a relative weighting which reflects proportion of income spent on it. (an example on weighting is given below)
3. Calculating weighted price – multiply the weighting by the price of the item. Add the weighted price of each item and give the total a value of 100 units in the base year.
4. Repeat step 1 to 3 in the next time period.
5. Calculating new index number – divide the total weighted price in the current year by the total weighted price in the base year, and multiply by 100.

Examples on Weighting

The items in the regimen are given weighting according to the proportion of income spent by household on them. *The least or smallest quantity consumed is automatically given a weighting of one (1*). Then, the relative weighting for other items in the regimen can be calculated.

Example1*:* weighted price in current year = K50
Weighted price in base year = K40

New index (CPI) = <u>Weighted price in current year</u> x 100 $= \frac{K50}{K40} \times 100 = 125$
Weighted price in base

Now, the inflation rate is calculated as follows:

- the base year index of 100
- current year CPI 125

Inflation rate = <u>Current year CPI - Base year CPI</u> x 100 $= \frac{125-100}{100} \times 100 = 25\%$
Base year CPI

Example 2: In the later year, the average price of the same goods and services is calculated again in the same way. If the new CPI in the following year is 135 then the average price of goods and services would have risen by 8% since the base year.

Now, the inflation rate is calculated as follows:

- the base year index (CPI) 125
- current year CPI 135

Inflation rate = <u>Current year CPI - base year index (CPI)</u> x 100 $= \frac{135-125}{100} \times 100 = 10\%$
Base year CPI

In the table below, the regimen has been selected; prices and weighted expenditure of Year 1 and Year 2 and the index for both years are also calculated. The base year always carries an index of 100.

		Year 1 (base year)		**Year 2 (current year)**	
Regimen	**Weight**	**Price (Kina)**	**Expenditure (Kina)**	**Price (Kina)**	**Expenditure (Kina)**
Meat (500g)	10	9.00	*90.00*	8.00	*80.00*
Potatoes (500g)	5	5.00	*25.00*	6.00	*30.00*
Milk (500ml)	15	4.50	*67.50*	5.00	*75.00*
Bread (loaf)	6	3.00	*18.00*	3.50	*21.00*
Tea (500g)	1	2.50	*2.50*	3.00	*3.00*
Total Expenditure			*203*		*209*
Price index			______		______

Wage Indexation

Wage indexation is increasing of wage as inflation rate rises.
Wage indexation is necessary during inflation to maintain the real value of money income.

Full and Partial Wage Indexation

Full wage indexation is increasing wage according to inflation rate, for instance, inflation rate is 10% then, increase wage by 10%.

Partial wage indexation is less than the inflation rate, for instance, when inflation rate is 10% then, increase wage by 7% which is partial not full.

Calculating Real Value of Money Income

Real value of money income refers to the purchasing power or the amount of goods and services that can be bought with the money income.

Decreasing real value of money income means decreasing purchasing power or the amount of goods and services that can be bought with the money income becomes less and less.

Formula

Example 1: Calculating real income (wage)

Real value of money income = Year 1 CPI ÷ Year 2 CPI, Nominal Income (Wage).

a) Real value of wage (year 1-2) = 100 ÷ 110 ,500 = K454

b) Real value of wage (year 2-3) = 110 ÷ 125 ,500 = K440

Example 2: Full wage indexation

Indexed wage = Year 2 CPI ÷ Year 1 CPI Year 1 indexed wage

a) Wage indexation (year 1-2) = 110 ÷ 100 ,500 = K550
b) Wage indexation (year 2-3) = 110 ÷ 125 ,550 = K625

See examples below:

Data in the table below has been used to compute real value of income (wage) and full wage indexation.

Year	CPI	Inflation rate (%)	Nominal Wage	Real wage	Indexed wage
1	100	___	500	500	500
2	110	10	500	454	550
3	125	13.6	500	440	625

**Rounded off to nearest whole numbers*

Policies to Control Inflation

The different types of inflation may be operating in the economy at the same time. Therefore, it is necessary to choose policies that will specifically attack each type of inflation in the right combination. Some inflation control policies are as follows:

- Price control is setting or fixing maximum prices which set limits for price rise and control the increase in prices of goods and services.
- Wage control is to minimise increase in minimum wage and does not allow excessive wage increases through unions asking for higher wages.

Wage freeze means government placing a temporary ban on wage increases if the economy is experiencing higher inflation until it is controlled or lowered. This can lead to fall in aggregate demand thus, fall in price.

Wage freeze lowers cost of production and fall in price.

- Fiscal policy – pass surplus budget to reduce government expenditure which reduces money supply and controls inflation.
- Tight or Restrictive Monetary policy e.g. raising interest and decreasing lending, sell government securities on the open market operation, increase LGS ratio. to reduce money supply in the economy and as a result control inflation.

12.2.6.4: Inflation in Papua New Guinea

Papua New Guinea has experienced three main types of inflation. They are imported inflation, cost-push inflation and demand-pull inflation.

As PNG is a developing country and heavily dependent on imports, the price rise in imports from overseas countries leads to rise in prices of goods and services in the domestic (local) market, this results in **imported inflation**.

Again, PNG gets most of its resource inputs for production and fuel from overseas countries and the lower kina value contributes to high cost of production. Rising costs add pressure for increased wage rate and result in **cost-push inflation**.

In recent years, Papua New Guinea has experienced a mining boom. For instance, the major mining project like PNGLNG, attracted many foreign and local investors into the country. This gave rise to employment and increased income which led to excess demand (increased demand). Ultimately high demand results in price increase of goods and services, hence, called **excess demand inflation** (or **demand-pull inflation**).

YOU HAVE COME TO THE END OF TOPIC 6. YOU MAY NOW READ THE SUMMARY ON THE NEXT PAGE.

Summary 12.2.6

- Inflation is a long term general increase in the average price level of goods and services.
- Inflation is measured using CPI.
- The three types of inflation are imported inflation, demand pull inflation and cost-push inflation.
- Philip's curve illustrates the relationship between inflation and unemployment.
- Imported inflation is caused by higher cost of importation due to price rise in overseas countries and/or lower exchange rate.
- Demand-pull inflation is caused by increased in income which results in excess demand.
- Cost-push inflation is caused by rise in price of raw materials, fuel and wage rates.

NOW DO STUDENT LEARNING ACTIVITY 12.2.6 ON THE NEXT PAGE.

Student Learning Activity 12.2.6

1. Define inflation.

___

___

2. List the three (3) types of inflation and explain their causes.

   a. ___

   ___

   b. ___

   ___

   c. ___

   ___

3. How is inflation measured?

___

___

4. Explain the effects of inflation on the economy.

___

___

5. Explain wage-price spiral.

___

___

___

NOW CHECK YOUR ANSWERS AT THE END OF THE UNIT

ANSWERS TO STUDENT LEARNING ACTIVITES 12.2.1 – 12.2.6

12.2.1

1. Any two of the problems faced in traditional economy listed below are correct.

a. Double coincidence of wants
b. Limited specialisation
c. Low productivity
d. Problem of divisibility
e. Problem of portability
f. Problem of storage
g. Problem in agreement on the value on the value of goods

2. Double coincidence of wants means two people or parties must agree on each other's goods to exchange to satisfy their wants, otherwise, they will not.

3. Because it is considered as legal tender and can be easily converted to other foreign currencies.

4. Regarded as:

a. Money	b. near / quasi money	c. near / quasi money
d. near / quasi money	e. near / quasi money	f. money

5. Function performed:

a. Unit of account	b. A store of value	c. A store of value
d. Unit of account	e. Medium of exchange	f. A store of value

6. Items included in the money supply in PNG are cash, demand deposits, savings deposits, term deposits, and bank deposits of stabilization funds.

7. Savings accounts are fairly liquid and demand deposits are very liquid (i.e. very easy to convert into cash).

8. Broad money supply

---

9. Increased lending leads to rise in M3 whereas decreased lending results in fall in M3.

---

10. Government securities is a monetary tool the government uses to borrow funds from the domestic market whenever in need of additional funds. Selling government securities to the public (individuals and firms) reduces M3 whereas buying back government securities from the public increases M3.

---

11. M x V must equal to the total amount of money spent during the year, therefore,

a) K5m x 10 = K50m
b) 10 times
c) i) Price level increase (ii) Total amount of goods and services increase

---

12. Monetarists led by Milton Friedman argue that there should be less government intervention in the economy and let the market forces of demand for and supply of money to determine the money supply and the value of money. However, the opposing group of economists known as Keynesians argued that there should be much government involvement in regulating the economy.

---

13. a. An initial balance sheet

Liabilities		Assets		
Deposits	*K500m*	*Liquid assets*	*K100m*	*(20% x K500m)*
		Loans and Advances	*K400m*	*(80% x K500m)*
Total	*K500m*	*Total*	*K500m*	

b. 100/500 x 100 = 20%

c. Reciprocal of LGS ratio: 100/20 = 5

d. With a new deposit of K50m, calculate the additional credit created (ACC).

ACC = D x A/L
= K50m x (80/100)/ (20/100)
= K50m x 80/100 x 100/20
= K200

<u>Note:</u> A fraction divided by a fraction, always multiply by its reciprocal.

e. Draw a final balance sheet showing additional credit created (ACC).

Liabilities		Assets	
Deposits	*K500m + K50m + K200m = K750m*	*Liquid assets* *Loans and Advances*	*K100 + K50m = K150m* *K400m + K200m = K600m*
Total	*K750m*	*Total*	*K750m*

f. Calculate the Multiplier Effect

Multiplier effect = new deposit x credit multiplier = K50m x 5 = K250m.

g. Draw a final balance sheet showing the multiplier effect.

Liabilities		Assets	
Deposits:	*K500m + K250m = K750m*	*Liquid assets* *Loans and Advances*	*K150m (20% x K300m)* *K600m (80% x K300m)*
Total	*K750m*	*Total*	*K750m*

---

14. BPNG is owned by the government and aims to ensure that the nation's monetary policies are carried out in the most efficient way and to promote monetary stability and a sound and efficient financial structure and does not accept deposits from customers. Whereas commercial banks are owned by individuals and they accept deposits and withdrawals from customers. Their main aim is to make a profit.

---

15. Micro-bank is a commercial bank because it performs all the functions of commercial banks.

---

16. Some examples of commercial banks in PNG are ANZ, West Pac, BSP, and Micro-bank.

12.2.2

1. Complete the flow charts

- Flow Chart 1: Decrease interest rate

a. decreases/falls; b. increases/rises c. increases/rises
d. increases/rises e. increases/rises

- Flow Chart 2: Decrease in LGS ratio

a. decreases/falls; b. increases/rises
c. increases/rises d. decreases/fall

- Flow Chart 3: Abolish/Decrease Special Deposit (SP)

a. More money b. increases/rises
c. increases/rises d. decreases/fall

- Flow Chart 4: Buy back government securities by BPNG

a. More b. increases/rises
c. increases/rises d. decreases/fall

- Flow Chart 5: Decrease Lending

a. increases b. increases/rises
c. increases/rises d. decreases/low

2. Quantitative control refers to the volume of loans to be given whereas Qualitative control refers to the type of loans to be given in a particular area in a country.

3. Special deposits are also called Statutory Reserve Deposits (SRD) in other countries.

4. The two aims of the monetary policy is to control:

a. the amount of money in the economy (money supply), and
b. the way in which that money is used

5. Restrictive/tight monetary policy aims to restrict credit and limit the growth on money supply. It is used to contract the income flow. Whereas expansionary/stimulative monetary policy aims to increase the availability of credit and increase the money supply.

12.2.3

---

1. The government finances a deficit budget by borrowing from;
- the central bank
- the commercial banks
- the public (OMO)
- overseas

---

2. The problem of,

a) Deficit budget causes inflation.

b)Causes unemployment.

---

3. A balanced budget is appropriated in an economy where there is no need to change the level of economy e.g. control of inflation or unemployment.

---

4. **a**. Deficit budget increases income, aggregate demand, consumption, production and employment.

b. Surplus budget, decreases income, consumption, demand and employment.

---

5. The main reasons why governments impose taxes are to:

a)raise revenue to finance it budget expenditure

b)discourage the production and consumption of certain goods and services

c) redistribute income

d)manage demand

---

6. There are basically three (3) types of tax rates:

a) Proportional rate of tax

b) Progressive rate of tax

c) Regressive rate of tax

7. PNG's income tax is a progressive method of tax rate and hence, people pay more as income increases.

8.

Annual Income (Kina)	***Tax A (Kina)***	***Tax rate %***	***Tax B (Kina)***	***Tax rate***	***Tax C (Kina)***	***Tax rate***
500	25	**5%**	50	**10**	100	**20**
1000	100	**10%**	100	**10**	150	**15**
2000	400	**20%**	200	**10**	200	**10**
5000	2000	**40%**	500	**10**	200	**4**

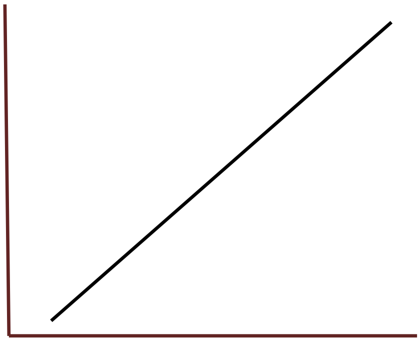
Tax A is: Progressive rate of tax

Tax B is: Proportional rate of tax

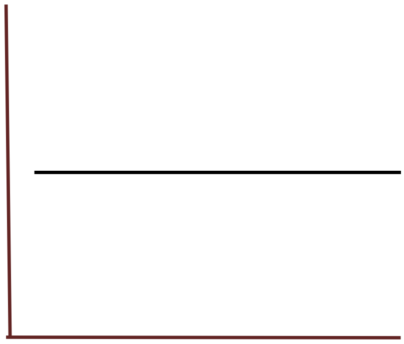
Tax C is: Regressive rate of tax

9.

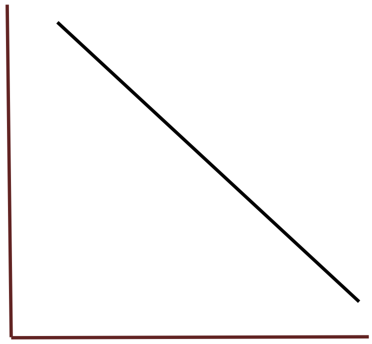
Tax Rate A – Progressive



Tax Rate B – Proportional



Tax Rate C- Regressive



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10. Tax Base refers to the item being taxed so ‘*broadening the tax base’* means increasing the item being taxed.

---

11. PNG government wants to increase the tax base to increase revenue.

12.2.4

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1. Words and meanings

a. Income is the return on investment such as wage, rent, interest and profit.

b. Wage is the return on labour input in production.

c. Wage indexation is fixing wages according to the rate of inflation.

d. Minimum wage is the lowest hourly or daily or monthly wage rate that an employer may legally pay to workers. In others words, it is the lowest wage at which workers may sell their labour.

---

2. Full wage indexation is increasing wage according to the inflation rate. For instance, if inflation rate is 5% then, increase wage by 5%.Whereas, partial wage indexation is when wage is less than the inflation rate. For instance, if inflation rate is 5% then, increase wage by 3%.

---

3. As price rises, income earners can purchase only a fewer items of goods and services. For instance, when the price of 1kg rice is K4 the consumers can purchase 5 of them. However, if price of 1kg rice rises to K5 the consumers would purchase only 4 of them. Therefore, when general price level increases the wages are increased to cater for the rising cost of living.

---

4. The reasons for government intervention in the income distribution:

a) Redistribution of income to achieve equity (fairer distribution)

b) Facilitate resolution of disputes over income between employees and employers

c) To control and regulate cost-push inflation pressure on price.

5. Trade unions are labour movement organisations which fight for the rights and well-being of employees. They usually push for better working conditions for labours/employees. Whereas, Employers Federation is formed by employers and it fights for the rights of employers.

12.2.5

---

1. The labour force of Papua New Guinea has grown faster than its population. Due to the economic hardships, children as young as 10 years old are forced to work. In some government departments elderly people who have reached the retirement age are still at work. As a result of this the labour force has increased rapidly. Female participation in the work force has also increased recently.

---

2. The agricultural sector of the economy is the main source of employment for the majority of Papua New Guineans. Most people work and live in rural areas producing food for home consumption and agricultural products for cash sales in the domestic and export markets. Their contribution to the economy relies on continued access to natural forest lands for development purposes.

---

3. Underemployment is when people seem to be working but not for full hours as expected (part time workers) and produce lower productivity than their capability. This is because the type of job done does not match the qualification and skills acquired. Whereas unemployment is when people are willing and able to find a gainful employment but cannot due to some other reasons or the state of being jobless.

---

4. Unemployment is a big problem especially for the youth, which needs immediate attention by all stakeholders. Rising unemployment results in;

a. social problem such as rascal activities, alcoholism, prostitution and many others.

b. economic problem such as low disposable income which leads to a decrease in demand for goods and services. Low demand will cause production to fall and in the end it deflates the economic activities of the country.

c. prolong unemployment may result in political unrest

---

5. The government has a moral and legal obligation to create employment opportunities in most of the urban centres.

It should provide technical training centres and connect with small medium entrepreneurs and involve unemployed youth.

More focus should be on rural service delivery to retain youths from migrating to towns and cities. Introduce youth council systems in districts and provinces to provide small entrepreneurship in the rural areas.

12.2.6

---

1. Inflation is the general, long-term increase in the average price level of goods and services. It is also referred to as price stability.

---

2. Types of inflation and explain their causes:
   a. Excess-demand inflation – it is caused by increase in demand, also, increase in income leads to increase in demand which leads to demand pull inflation.

   b. Cost push inflation – it is caused by an increase in the cost of production (e.g. an increase in wages or cost of raw materials, fuels etc.), which are passed onto consumers in the form of increased prices.

   c. Imported inflation – it is caused by increase in the cost of imported raw materials or finished products which lead to a rise in the cost (price) of items in the domestic (local) market (own country).

---

3. The rate of inflation is measured by the Consumer Price Index (CPI). This is a measure used to show changes in the average price of goods and services over time.

---

4. Decreasing Real value of money income means decreasing purchasing power or the amount of goods and services that can be bought with the money income becoming less and less.

---

5. Wage price spiral – wage earners often seek (ask for) higher wages during times of inflation in order to maintain real incomes. This results in increased cost of production, which producers will pass on to consumers through further increase in prices, thus starting the wage price spiral.

YOU HAVE COMPLETED UNIT 2 OF THE GRADE 12 ECONOMICS COURSE. YOU WILL NOW WORK ON THE ASSIGNMENT BOOK.

Glossary

Words	Definition
Aggregate demand	Total demand for all goods and services
Balance budget	A money plan in which income is expected to be equal to expenditure (see also budget surplus &budget deficit)
Barter	The exchange of goods or services for other goods or services without the use of money.
Budget	A plan giving details of expected income and expenditure during a specific period of time. In PNG the National Governments budget is presented in the November sitting of Parliament in the Preceding year.
Budget deficit	A situation in which income is less than expenditure.
Commodity	A good that can be seen, touched and transported (as opposed to a service).
Credit creation	Process of making more money available for spending through loans. This involves accepting customer deposits, parts of which are lent, spent, re-deposited, re-lent etc…(see multiplier effects)
Fiscal policy	Policies carried out through the government's budget in relation to government spending, taxation and borrowings.
Government securities	Notes (sometimes called bonds or treasury notes) issued by the government in return for loan funds. (see Open Market Operation)
Gross Domestic Product(GDP)	The value of all goods and services produced for final consumption and for investment within an economy during a year. It does not include income received from overseas by residents.
Gross National Product (GNP)	The sum of all incomes received by residents of the country as a result of economic activity. It includes the value of all goods and services produced in an economy during a year and income received by residents from overseas.
Inflation	A general increase in the average price of goods and services over a period of time.
Labour force	All people in the economy who are able and willing to work.
Legal tender	Money that may be legally offered in payment of debts and may not be refused by creditors.

Liquid Asset Ratio/ LGS ratio	Liquid Assets and Government securities. The LGS ratio is the ratio of these deposits to total deposits of the commercial banks. Banks are required to keep a certain percentage of their assets as liquid assets as part of government monetary policy and in order to meet customers demand for withdrawals
Minimum wage	A lowest wage an employer can be able to pay his/her employer
Monetary policy	Is a policy carried out by the government of Papua New Guinea to influence the amount of money in the economy and the way in which money is used.
Multiplier Effect	A situation in which an initial change in one thing will lead to even larger(multiplied) changes in others
Open -market operation	Buying and selling of Government securities to stimulate or deflate the economy.
Real income	The purchasing power of income measured in terms of the number of goods and services it can buy. During times of inflation as prices rise people find that they are able to buy fewer goods and services for the same amount of money-real income will fall.(see also inflation)
Value Added Tax	A percentage tax on the value added to goods or services at each stage of production and distribution. As with general sales taxes, consumers bear the final burden of value-added taxes.
Wage freeze	The government placing a temporary ban on wage increases if the economy is experiencing higher inflation until it is controlled or lowered

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FODE PROVINCIAL CENTRES CONTACTS

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SUBJECTS AND GRADE TO STUDY

Grade Levels	Subjects
Grades 7 and 8	1. English Language
	2. Mathematics
	3. Science
	4. Social Science
	5. Making a Living
	6. Personal Development
Grades 9 and 10	1. English
	2. Mathematics
	3. Science – Biology/Chemistry/Physics
	4. Social Science
	5. Business Studies
	6. Personal Development
	7. Design and Technology- Computing
Grades 11 and 12	1. English - Applied English/Language and Literature
	2. Mathematics - Mathematics A/Mathematics B
	3. Science – Biology/Chemistry/Physics
	4. Social Science – History/Geography/Economics
	5. Business Studies
	6. Personal Development
	7. ICT

REMEMBER

- For **Grades 7 and 8**, you are required to do all six (6) courses.
- For **Grades 9 and 10**, you must study English, Mathematics, Science, Personal Development, Social Science and Commerce, Design and Technology-Computing is optional.
- For **Grades 11 and 12,** you are required to complete seven (7) out of thirteen (13) courses to be certified.
- For **Matriculation,** you must successfully complete 8 courses; 5 core and 3 optional courses.

CORE COURSES

- Basic English
- English 1
- English 2
- Basic Maths
- Maths 1
- Maths 2
- History of Science & Technology

OPTIONAL COURSES

- Science Stream:
  Biology, Chemistry and Physics
- Social Science Stream:
  Geography, Introduction to Economics, and Asia and the Modern World

Your Provincial Coordinator or Supervisor will give you more information regarding each subject.