

Hunde 2nd School Gelemso

ECONOMICS SHORT NOTE FOR GRADE 12TH

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UNIT 1

THE FUNDAMENTAL CONCEPTS OF MACROECONOMICS

1.1 Definition and Focus Areas of Macroeconomics Revisited

1.2 Definition of Macroeconomics

- ❖ Conventionally, **economics** is divided into **microeconomics** and **macroeconomics**.
- ❖ **Microeconomics:** studies the **individual decision-making behaviour** of different economic units such as households, firms, and governments at a disaggregated level.
- ❖ **Macroeconomics:**
 - ✓ studies **overall or aggregate** behaviour of the economy
 - ✓ the **overall level of output, prices and employment**.
 - ✓ studies what happens to the whole economy or economic system.
 - ✓ focuses on the economy as a **whole**.
 - ✓ the study of the structure and performance of national economies and of the policies that governments use to try to affect economic performance.
- ❖ **The Focus Areas of Macroeconomics**
 - The focus areas of macroeconomics are aggregate behaviour of the economy, such as
 - ✓ Economic growth
 - ✓ Employment
 - ✓ Inflation
 - ✓ distribution of income
 - ✓ macroeconomic policies and international trade.
- ❖ **The study of macroeconomics helps us understand and try to find answers for central macroeconomic questions such as:**
 - What factors determine the flow of total output produced in the economy over time?
 - How can a nation increase its rate of economic growth?
 - Why do outputs and employment sometimes fail?
 - What are the causes of inflation and how it can be controlled?
 - How do government policies affect output, unemployment, inflation, and growth?
 - How can business cycle downturns be managed?
 - How does the domestic economy interact with the rest of the world?
- ❖ These questions are related to **macroeconomic goals**. The goals include achieving
 - ✓ ***economic growth***
 - ✓ ***full employment***
 - ✓ ***price stability***
 - ✓ ***reducing budget or balance of payment deficit, and***
 - ✓ ***ensuring fair distribution of income in society.***
- ❖ A country's macroeconomic health is examined through such goals as the
 - ✓ **rise in the standard of living**
 - ✓ **low unemployment**

✓ **low inflation.**

- ❖ **macroeconomic variables** which show the status and trends of the whole economy. Examples of such variables include
 - ✓ **gross domestic product (GDP)**
 - ✓ **gross national product (GNP)**
 - ✓ **economic growth rate**
 - ✓ **price level (rate of inflation and deflation)**
 - ✓ **investment**
 - ✓ **savings**
 - ✓ **consumption**
 - ✓ **government budget**
 - ✓ **level of employment and unemployment**
 - ✓ **total labour force**
 - ✓ **demand for money and supply of money**
 - ✓ **total export and total import**
 - ✓ **trade balance and exchange rate.**
- ❖ The macroeconomic variables such as **Gross Domestic Product (GDP), unemployment rate, and inflation** help us determine the **macroeconomic performance of a country**
- ❖ **GDP** which is defined as the measure of the market value of all final goods and services which are produced in a country during a year.
- ❖ **Gross National Product (GNP)**, which is defined as the total value of final goods and services that are produced by domestically owned factors of production in a given period of time, usually one year, irrespective of their geographical locations
- ❖ **GDP and GNP** are functionally related as: **$GNP = GDP + NFI$** , where **NFI** denotes **net factor income received from abroad which is equal to factor income received from abroad by a country's citizens less factor income paid for foreigners to abroad.**
- **Product approach**: here, the GDP is calculated by adding the market value of goods and services that are currently produced by each sector of the economy. Only the values of final goods and services are included to avoid double counting.
- **Expenditure approach**: here, the GDP is measured by adding all expenditures on final goods and services that are produced in the country by all sectors of the economy. Thus, GDP can be estimated by summing up personal consumption of households (C), gross private domestic investment (I), government purchases of goods and services (G) and net exports (NE).
- **Income approach**: in this approach, GDP is calculated by adding all the incomes accruing to all factors of production used in producing the national output. Then, the GDP is the **sum of incomes to owners of factors of production** (in the form of **wages and salaries, rental income, interest income, and profits**) as well as some other claims on the value of output less subsidies and transfer payments.

For as long as market values and prices are involved in GDP calculation of GDP, we have **nominal GDP** (measured in actual market prices) and **real GDP** (calculated in **constant prices** by taking a base year). Real GNP accounts for difference in price levels in different countries, in cases where inter-country comparisons of GNP are considered. An upward or downward movement in real GDP is the most widely used measure of the level and growth of output.

1.3 Key Challenges in Macroeconomics

1.3.1 Economic Growth

Economic growth represents an **increase in the capacity of an economy** to produce goods and services. It is a necessary ingredient for both **high incomes and higher living standards**. Higher GDP per capital translates to better diet, health, life expectancy and greater educational opportunity

- ❖ Measuring real income in developing countries is not simple as we may think. This is because in developing countries real income is generally understated compared to that of developed countries. **The reasons are:**
- ✓ The national income account may understate GDP in developing countries because the majority of the population are subsistence farmers who **produce for their own consumption** and such outputs are not correctly reported.
- ✓ **Underreporting income** is common in developing countries due to fear of tax and it is partly due to inefficient taxation systems.
- ✓ Usually, **no allowance is made for non-monetary sectors** in the national income account of less developed countries.
- ✓ **Distortion in prices** is much higher in developing countries than in developed ones.
- ✓ The cost of pollution and environmental degradation are **not deducted from gross national product to get net GNP** in developing countries while in developed countries such as Sweden and the Netherlands, the cost of pollution is deducted to get net GNP

1.3.2 Inflation

The prices of goods and services do not always stay the same. This means that sometimes they rise and at other times they fall. The word “**inflation**” represents a **regular and continuous rise in the general price level**. Since the general price level refers to the average price of goods and services, inflation represents the rising prices of almost all goods and services. Moreover, inflation is cumulative whereby even a small rise in price in the beginning may become a very large one in the future. Similarly, the rate of inflation denotes the rate of growth or decline of the price level from one year to the next. It is the percentage change in the overall level of prices. Contrarily, the fall in price level is called “**deflation**”. Generally speaking, a substantial and rapid rise in the general price level induces a **decline in the purchasing power of money**, which means people must **spend more** to buy a litre of milk or a kilogram of sugar. It is obvious that when prices rise, **money buys less and the standard of living declines** over time. Therefore, **inflation increases the cost of living, and decreases the purchasing power of currency**.

In order to protect citizens from the increased cost of living, some governments index contracts, wage levels, and interest rates to inflation. Indexing wage contracts and interest rates means that they **will increase when inflation increases to retain purchasing power**. **When wages do not rise as price levels rise, this leads to a decline in the real wage rate and a decrease in the standard of living**. For this and other reasons, inflation is the major concern of macroeconomic policy makers throughout the world.

Inflation results in an **increased consumer price index (CPI)**. The **CPI** is a price index whose movement reflects changes in the prices of goods and services typically purchased by consumers. Thus, the CPI of each month reflects the ratio of the current cost of the basket divided by its base-period cost.

Types of Inflation

Now, let us explore the type of inflation. It is broadly the case that, during inflation, the supply of goods and services is less in comparison to their demand (i.e. aggregate demand is higher than aggregate supply) resulting in a situation where too much money is chasing too few goods. Yet shortage in supply of goods and services alone does not provide the sole explanation

- ❖ **Inflation classified on the basis of speed of occurrence** and can be termed as **creeping, walking, running, galloping inflation, and hyperinflation**. Thus,
 - Creeping inflation** is moderate inflation that occurs when the price level persistently rises over a period of time at a slow rate such as the price rise in 3% or less.
 - Walking inflation** occurs when annual inflation rate is a single digit or in the range of 3 to less than 10% per year.
 - Running inflation** occurs when prices rise rapidly at the rate of 10 to 20% per year.
 - Galloping or jumping inflation** occurs at a quick rate (dual or triple-digit annual rates) for a short period of time.
 - Hyperinflation** refers to a situation where the prices of goods and services rise uncontrollably, for example, at the rate of increase at more than 50% a month.
- ❖ **Inflation is also classified on the basis of causes** such as **demand-pull or cost-push inflation as well as wage, profit, scarcity, deficit, currency, credit and foreign trade** induced inflation. Many of these causes are related to how money is supplied and demanded in the economy

1.3.3 Unemployment

- A person is **employed** if he or she spends some of his/her time working at a paid job.
- A person is **unemployed** if he or she is not employed and has been looking for a job or is on temporary layoff.
- On the other hand, a person who fits into neither of the first two categories, such as a **full-time student or retiree, is not in the labour force**.
- In the case of Ethiopia, the population aged 14 to 60 is termed as economically active or of working age. Yet formal employment requires a minimum of 18 years of age.
- **The labour force does not include**
 - ✓ **children under the age of 14**
 - ✓ **retired people over 60 years old and**
 - ✓ **those in mental and correctional institutions.**
- Unemployment is the macroeconomic problem that affects people most directly and severely. It has economic costs to broader society
- **The labour force** is defined as the sum of the employed and unemployed. The total labour force refers to the percentage of the population that is willing and able to work.
- **The unemployment rate** is defined as the percentage of the labour force that is unemployed or the percentage of those people who want to work and who do not have jobs or those who are out of job despite willingness to work at the existing wage rate.
- **The labour-force participation rate** is the percentage of the adult population that is in the labour force
- ❖ **There are different types of unemployment. The major ones are frictional, cyclical and structural unemployment**

1. Frictional unemployment

- occurs during the time when **workers move between jobs which takes time on part of both the employer**
- the individual to match those who are looking for employment with the correct job opportunities.
- This results in a lack of perfect mobility of workers between jobs.
- The good example of these, the case of individuals entering the workforce for the first time after graduating from college/ university or searching for their first job. They are unemployed until they get their first job.
- **There is Temporarily unempl't**

2. Cyclical unemployment

- occurs due to a **deficiency of aggregate effective demand resulting from business depressions.**
- International factors may generate this kind of unemployment. For example,
 - ✓ **lack of demand for coffee or other agricultural products in overseas markets**, resulting from unfavourable business cycles that has a knock-on effect to the employment situation in a domestic economy.
 - ✓ **workers will be laid off when the economy is in recession.**

3. Structural unemployment

- is a form of involuntary unemployment that happens when there is lack of adjustment between demand for and supply of labour.
- implies, the economic changes are extensive amounting to a transformation of an economic structure.
- there are situations where employers may lack knowledge about the availability of workers or the workers may not know that employment is available with a relevant employer.
- Individuals may also lack the skills that are valued by the labour market because they never learned any skills.
- Education is the key in minimizing the amount of structural unemployment.
- In sum, structural unemployment is caused by such factors as
 - ✓ the lack of necessary skills for a particular job
 - ✓ labour immobility
 - ✓ breakdowns of machinery
 - ✓ shortages of raw materials.

- ❖ On other hand, there is a form of unemployment categorised as
 - A. **Underemployment:** which refers to the situation in which person is forced by unemployment to take a job that he/she thinks is not adequate for his/her purpose, or not commensurate with his/her training. Furthermore, there are those who work full time in terms of hours per day but earn very little to rise above the poverty level.
 - B. **Open and disguised unemployment:** in urban and rural areas are estimated at 30-35% of the labour force in underdeveloped countries.
 - C. **involuntary unemployment:** people who want to work and who do not have jobs or those who are out of job despite willingness to work at the existing wage rate.

1.3.4 Business Cycle

- In real life, economic growth is often accompanied by cycles of **expansion and contraction, boom and bust**.
- refers to **economy-wide fluctuations in production, trade, and general economic activities**.
- The term “**business cycle**” also known as “**trade cycle**”, “**economic cycle**” or “**boom-bust cycle**”
- The **fluctuations represent upward and downward movements in levels of GDP** or the **period of expansions and contractions in the level of economic activities** around a long-term growth trend.
- **Business cycles** as fluctuations recur with a certain degree of regularity following a pendulum like oscillation. There are upward swings and then downward swings in business According to some economists, every boom is followed by a slump and vice versa

❖ Business cycles have four distinct phases: expansion, peak, contraction, and trough.

- A. An **expansion** is characterized by
 - ✓ increasing employment
 - ✓ economic growth
 - ✓ upward pressure on prices.
- B. A **peak** is the highest point of the business cycle, when the economy is producing at
 - ✓ maximum possible output
 - ✓ employment is at full employment
 - ✓ inflationary pressures on prices are evident.
- C. Following a peak, the economy typically enters a correction which is characterized by a **contraction** where
 - ✓ growth slows
 - ✓ employment declines (unemployment increases)
 - ✓ pricing pressures subside.
- D. The slowing ceases at the **trough** and at this point the economy has hit a bottom from which the next phase of expansion will emerge.

1.3.5 Balance of Trade

- **The balance of trade**
 - ✓ is another **macroeconomic variable** that affects national economies.
 - ✓ is the difference between **export and the import of goods and services** of a country for a given period;
 - ✓ it is also an important component of the balance of payment of a country
- **The balance of payment**
 - ✓ is the **systematic record of a nation's financial transactions** with the outside world.
 - ✓ It is divided into **current and capital accounts**.
- 1. **The current account** shows
 - ✓ **the market value of a country's export and import of goods and services** (Trade Balance and Net Service)
 - ✓ investment income
 - ✓ debt service payments
 - ✓ private and public net remittances and transfers.

2. The **capital account** shows the volume of that flow into and out of a country over a given period. These are
 - ✓ **private foreign investment**
 - ✓ **public grants**
 - ✓ **public loans**
- Countries pay interest on loans they receive. For this, they pay a sum of interest payments and repayments of principal on external debt, which is also **called debt service**
- ❖ The **balance of trade (or trade balance)** is any gap between a nation's dollar value of exports and imports.
 1. When imports exceed exports, the result is a **trade deficit** in the economy.
 2. if exports exceed imports, the economy has a **trade surplus**.
 3. if exports and imports are equal, then **trade is balanced**.
- ❖ Many nations seek trade surpluses; however, some degree of **trade deficits is economically tolerable for countries** when such a deficit reflects the **importing of capital equipment** which can then be used to boost productivity and output.
- ❖ A series of financial crises which are triggered by **unbalanced trade** can lead economies into **deep recessions**. These crises begin with **large trade deficits**

Review Questions

Part I: Answer for True and False

1. There is no difference between microeconomics and macroeconomics. **False**
2. Macroeconomics focuses on the economy as a whole. **True**
3. Microeconomic goals include achieving high economic growth, promoting maximum employment or reducing unemployment, attaining stable prices, reducing budget or balance of payment deficit, and ensuring fair distribution of income. **False**
4. Balance of trade is the difference between export and import of goods and services of a country for a given period. **True**
5. Monetarists prescribe active fiscal policy to alleviate weak aggregate demand. **False**

Part II: Answer of Multiple Choices

1. Which one of the following is not a macroeconomic question? A. What determines the level of economic activity in a society? B. What determines how many goods and services a nation produces? C. What determines how many jobs are available in an economy? **D. What causes a firm to grow?**
2. Technological change has the largest impact on which form of unemployment? A. frictional unemployment B. cyclical Unemployment **C. Structural unemployment** D. All of the above
3. If the national economy is closed, i.e. a country has no interaction with the rest of the world, then, A. $GNP > GDP$ B. $GNP < GDP$ **C. $GNP = GDP$** D. All
4. Which one of the following refers to the recurrent ups and downs in the level of economic activity? A. economic boom B. economic trough C. unemployment **D. business cycle**
5. One of the following is not true about the evolution and recent development of macroeconomics. A. The classical view was the predominant economic philosophy until the Great Depression. B. Keynesian economics is more useful for analysing the macroeconomic in the short run. C. The most recent wave of new Keynesian economics is more micro-based. **D. Monetarist argued that it is fiscal policy and not monetary policy that addresses the macroeconomic problems.**

UNIT 2

AGGREGATE DEMAND AND AGGREGATE SUPPLY ANALYSIS

2.1 Aggregate Demand (AD)

❖ Aggregate Demand (AD)

- ✓ the **total amount of money which all sections** (households, firms, and governments) are **ready to spend on the purchase of goods and services produced in an economy** during a given period.
- ✓ is the **total expenditure on consumption and investment**.
- ✓ is the **sum of spending** by consumers, businesses, and governments which depends on the **level of prices** as well as on **monetary policy, fiscal policy and other factors**.

❖ There are four major components of AD

- A. household consumption demand (C) B. private investment demand(I)
- C. government demand for goods and services (G) D. net export demand (X-M)

So that, $AD = C + I + G + (X - M)$

2.1.2 The Aggregate Demand Curve

❖ The aggregate demand (AD) curve

- ✓ is a schedule that shows the amount of real output that buyers collectively desire to purchase at each price level *ceteris paribus*.
- ✓ R/ship b/n price level and real GDP demanded is ***inverse or negative***.
- ✓ a downward sloping curve
- ✓ aggregate demand **rises** with a **fall** in the general price level

- ✓ the general **price level falls** with **increases** the aggregate quantity demanded of the **output**

Figure 1.2 Aggregate Demand Curve

❖ Why Does the Aggregate Demand Curve Slope Downward?

Asking why the AD curve slopes downward is the same as asking why there is an inverse relationship between the price level and the quantity demanded of real GDP. This inverse relationship, and the resulting downward slope of the AD curve, is explained by the ***real balance effect, the interest rate, and the international trade effect***.

1. Real Balance Effect:

- ❖ The real balance effect states that the inverse relationship between the price level and the quantity demanded of real GDP is established through
 - ✓ changes in the ***value of monetary wealth, or money holdings***.
 - ✓ ***A rise in the price level causes purchasing power to fall, which decreases a person's monetary wealth.***
 - ✓ ***as people become less wealthy, the quantity demanded of real GDP falls.***

2. Interest Rate Effect:

- ❖ This is also called a ***"money supply effect"***.
- ❖ ***A rise in price with a fixed money supply***, other things being equal, ***leads to tight money and produces a decline in total real spending***.
- ❖ The inverse relationship between the price level and the quantity demanded of real GDP is established through
 - ✓ ***changes in household and business spending*** that is sensitive to changes in interest rates.
 - ✓ ***A higher price level increases the demand for money.***
 - ✓ So, given a fixed supply of money, an ***increase in money demand will drive up the price paid for its use***. That price is the interest rate.
 - ✓ ***Higher interest rates curtail investment spending and interest-sensitive consumption spending.***
 - ✓ ***Higher price level reduces the amount of real output demanded.***

3. **International Trade Effect:**

- ❖ The international trade effect states the inverse relationship between the price level and the quantity demanded of real GDP, which is established through
 - ✓ foreign sector spending.
 - ✓ Suppose that the price level in Ethiopia rises. As this happens,
 - Ethiopian goods become relatively more expensive than foreign goods.
 - As a result, both Ethiopians and foreigners buy fewer Ethiopian goods.
 - Due to this, the quantity demanded of Ethiopia's real GDP falls.
- ❖ **Change in Quantity Demanded Vs Change in Aggregate Demand**
 - A **change in the quantity demanded of real GDP** is brought about by a
 - ✓ **change in the price level.**
 - ✓ For example, as the **price level falls, the quantity demanded of real GDP rises**, ceteris paribus.
 - ✓ represented as a **movement from one point to another along the same demand curve.**
 - A **change in aggregate demand** is a
 - ✓ shift in the aggregate demand curve
 - ✓ the quantity demanded of real GDP changes even though the price level remains constant.
 - ✓ General Price level remaining constant,
 - ✓ any positive change in any of these factors causes a rightward shift in the AD curve
 - ✓ a negative change shifts the AD curve leftward.
 - These factors include:
 - ✓ **general level of income of the people,**
 - ✓ **real interest rate,**
 - ✓ **level of economic activity in other countries (it determines the level of exports),**
 - ✓ **availability of credit,**
 - ✓ **the level of economic activity in the economy itself.**

Figure 2.2 A change in the quantity demanded Vs Change in Aggregate Demand

2.1.3 Shifts in the Aggregate Demand Curve

- ❖ What are the kinds of variables that lead to shift in aggregate demand? In other words, what can cause aggregate demand to rise and what can cause it to fall? The simple answer to these questions is that
 - ✓ **aggregate demand changes when the spending on goods and services changes. For example,**
 - ✓ **if spending increases at a given price level, aggregate demand rises;**
 - ✓ **if spending decreases at a given price level, aggregate demand falls.**
- ❖ If, at given price level, consumption, investment, government purchases, or net exports rise, aggregate demand will rise and the AD curve will shift to the right.
- ❖ If, at a given price level, consumption, investment, government purchases, or net exports fall, aggregate demand will fall and the AD curve will shift to the left. We can write these relationships as:

Consumption And Aggregate Demand

- ✓ If, at a given price level, C increase = G increase = NE increase = AD increase
- ✓ If, at a given price level, C decrease = G decrease = NE decrease = AD decrease
- ❖ There are two categories of AD determinants. Namely,
 1. policy variables under government control, e.g.
 - ✓ monetary
 - ✓ fiscal policy variables

2. exogenous variables which are determined outside the AD-AS framework, e.g.

- ✓ Foreign economic activity
- ✓ technological change.

❖ **Factors Affecting Consumption:** Four factors that can affect consumption are ***wealth, expectations about future prices and income, the interest rate, and income taxes.***

1. Wealth:

- ✓ Greater wealth makes individuals feel financially more secure and thus, more willing to spend.
- ✓ **Increases in wealth lead to increases in consumption.** For example,
 - if consumption increases, then aggregate demand rises
 - the AD curve shifts to the right.
- ✓ **Decreases in wealth lead to a fall in consumption,** which in its turn
 - leads to a fall in aggregate demand, consequently,
 - the AD curve shifts to the left.

Wealth And Aggregate Demand

- ***Increase in wealth = C Increase = AD Increase***
- ***Decrease in wealth = C decrease = AD decrease***

2. Expectations about future prices and income.

- ✓ **If individuals expect higher prices in the future,**
 - they increase current consumption expenditures to buy goods at the lower current prices.
 - increase in consumption leads to an increase in aggregate demand.
- ✓ **If individuals expect lower prices in the future,**
 - they decrease current consumption expenditures.
 - reduction in consumption leads to a decrease in aggregate demand.
- ✓ **expectation of a higher future income**
 - increases consumption
 - leads to an increase in aggregate demand.

- ✓ expectation of a lower future
 - income decreases consumption
 - leads to a decrease in aggregate demand.

Expectations about future prices

- ***Expect higher future prices = C increase = AD increase***
- ***Expect lower future prices = C decrease = AD decrease***

Expectations about future income

- ***Expect higher future income = C increase = AD increase***
- ***Expect lower future income = C decrease = AD decrease***

3. Interest rate.

- ✓ an increase in the interest rate
 - increases the monthly payment amounts which are linked to their purchase and
 - thereby reduces their consumption.
 - leads to a decline in aggregate demand.
- ✓ a decrease in the interest rate
 - reduces monthly payment amounts which is linked to the purchase of durable goods
 - thereby increases their consumption.
 - increase in consumption leads to an increase in aggregate demand.

Interest rate And Aggregate Demand

- Decrease in Interest Rate = C increase = AD increase
- Increase in Interest Rate = C decrease = AD decrease

4. Income taxes.

- ✓ As income taxes rise
 - disposable income decreases
 - when people have less take-home pay to spend, consumption falls.
 - Consequently, aggregate demand decreases.
- ✓ A reduction income taxes
 - it raises disposable income.
 - when people have more take-home pay to spend, consumption rises
 - aggregate demand will increase.

Income tax And Aggregate Demand

- Decrease in Income tax = C increase = AD increase
- Increase in Income tax = C decrease = AD decrease

❖ **Factors Affecting Investment:** Three factors that can change investment are *the interest rate, expectations about future sales, and business taxes.*

1. Interest rate.

- ✓ changes in interest rates affect business decisions.
- ✓ as the interest rate rises
 - the cost of a given investment project rises and businesses invest less.
 - As investment decreases, aggregate demand also decreases.
- ✓ as the interest rate falls
 - the cost of a given investment project falls and businesses invest more.
 - Consequently, aggregate demand increases.

Interest rate Investment And Aggregate Demand

- Decrease In Interest rate = C increase = AD increase
- Increase In Interest rate = C decrease = AD decrease

2. Expectations about future sales:

- ✓ businesses invest because they expect to sell the goods they produce.

Expectations about future sales And Aggregate Demand

- *Businesses become optimistic about future sales = Inv't increase = AD increase*
- *Businesses become pessimistic about future sales = Inv't decrease = AD decrease*

3. Business taxes:

- ✓ Businesses naturally consider expected after-tax profits when making their investment decisions.
- ✓ an increase in business taxes
 - lowers expected profitability.
 - businesses invest less.
 - As investment spending declines,
 - aggregate demand declines.
- ✓ A decrease in business taxes
 - rises expected profitability
 - rises investment spending.
 - its turn increases aggregate demand.

Business taxes And Aggregate Demand

- Decrease in business tax = Inv't increase = AD increase
- Increase in business tax = Inv't decrease = AD decrease

❖ Factors Affecting Government Spending:

- ✓ An increase in government purchases (for example, on military equipment)
 - will shift the aggregate demand curve to the right as long as tax collections and interest rates do not change as a result.
- ✓ reduction in government spending (for example, fewer transportation projects)
 - will shift the curve to the left.

❖ Factors Affecting Net Exports:

- ✓ The main determinants of net export are
 - **domestic and foreign incomes**
 - **relative price**
 - **exchange rate**
 - **domestic and foreign trade policies**
 - **preferences and technology.**

❖ For instance, a change in national income affects net exports:

as foreign real national income rises, foreigners buy more Ethiopian goods and services. Thus, Ethiopia's exports (EX) rise and as exports rise, net exports rise, ceteris paribus. As net exports rise, aggregate demand increases. This process works in reverse, too. This means that as foreign real national income falls, foreigners buy fewer Ethiopian goods and exports fall. This in its turn lowers net exports, which reduces aggregate demand.

Foreign real national income and Aggregate Demand

- Increase Foreign real national income = increase Export = increase Ethio net export = increase AD
- Decrease Foreign real national income = decrease Export = decrease Ethio net export = decrease AD

❖ In the case of change in exchange rate affecting net exports:

- ✓ when a currency **appreciates** in value if more of a foreign currency is needed to buy it.
- ✓ A currency is said to **depreciate** if more of it is needed to buy a foreign currency.
- ✓ For example, a change in the exchange rate from \$1 = 32 Birr to \$32 = 1 Birr means that more dollars are needed to buy 1 Birr, and Birr appreciates. This is because more dollars are needed to buy 1 Birr, when the dollar depreciates.
- ✓ Depreciation of a nation's currency makes foreign goods more expensive.
- ✓ an appreciation in a nation's currency makes foreign goods cheaper.

✓ As **Birr the depreciates**

- foreign goods become more expensive.
- Ethiopians cut back on imported goods
- foreigners (whose currency has appreciated) increase their purchases on Ethiopian exported goods.
- If exports rise and imports fall, net exports increase and aggregate demand increases.

✓ As the **Birr appreciates**

- foreign goods become cheaper
- Ethiopians increase their purchases of imported goods
- foreigners (whose currency has depreciated) cut back on their purchases of Ethiopia's exported goods.
- if exports fall and imports rise, net exports decrease, and thus, lower aggregate demand.

Exchange rate And Aggregate Demand

- ETB depreciates = Export increase and import decrease = Ethio net export increase = AD increase
- ETB appreciates = Export decrease and import increase = Ethio net export decrease = AD decrease

2.2 Aggregate Supply

2.2.1 Concept of Aggregate Supply

❖ *Aggregate supply*

- ✓ refers to the **quantity supplied of all goods and services** (real GDP) at various **price levels**, ceteris paribus.
- ✓ **direct or positive relationship between the price level and the amount of real output** that firms offer for sale.
- ✓ includes both **SRAS** and **LRAS**.

1. The Keynesian supply curve

- ✓ is **horizontal**.
- ✓ Firms will **supply whatever amount of good** is demanded at the **existing price level**
- ✓ there is **unemployment**.
- ✓ Firms can obtain much labour as they want at the current wage.
- ✓ Average costs of production are assumed **not to change as their output level changes**.

2. The classical aggregate supply curve

- ✓ is **vertical**
- ✓ indicating that the **same amount of goods** will be **supplied whatever the price level**
- ✓ the labour market is always in equilibrium with **full employment** of the labour force.

2.2.2 The Upward Sloping Aggregate Supply Curve: The Short Run (SRAS)

- ❖ The **short run** is a time horizon during which at least one of the firm's inputs **cannot be varied**
- ❖ the **long run**, is a time horizon that is long enough for a firm to **vary all of its inputs**.
- ❖ The short-run aggregate supply (SRAS) curve
 - ✓ shows the quantity supplied of all goods and services (real GDP or output) at different price levels, ceteris paribus.
 - ✓ is **upward sloping**:
 - ✓ **as the price level rises, firms increase the quantity supplied of goods and services**
 - ✓ **as the price level drops, firms decrease the quantity supplied of goods and services**.

- ❖ **Why is the SRAS curve upward sloping?** Economists have put forth a few explanations, from which we will discuss only two of them, **sticky wages and worker misperceptions**.

1. Sticky wages:

- ✓ some economists believe that wages are **sticky, or inflexible**.
- ✓ wages are "**locked in**" for a few years due to labour contract agreements entered into between workers and employers.
- ✓ wages may be sticky because of certain social conventions or perceived notions of fairness.

- ❖ **Real wages are nominal wages which are divided by the price level.**

- ❖ **Note that the quantity supplied of labour is directly related to the real wage:**

- ✓ as the real wage rises, the quantity supplied of labour rises
- ✓ the real wage falls, the quantity supplied of labour falls.

- ❖ **The quantity demanded of labour is inversely related to the real wage:**

- ✓ as the real wage rises, the quantity demanded of labour falls
- ✓ as the real wage falls, the quantity demanded of labour rises.

♣ **In conclusion, if wages are sticky**, a decrease in the price level (which pushes real wages up) will result in a decrease in output. This is what an upward-sloping SRAS curve represents: as the price level falls, the quantity supplied of goods and services declines

2. **Worker misperceptions:** They also may know that the price level is lower, but they may not know initially how much lower the price level is.

❖ In response to (the misperceived) falling real wage

- ✓ workers may reduce the quantity of labour that they are willing to supply.
- ✓ With fewer workers (resources), firms will end up producing less.

♣ **In conclusion, if workers misperceive real wage changes**, then a fall in the price level will bring about a decline in output, which is illustrative of an upward-sloping SRAS curve.

❖ **Changes in Short-Run Aggregate Supply and Shifts in the SRAS Curve**

➤ **A change in the quantity supplied of real GDP is brought about by**

- ✓ a change in the price level.
- ✓ shown as a movement along the SRAS curve

➤ **what are the factors that are likely to shift the SRAS curve?**

- ✓ Not change by price level
- ✓ Change By Other factors

❖ Aggregate Supply is determined by a number of factors. Some of these factors are as follows:

a) cost of input or change in input price

b) domestic Resource availability

- ✓ managerial ability, land, labour and capital
- ✓ price of imported resource
- ✓ market power

c) change in productivity

d) state of technology

e) tax policy of government (business taxes and subsidies)

f) weather (applies particularly to agricultural output)

❖ **Wage rates:**

- ✓ Is Labour price
- ✓ contributes for cost of production.
- ✓ cost of input in the supply process.
- ✓ Changes in wage rates have a major impact on the position of the SRAS curve

Profit per unit = Price per unit - Cost per unit

❖ **When higher wage rates** are introduced,

- ✓ Mean higher costs and, at constant prices
- ✓ a firm's profits at a given price level decrease.
- ✓ the firm reduces production
- ✓ leads to a **leftward shift** in the aggregate supply curve.

❖ **When lower wage rates** are introduced,

- ✓ Mean lower costs and, at constant prices
- ✓ a firm's profits at a given price level increase.
- ✓ the firm rise production
- ✓ leads to a **rightward shift** in the aggregate supply curve.

2.2.3 The Vertical Aggregate Supply Curve: The Long Run (LRAS)

- ❖ When the economy is said to be in the **long run**.
 - ✓ **Wages or price will become flexible and no misperceptions** will turn into accurate perceptions.
 - ✓ the economy produces the **full-employment real GDP or the natural real GDP (QN)**.
- ❖ The aggregate supply curve that identifies the output the economy produces in the long run is
 - ✓ the **long-run aggregate supply (LRAS) curve**.

2.3 Equilibrium of Aggregate Demand and Aggregate Supply

- ❖ we put **aggregate demand and short-run aggregate supply together** to achieve **short-run equilibrium** in the economy.
- ❖ Aggregate demand and short-run aggregate supply determine the **price level and real GDP**.

At P₁, the quantity supplied of real GDP (Q₂) is greater than that of the quantity demanded (Q₁). There is a surplus of goods. As a result, the price level drops, firms decrease output, and consumers increase consumption. Why do consumers increase consumption as the price level drops? (Hint: Think of the real balance, the interest rate, and the international trade effects.

At P₂, the quantity supplied of real GDP (Q₁) is less than that of the quantity demanded (Q₂). There is a shortage of goods. As a result, the price level rises, firms increase output, and consumers decrease consumption.

At E, where the quantity demanded of real GDP equals the (short-run) quantity supplied of real GDP. This is the **point of short-run equilibrium**. **PE** is the short-run equilibrium price level; **QE** is the short-run equilibrium real GDP.

- ❖ If the aggregate demand curve and aggregate supply curves were to remain unchanged, the economy would continue to produce the natural rate of output and have an equilibrium price indefinitely.

2.3.1 Shocks to Aggregate Demand

- ❖ **Aggregate demand shocks**
 - ✓ cause P and Y to change in the same directions
 - ✓ both rise with an increase in demand, and both fall with a decrease in demand
 - ✓ An increase in aggregate demand shifts the AD curve to the right; more output is demanded at each price.
 - ✓ causes can either be expansionary or contractionary.
 - ✓ An expansionary demand shock shifts the AD curve to the right, increasing both P and Y.

2.3.2 Shocks to Aggregate Supply

- ❖ **Aggregate supply shocks**
 - ✓ cause P and Y to change in **opposite directions**.
 - ✓ An example of a negative supply shock is an increase in the price of oil.
 - ✓ An increase in the price of oil causes a decrease in the supply of the product which results in a leftward shift of the aggregate supply curve.

Review Questions

Part I: Multiple Choice with their Answer

1. The increase in spending that occurs because of the increases the real value of money, when the price level falls is called
A. the wealth effect. **B. the interest rate effect.**
C. the foreign trade effect. D. the income effect.
2. An increase in government spending, all else the same, will shift the AD curve from the initial AD curve to the curve labelled: **A. Increase in AD** B. Decrease in AD
C. Neither curve because government spending does not affect the AD curve.
D. Either curve, depending on the simultaneous changes in taxation.
3. In the short run, lower aggregate demand will cause:
A. a large decrease in the price level, but no change in the level of output.
B. a lower price level, but only a slight decrease in the level of output.
C. a lower level of output, but only a slight decrease in the price level.
D. a large decrease in both the price level and the level of output.
4. Which one of the following is the determinant of aggregate demand?
A. general level of income of the people, B. real interest rate,
C. the level of exports **D. All of the above.**
5. Everything else held constant, aggregate demand increases when:
A. government spending is reduced. B. the money supply is reduced.
C. taxes are cut. D. All of the above.

Part II: For the following questions write short answers

1. What is aggregate demand?
2. What are the main components of AD?
3. How is the equilibrium level of output determined by aggregate demand and aggregate supply? Show this using diagram.

Part III: Explanation

Distinguish between the following

1. Change in aggregate demand and change in aggregate quantity demanded.
2. Change in aggregate supply and change in aggregate quantity supplied.

UNIT 3

MARKET FAILURE AND CONSUMER PROTECTION

3.1 Market Failure

Market failure is the economic situation defined by an inefficient distribution of goods and services in the free market. It occurs when the price mechanism fails to account for all of the costs and benefits that are necessary to provide and consume a good. Furthermore, the individual incentives for rational behaviour do not lead to rational outcomes for the group. In other words, each individual makes the correct decision for himself/herself, but these may prove to be the wrong decisions for the group.

- ✓ The structure of market systems contributes to market failure. It is obvious that in the real world that it is not possible for markets to be perfect due to inefficient producers, externalities, environmental concerns, and lack of public goods.

- ✓ Government responses to market failure include legislation, direct provision of merit and public goods, taxation, subsidies, tradable permits, extension of property rights, advertising, and international cooperation among governments.

A market failure occurs whenever the individuals in a group end up worse off than if they had not acted in perfectly rational self-interest. Such a group either incurs too many costs or receives too few benefits. Additionally, not every bad outcome from market activity counts as a market failure. Nor does a market failure imply that private market actors cannot solve the problem. On the flip side, not all market failures have a potential solution, even with prudent regulation or extra public awareness.

3.1.1 Common Types of Market Failures

Commonly cited market failures include externalities, monopoly, information asymmetries, and factor immobility. One of the examples to illustrate market failure is the public goods problem. **Public goods** are goods or services for which the producer cannot limit consumption to paying customers and for which the consumption by one individual does not limit the consumption by others.

3.1.2 Solutions to Market Failures

There are many potential solutions for market failures. These can take the form of private market solutions, government-imposed solutions, or voluntary collective action solutions.

Externalities such as pollution are solved with tort lawsuits that increase opportunity costs for the polluter.

Governments can also impose taxes and subsidies as possible solutions. Subsidies can help encourage behaviour that can result in positive externalities. Meanwhile, taxation can help cut down negative behaviour.

Private collective action is often employed as a solution to market failure. Parties can privately agree to limit consumption and enforce rules among themselves to overcome the market failure of the tragedy of the commons.

3.2 Public Goods

Public goods are goods or services for which the producer cannot limit consumption to paying customers and for which the consumption by one individual does not limit the consumption by others.

Public goods are goods whose benefits are shared.

Generally speaking, public goods have two major features.

- ✓ **Non rivalry in consumption:** once the good is provided or supplied, consumption by one person does not reduce the quantity which is available for consumption by another. This means that the same amount is left for the remaining consumers. This implies that the cost /marginal cost of allowing another person to consume the good is zero.
- ✓ **Non-excludability:** it is difficult and expensive to prevent or to exclude someone (non-payers) from consuming the good.

There are also goods which fall in between these two extremes. A good can satisfy one part of the definition of a public good and not another. These kinds of goods are called “impure public goods”. Based on this, we can generally classify public goods into **four major groups**

- ❖ Another aspect of public goods is that although everyone consumes the same quantity of goods, they may not value them equally. For example, for some individuals, national defence is very important while others do not care for it, some others still value it negatively though it is equally available to all.
- ❖ A number of things that are not conventionally considered to be commodities have public good characteristics. Examples include honesty, fair income distribution, certain information, polio vaccination, and HIV/AIDS blood tests.
- ❖ Private goods are not necessarily supplied by the private sector; government may provide private goods too. Many private goods such as electricity, and telecommunications are supplied by governments and many public goods like protection and guarding are supplied by the private sector.
- ❖ Public provision of a good does not necessarily mean that it is produced by the public sector/government. For instance, a government/municipality may collect the garbage using its own trucks and labour or it may hire a private firm to do the job. In both cases, the government provides the services, but it produces only in the former case

The Free Rider (Social Loafer)

A person who seeks to enjoy the benefit of public goods without contributing anything to the cost of financing the amount made. This problem was first observed in trade union where not-members benefit from the successful bargaining of unions members. As result, they were not willing to become a member and make a contribution. Free ridership arises because public goods are non-excludable. Since it is difficult to exclude non-payers from using/benefiting, there is an incentive not to pay/to be free rider. It is this free rider problem that causes markets to operate inefficiently for public goods. The private market may provide no output as no one is willing to purchase it.

Other Mechanisms for Providing the Efficient Level of Public Goods

In those cases where the private market fails to provide the efficient level of public goods, provision of public goods requires collective action. People need to realize that public goods' situation exists and either raise contributions from private individuals to fund the public goods or let the government provide the public goods. Mechanisms to provide public goods include the following:

- a) private provision of excludable public goods (e.g. movies, music concerts).
- b) public provision of excludable public goods through the use of entrance fees(e.g. entrance fees for a National Park).
- c) public provision of non-excludable public goods through the use of tax revenues (e.g. taxes earmarked for national defence).
- d) religious beliefs, e.g. church/mosque services are public goods; during the ceremony a basket is passed around for collections. Religion can prevent free riding by convincing people that God is watching.

3.3 Externalities

- ❖ **An externality** occurs when the consumption or the production of goods has positive or negative effects on other people's utility where these effects are not reflected in the price.
- ❖ **We distinguish between positive and negative externalities.**
 - ✓ **Positive externalities** occur when one person's consumption of a good also increases other people's utility without them having to pay for it
 - ✓ **Negative externality** occurs when one person's consumption of good decreases, other people's utility without them receiving any compensation. This is also true in case of production.
- ❖ **The characteristics of externalities are listed below:**
 1. externalities can be either positive or negative. Some externalities are beneficial, while others are harmful.
 - ✓ An economic agent is said to generate positive externalities when its activities benefit the third party.
 - ✓ It generates negative externalities when its activity harms the third party.
 - ✓ Here, we consider the producer/seller as first party, and the buyer as the second party.
 2. Externalities can be generated by consumers or producers. Externalities can be viewed as special kind of public good or bad. They are no rival, and non-excludable. And public good generate external benefit.
 3. Externalities are reciprocal in nature. Smoker imposes an extensity on non-smoker, but non-smoker also imposes a burden on smoker.
 - ✓ Externalities are not the result of one person's action, but results from combined action of two or more parties.

❖ Externality and Efficiency

➤ In the presence of externality, the free market economy will not allocate resources efficiently. This is because the presence of **negative or positive externality** creates a difference between **marginal cost (MC) and price (P)** as efficiency requires **MC = P**

1) Negative Externality and Efficiency

- ✓ When there is negative externality, **MSC>PMC**, as there is an **external cost** of pollution.
- ✓ This will create a difference between **MPC and P**, and hence inefficiency.
- ✓ **MSC=MPC+MEC**.
- ✓ **Profit maximizing** condition requires **MPC=P** and hence, **point e**.
- ✓ **The social optimal** condition requires **MSC=MSB=P** and **point at e***.

- ✓ Therefore, **over production** arises to the amount of Q^*Q
- ✓ At point e, **Welfare (W) = Consumer surplus + Producer surplus – External Cost**
- ✓ At point e^* , **Welfare (W) = Consumer surplus + Producer surplus**

♣ Thus, **W of point $e^* < W$ of point e by the amount of ee^*c** and hence, there is dead weight loss or efficiency loss to the amount of ee^*c .

2) Positive Externality and Efficiency

- ✓ In the presence of positive externality, **$MSB > MPB$** as there is **external benefit**.
- ✓ This will create the difference between **MPB and MC**, and hence inefficiency.
- ✓ **$MSB = MPB + MEB$** .
- ✓ **Profit maximizing** condition requires **$MPB = MC$** and hence, **point e**.
- ✓ **The social optimal** condition requires **$MSB = MC$** , point at e^* .
- ✓ Therefore, **under production** arises to the amount of QQ^* .
- ✓ At point e, **Welfare (W) = Consumer surplus + Producer surplus + External benefit**
- ✓ At point e^* , **Welfare (W) = Consumer surplus + Producer surplus**

♣ Thus, **W of point $e^* > W$ of point e by the amount of ee^*c** and hence there is a dead weight loss or efficiency loss to the amount of ee^*c .

♣ In general, inefficiency is created due to over production and under production or due to the difference between the profit maximizing and social optimal levels of output.

❖ Suggested Solutions to Avoid Externality

1. Solutions for negative externality

- a) Per unit tax equivalent to the amount of the difference between SMC and PMC corresponding to the socially optimal Output
- b) Private bargaining between the affected parties.
Bear in mind that **optimum pollution does not mean zero pollution** as the latter implies zero production.
- c) Defining and enforcing property rights for those who would like to pollute the environment. This means the sale of **property rights**. Since producers incur some additional costs due to the property rights, they will take this consideration into their production decisions and hence, produce relatively smaller quantities, as a result of which less pollution occurs.

2. Solutions for positive externality

- a) Provide per unit subsidy which is equivalent to the difference between SMB and PMB corresponding to the **socially optimal output**. Thus, if private firms are subsidized, they will supply optimal output
- b) The government itself can supply the product at a price of P_s and hence, bear the loss.

3.4 Asymmetric Information

❖ Asymmetric information is

- ✓ a situation in which **different agents have a different amount of information about a good**.
- ✓ when **one party in a transaction is in possession of more information than the other**.
- ✓ deals with the study of **decisions in transactions where one party has more information than another**.
- ✓ creates an **imbalance in power in transactions** which can sometimes cause the transaction to go away.

❖ Two types of problems associated with asymmetric information are **adverse selection and moral hazard**.

1. Adverse Selection Problem

- ✓ situations where **one side of the market cannot observe the “type” or quality** of the goods on the other side of the market.
- ✓ It is sometimes known as **“hidden information problem” or “anti-selection problem” or “negative selection problem”**. Adverse selection problem
- ✓ is a term that is used in **economics, insurance, statistics and risk management**.

2. Moral Hazards Problem

- ✓ situation where **one side of the market cannot observe the actions of the others**.
- ✓ It is sometimes known as “**hidden action problem**”.
- ✓ In simple words, it is the **inability to observe and/or verify the agents’ action**.
- ✓ arises when an individual or situation **does not bear the full consequences of its actions**, and therefore has a tendency to act less carefully than it otherwise would, leaving another party to bear some responsibility for the consequences of those actions.

❖ Solutions for Moral Hazard and Adverse Selection

A. Signalling: this is the idea that one party (agent) conveys some meaningful information about itself to another party (principal)

B. Screening: refers to a strategy of combating adverse selection.

3.5 Consumer Protection

❖ Consumer protection

- ✓ means **safeguarding the interest and rights of consumers**.
- ✓ it refers to the **measures adopted for the protection of consumers from unscrupulous and unethical malpractices by the business** in order to provide them with **speedy redressal of their grievances**.

❖ The most common business malpractices leading to consumer exploitation are given below.

1. **Sale of adulterated goods**, i.e., adding something inferior to the product being sold.
2. **Sale of spurious goods**, i.e., selling something of little value instead of the real product.
3. **Sale of sub-standard goods**, i.e., sale of goods which do not conform to prescribed quality standards.
4. **Sale of duplicate goods**.
5. **Use of false weights and measures** leading to underweight.
6. **Hoarding and black-marketing** leading to scarcity and rise in price.
7. **Charging more than the maximum retail price fixed** for the product.
8. **Supply of defective goods**.
9. **Misleading advertisements**, i.e., advertisements that falsely claim a product or service is of superior quality, grade or standard.
10. **Supply of inferior services**, i.e., quality of service is inferior to the quality agreed upon etc.

❖ Need for Consumer Protection

The necessity of adopting measures to protect the interest of consumers arises mainly due to **the helpless position of the consumers**. There is no denying the fact that the consumers have the basic right to be protected from the loss or injury which is caused by defective goods and deficiency of services.

➤ The main arguments in favour of consumer protection are outlined below.

- ✓ Social Responsibility
- ✓ Increasing Awareness
- ✓ Consumer Satisfaction
- ✓ Principle of Social Justice
- ✓ Principle of Trusteeship
- ✓ Survival and Growth of Business

❖ Consumer protection experience in Ethiopia

In Ethiopia, the **Consumer Proclamation No. 813/2013** has provided the rights to consumers. Here is a brief outline of about these rights of consumers.

1. Consumers should receive sufficient and accurate information or explanation as to the quality and type of goods or services they purchase.
2. They should buy goods and services on the basis of their own choice.

3. They should not to be obliged to buy because they looked into quality or options of goods and services or they made price bargains.
4. They should be received humbly and respectfully by any business person and be protected from insult, threat, frustration and defamation by the business person.
5. They should be able to claim compensation either jointly or severally from persons who have participated in the supply of goods or services such as the manufacturer, importer, and wholesaler retailer or in any other way for damages suffered as a result of purchase or use of the goods or services.

❖ **The main objectives of the Consumer Protection Act in Ethiopia are to:**

1. Protect the business community from anti-competitive and unfair market practices, and also consumers from misleading market conducts, and to establish a system that is conducive to the promotion of a competitive free market.
2. Ensure that consumers get goods and services safe and suitable to their health and equivalent to the price they pay.
3. Accelerate economic development.

Review Questions

Part I: Multiple Choice with Answer

1. Which one of the following goods or services is non-excludable?
A. roads B. primary education
C. police protection D. streaming music from satellite transmission programs **E. All of the above**
2. An externality is defined as:
A. an additional cost that is imposed by the government on producers.
B. a cost or benefit that arises from production and falls on someone other than the producer, or a cost or benefit that arises from consumption and falls on someone other than the consumer.
C. an additional gain received by consumers from decisions made by the government.
D. the additional amount that consumers have to pay to consume an additional amount of a good or service.
E. a marginal social cost.
3. Which one of the following goods is excludable?
A. a bridge that does not charge a toll **B. a city bus**
C. protection from the police force D. the atmosphere E. All of the above
4. Which one of the following goods is non-excludable?
A. the atmosphere B. a taxi C. an art museum
D. a toll bridge E. All of the above
5. A common resource is:
A. non-rival and non-excludable B. non-rival and excludable.
C. rival and non-excludable. D. regulated and excludable. E. rival and excludable
6. When a city street is congested, it is:
A. a public good. **B. a common resource**
C. a private good. D. non-rival and excludable. E. non-rival and non-excludable
7. A good that is rival and non-excludable is a:
A. private good. B. regulated good.
C. public good. **D. common resource.** E. government good
8. Free riding can occur if a good is:
A. a private good. B. excludable and non-rival.
C. excludable and rival. D. non-excludable and rival. **E. non-excludable and non-rival.**
9. If a good is a public good,
A. no one can be excluded from enjoying its benefits.
B. anyone can be excluded from enjoying its benefits.
C. consumers pay a low price.
D. economies of scale exist over the entire range of output for which there is a demand.
E. consumers must pay a high price to enjoy its benefits.

10. The tragedy of the commons is the absence of incentives to:

- A. discover new common resources.
- B. export wool in sixteenth-century England.
- C. prevent overuse of common resources.**
- D. prevent underuse of common resources.
- E. reduce marginal cost of common resources.

Part II: Matching with Answer

- | | |
|---|------------------------------------|
| 1. unintended costs or benefits imposed on third parties. <u>B</u> | A. Market failure |
| 2. situation in which one side of the market (buyer or seller) has more information than the other side (buyer or seller). <u>D</u> | B. Externalities |
| 3. the failure of the market to achieve an optimal allocation of the economy's resources <u>A</u> | C. Social cost |
| 4. the cost to society of producing a good including both the private costs and the externalities costs <u>C</u> | D. A s y m m e t r i c information |
| 5. benefits from these goods are not diminished by consumption and cannot be withheld from anyone <u>G</u> | E. Moral hazard |
| | F. Adverse selection |
| | G. Public Good |

Part III: Short Answer and Work Out

1. What are the two key characteristics of public goods?
2. Name two public goods and explain why they are public goods.
3. What is the free rider problem?
4. Explain why the federal government funds national defence.
5. Suppose that a producer of commodity Y is located on the upstream of river Z. The MC of producing Y is given by the function $MC = 10 + 0.5Y$. In addition to this, MC however, an external cost is incurred. Each unit of product Y produces a pollutant that flows to the river, which causes damage valued at Birr 10. Suppose that this external

Answer for Work out (5)

Solution

UNIT 4

MACROECONOMIC POLICY INSTRUMENTS

4.1 Definition and Types of Macroeconomic Policies

Macroeconomic analysis deals with the behaviour of the economy as a whole with respect to output, income, employment, general price level and other aggregate economic variables. With a view to bringing about desirable changes in such variables, nations, developed as well as developing, need to adopt various macroeconomic policies.

The economy does **not always work smoothly**. This is because **fluctuations often occur in the level of economic activity**. At times the economy finds itself in the grip of **recession** when levels of national income, output and employment are far below their full potential levels. During recession, there is a lot of idle or unutilized productive capacity, that is, available machines and factories are not working to their full capacity. As a result, unemployment of labour increases along with the existence of excess capital stock. On the other hand, at times the economy is **“overheated”** which means inflation (i.e., rising prices) occurs in the economy. Thus, in a free market economy there is a lot of economic instability.

❖ **The general objectives of macroeconomic policy are to achieve:**

- ✓ maximum feasible output
- ✓ high rate of economic growth
- ✓ full employment

- ✓ price stability
- ✓ equality in the distribution of income and wealth
- ✓ a healthy balance of payments.

To achieve these objectives, different types of macroeconomic policies – **fiscal, monetary, income, and foreign exchange policies** – are adopted

4.2 Fiscal Policy

Fiscal policy is the **expenditure and revenue (tax)** policy of the government to achieve the desired objectives.

❖ **There are two key tools of the fiscal policy:**

- 1. Taxation:** funds in the form of direct and indirect taxes, capital gains from investment, etc, help the government function. Taxes affect the consumer's income and changes in consumption lead to changes in real gross domestic product (GDP).
- 2. Government spending:** it includes welfare programmes, government salaries, subsidies, infrastructure, etc. Government spending has the power to raise or lower real GDP, hence it is included as a fiscal policy tool.

❖ **Government spending/expenditure has four major components, namely**

- A. Government spending:** is the sum of government expenditures on final goods and services. It includes salaries of public servants, purchase of weapons for the military, and any investment expenditure by a government
- B. Transfer payments:** are direct payments to individuals- such as unemployment insurance benefits, social security benefits, Medicare, or welfare payments - where goods or services are not provided in return
- C. Grants in aid:** This reflects federal assistance to state and local governments.
- D. Net interest payments:** are interest payments that are made to holders of government debt, less interest which is paid to the government for debts like student loans.

❖ **The four major components of tax revenue (taxes) are the following:**

- A. Personal taxes:** are composed of income taxes and property taxes, and are major sources of total government revenue.
- B. Contributions for social insurance:** are primarily social security taxes, which are assessed as a fixed percentage of a worker's wages, up to a fixed ceiling (or cap).
- C. Taxes on production and imports:** are primarily sales taxes, but they also include taxes on imported goods, known as "tariffs".
- D. Corporate taxes:** are primary taxes on the profits of businesses.
- E. Grants in aid:** are the federal assistance to state and local governments and are revenue for them (while they are spending for the federal government).

❖ **Types of Fiscal Policy**

1. Expansionary Fiscal Policy

- In a situation in which an economy is facing the problem of **deficient demand**, i.e., aggregate demand falling short of output at full employment, there is a depression marked by **overproduction, a rise in unemployment, and a fall in prices and incomes**.
- To **increase the aggregate demand** and thereby total output and employment levels, **expansionary fiscal policies are adopted** by governments.

❖ **The major instruments of expansionary fiscal policy are:**

A. Expenditure policy (increase expenditure):

- The objective of an expenditure policy **should be to pump more money into the system** in order to boost demand.
- During a period of deficiency in demand, the government **should make large investments** in public works
- In this way, the government will **enlarge the budget deficit**, which shows excess expenditure over revenue.
- The aim is to **put more money in the hands of people** so that they would also **spend more**.

B. Revenue policy (reduce tax rate):

- Taxes on personal incomes and taxes on expenditures on buildings etc. **should be reduced**.
- If possible, taxes on lower income groups **should be abolished** in order to **increase their disposable income** for spending and to **increase aggregate demand** in the economy.

♣ *In this situation, Expansionary fiscal policy using tax cuts or increases in government spending can shift aggregate demand to the right ward, closer to the full-employment level of output. In addition, the price level will rise.*

2. Contractionary Fiscal Policy

- When an economy's **aggregate demand** is for a level of output that is **more than** the **full employment**, the demand is said to be an excess demand.
- To **control the situation of excess demand** and thereby reduce the pressure of high inflation, **contractionary fiscal policies are adopted** by governments.

❖ **Major instruments of contractionary fiscal policy are:**

A. Expenditure policy (reduce expenditure):

- In a situation of excess demand, the government **should curtail its expenditures** on public works, thereby **reducing the money income of the people** and thus, their demand for goods and services.
- In this way, the government will **reduce the budget deficit**, which shows **excess expenditure over revenue**.

B. Revenue policy (increase taxes):

- During inflation, the government **should raise rates of all taxes**, especially taxes on rich people, because taxation withdraws purchasing power from the taxpayers and, to that extent, **reduces effective demand**.
- Care should be taken that measures adopted to **raise revenue** are **disinflationary** and at the same time have **no harmful effects on production and savings**.

♣ *In this situation, Contractionary fiscal policy involving federal spending cuts or tax increases can help to reduce the upward pressure on the price level by shifting aggregate demand to the left.*

4.3 Monetary Policy

Monetary policy is the process of **drafting, announcing, and implementing** the plan of actions taken by the **National Bank**, or other monetary authority of a country that **controls the quantity of money** in an economy.

❖ **There are three key tools of monetary policy:**

1. Open market operations (OMO)

- These are the **purchases and sales of government bonds** by the National Bank.
- The Birr it pays when the **National Bank purchases bonds** increases the monetary base and the money supply.
- When the **National Bank sells bonds** to the public, the Birr it receives reduces the monetary base and then, decreases the money supply.

2. Discount rate (DR)

- The discount rate is the interest rate that the National Bank charges banks to borrow funds from a National Bank.

3. Required reserve ratio (RRR)

- This refers to the funds that banks must retain as a proportion of the deposits made by their customers in order to ensure that they are able to meet their liabilities.
- Every commercial bank is required to keep with the central bank a particular percentage of its deposits or reserves in the form of cash.
- **Lowering this reserve requirement** releases more capital for the **banks to offer loans or to buy other assets**, **increase liquidity** and credit expansion power of banks.
 - **Increasing the reserve requirement** curtailing bank lending and slowing growth of the money supply, **contracts the liquidity** as well as credit expansion power of commercial banks.

❖ Types of Monetary Policies

1. Expansionary (Loose) Monetary Policy

- If a country is facing a high unemployment rate during a slowdown or a **recession**, the monetary authority can opt for an **expansionary policy** which aims at **increasing economic growth and expanding economic activity**.

❖ Major instruments of expansionary monetary policy are

A. Reducing a discount rate:

- To **increase money supply**, the National Bank **reduces the discount rate** and then, enables the commercial banks **to take more loans** from it and in turn **to give more loans to producers** (investors) at lower interest rates.

B. Buying securities through open market operations:

- During a depression, the central bank **buys government bonds and securities** from commercial banks, paying in cash to **increase their cash stock and lending capacity**.

C. Reducing required reserve ratio (RRR) OR cash reserve ratio (CRR)

- During a depression, the central bank **lowers the CRR**, thereby **increasing** commercial bank's **capacity to give credit**.

♣ *An expansionary monetary policy will reduce interest rates and stimulate investment and consumption spending, causing the original aggregate demand curve to shift in the right ward.*

2. Contractionary (Tight) Monetary Policy

- **Increased money supply** can lead to **higher inflation**, raising the cost of living and cost of doing business.
- Contractionary monetary policy, **increasing interest rates**, and by **slowing the growth of the money supply**, aims to **bring inflation down**.

❖ Major instruments of contractionary monetary policy are

A. Increasing the discount rate:

- In a situation of excess demand leading to inflation, the **central bank raises its rate**.
- This **raises the cost of borrowing**, which **discourages commercial banks from borrowing** from the central bank.
- An increase in the bank rate forces the commercial banks **to increase their lending rates of interest**, which makes **credit costlier**. As a result, the **demand for loans falls**.
- The **high rate of interest** induces households to **increase their savings** by restricting expenditure on consumption and **discourages investment**. Thus, expenditure on investment and consumption is reduced, thereby **reducing the aggregate demand**.

B. Selling securities through open market operations:

- During inflation, the central bank **sells government securities** to commercial banks, which **lose an equivalent amount of their cash reserves**, thereby **reducing their capacity to offer loans**.
- This absorbs liquidity from the system. Consequently, there is a **fall in investment and in aggregate demand**.

C. Increasing the RRR:

- During inflation, the central bank **increases the RRR**, thereby **curtailing the lending capacity** of commercial banks.

♣ *A contractionary monetary policy will raise the interest rate, which discourages borrowing for investment and consumption spending, and causes the original demand curve to shift the left ward.*

4.4 Income Policy and Wage

Income policies in economics are economy-wide **wages and price controls**, most commonly instituted as a **response to inflation**, and usually seeking to establish **wages and prices below** free market level.

❖ Determination of wage rates in a free market

- In any market, the **price of labour, the wage rate**, is determined by the **intersection of supply and demand**.
- When the **supply of labour increases**, the equilibrium **price falls, wage rate rises**.
- When **the demand for labour increases**, the equilibrium **price rises, wage rate falls**.

❖ **A perfectly competitive labour market has the following characteristics:**

- A large number of firms **competing with each other to hire** a specific type of labour to **fill identical jobs**.
- Numerous qualified people who **have identical skills** and **independently supply their labour services**.
- **“Wage taking” behaviour**, that is, neither workers nor firms exert control over the market wage,
- Perfect, **costless information and labour mobility**.

♣ **Market labour demand is a “price adjusted” downward- sloping curve, whereas, the market labour supply however, generally slopes upward to the right, indicating that collectively workers will offer more labour hours at higher relative wage rates**

♣ **A Surplus of labour or Excess Supply occur at Higher Wage Rate.**

♣ **A Shortage of labour or Excess Demand occur at lower Wage Rate.**

♣ **At Equilibrium Wage Rate the number of hours offered labour suppliers just matches the number of hours that the firms desire to employ.**

❖ **Minimum Wages**

- A **minimum wage** is the **lowest wage per hour** that a worker may be paid as mandated by federal law.
- it is a legally mandated **price floor on hourly wages**, below which **workers may not be offered or accept a job**.
- **cannot be reduced** by collective agreement or an individual contract.
- **The purpose of minimum wages are**
 - ✓ to protect workers from unduly low pay.
 - ✓ They help ensure a just and equitable share of the fruits of progress to all.
 - ✓ to overcome poverty and reduce inequality, including between men and women.
 - ✓ promoting the right to equal remuneration for work of equal value.

❖ **Pricing Policy**

One of the income policies in economics is price controls; most commonly instituted as a response **to inflation**, and usually seeking to establish **prices which are below free market** level.

There are two types of price controls:

1. Price Ceiling (Price Supports)

- is the mandated **maximum amount that a seller is allowed to charge** for a product or service.
- puts a limit on the cost that one has to pay or that one can charge for something
- it **sets a maximum cost**
- keeping prices from **rising above** a certain level.
- a maximum **legal price below** the equilibrium price.
- causing a **shortage**.

2. price floor

- is a **government- or group-imposed price control** or limit on how **low a price can be charged for a product, good, commodity, or service**.
- establishes a **minimum cost for something**, a bottom-line benchmark.
- It keeps a price from **falling below** a particular level.
- An example of a price floor is **minimum wage** laws.
- Causes a **Surplus**.

4.5 Foreign Exchange Policies

- We call the market in which people or firms use **one currency to purchase another currency**, the foreign exchange market.
- **Exchange rate policy** is concerned with how the value of the domestic currency, relative to other currencies, is determined.

- Most of the international economy takes place in a situation of multiple national currencies in which both people and firms need to convert from one currency to another when **selling, buying, hiring, borrowing, travelling, or investing across national borders**.
- An exchange rate is **nothing more than a price**, that is the price of one currency in terms of another currency and so we can analyse it with the tools of **supply and demand**.
- The formula for calculating **exchange rates** is: **Starting amount (original currency) / Ending amount (new currency)**.
- person or firm who demands one currency must at the same time supply another currency and vice versa.

❖ **Four groups of people or firms who participate in the foreign exchange market:**

1. Firms that are involved in international trade of goods and services;
2. Tourists visiting other countries;
3. International investors buying ownership (or part ownership) of a foreign firm;
4. International investors making financial investments that do not involve ownership.

❖ **Firms that buy and sell in international markets find that their**

- ***Costs for workers, suppliers, and investors are measured in the currency of the nation in which their production occurs***
- ***Revenues from sales are measured in the currency of the different nations in which their sales took place.***

❖ **An Ethiopians firm exporting abroad will**

- **earn some other currency**, say US dollars
- **need Ethiopian Birr to pay** the workers, suppliers, and investors who are based in Ethiopia
- be a **supplier of US. Dollars**
- a **demand of Ethiopia Birr**.

❖ **International tourists will**

- supply their home currency
- Receive the currency of the country that they are visiting.

❖ **An American tourist who is visiting Ethiopia will**

- Supply US dollars.
- Demand Ethiopian Birr.

❖ **Types of Exchange Rate Policies**

1. Fixed Exchange Rate Policy

- Exchange rate is determined by the **government's political and economic decisions**.
- There are some problems which are associated with this policy. An example is the creation of a **parallel market (also known as aa "black market")**.
- Governments use fixed exchange rate systems to accomplish various goals.

A. An undervalued exchange rate

- ✓ acts as an **import tax and an export subsidy**
- ✓ **Low** level promotes domestic industries by **encouraging exports and discouraging imports**.
- ✓ It can also hurt other industries by **increasing the price of imported inputs**

B. An overvalued exchange rate

- ✓ acting as an **import subsidy and an export tax**
- ✓ **high** level benefits domestic consumers by **encouraging imports and discouraging exports** through **decreasing the price of imported inputs**.

❖ **Fluctuation in exchange rate under fixed exchange rate policy:**

- Devaluation:** an **increase** in the exchange rates due to political and economic decisions of the government.
- Revaluation:** a **decrease** in exchange rate due to political and economic decisions of the government.

2. Flexible/Floating Exchange Rate Policy

- Exchange rate determination is **left for market forces**.
- Determined by the **supply and demand for foreign currencies**.

❖ Impact of Exchange Rate Fluctuation

A. Impact of devaluation and depreciation:

- **Improves the current account balance** and/or overall balance of payment by making **exports cheaper** and **imports more expensive**.
- Foreigners **find exports cheaper** while residents **find imports more expensive**.

B. Impact of revaluation and appreciation:

- **Worsens the external balance** by making **exports more expensive** and **import cheaper** than before.
- Foreigners find **exports more expensive** while residents **find imports cheaper**.

❖ Key Factors that Affect Foreign Exchange Rates

A. Inflation rates:

- **country with a lower inflation rate than another**
 - ✓ will see an **appreciation in the value** of its currency
 - ✓ The **prices of goods and services increase at a slower rate**
 - ✓ A country with a consistently lower inflation rate exhibits a **rising currency value**
- **country with a higher inflation rate**
 - ✓ sees **depreciation** in its currency
 - ✓ Usually accompanied by **higher interest rates**.

B. Interest rates:

- **Increases in interest rates**
 - ✓ cause a country's currency to **appreciate** because higher interest rates provide **higher rates to lenders**
 - ✓ thereby **attracting more foreign capital**, which causes a **rise in exchange rates**

C. Balance of payments:

- It consists of the total number of transactions including its **exports, imports, debt**
- **A deficit in the current account** due to **spending more** of its currency on importing products than its **earning** through sale of exports causes **depreciation**.

D. Government debt:

- **A country with government debt**
 - ✓ **Less likely to acquire foreign capital**, leading to **inflation**.
 - ✓ Foreign investors will **sell their bonds** in the open market
 - ✓ As a result, a **decrease in the value** of its exchange rate will follow.

E. Terms of trade:

- **A country's terms of trade improves**
 - ✓ If its **export' prices rise at a greater rate than its imports prices**.
 - ✓ This results in **higher revenue**, which causes a **higher demand for the country's currency** and an increase **in its currency's value**.
 - ✓ This in its turn results in an **appreciation** of the exchange rate.

F. Political stability and performance:

- **A country with less of political turmoil**
 - ✓ more attractive to foreign investors,
 - ✓ An increase in foreign capital
 - ✓ Its turn leads to an appreciation in the value of its domestic currency.

G. Recession:

- **when a country experiences a recession,**
 - ✓ its interest rates are likely to fall
 - ✓ decreasing its chances to acquire foreign capital.
 - ✓ For this reason, its currency weakens in comparison to that of other countries, therefore lowering the exchange rate.

H. Speculation:

- **if a country's currency value is expected to rise,**
 - ✓ investors will **demand more of that currency** in order to make a profit in the near future.
 - ✓ Thus, the **value of the currency will rise** due to the **increase in demand**
 - ✓ With this increase in currency value comes a **rise in the exchange rate** as well.

❖ Advantages of fixed exchange rates

- Certainty
- Absence of speculation
- Constraint on government policy

❖ Disadvantages of fixed exchange rates

- The economy may be unable to respond to shocks
- Problems with reserves
- Speculation
- Deflation
- Policy conflicts

❖ Advantages of floating exchange rates

- Protection from external shocks
- Lack of policy constraints
- Correction of balance of payments deficits

❖ Disadvantages of floating exchange rates

- Instability
- No constraints on domestic policy
- Speculation

Review Questions

Part I: True or False

1. To correct excess demand, the central bank buys government securities. **TRUE**
2. Expansionary fiscal policies are adopted to reduce aggregate demand. **FALSE**
3. Government should reduce tax rates to increase aggregate demand. **TRUE**
4. Control of wages becomes necessary when there is a situation of inflation. **TRUE**
5. In situations of deficient demand, government expenditure should be reduced. **FALSE**

Part II: Multiple Choices

1. A reduction in bank rate is: A. a contractionary fiscal policy. B. an expansionary fiscal policy. **C. an expansionary monetary policy.** D. a contractionary monetary policy.
2. To control the situation of excess demand the central bank: A. reduces discount rate. **B. sells government securities.** C. decreases RRR. D. None of the above.
3. To control the situation of deficient demand: A. government expenditure is reduced. B. tax rates are increased. **C. the bank rate is reduced.** D. All of the above.
4. Fiscal policy refers to: **A. government spending and taxation decisions.** B. control of the money supply. C. decisions to alter market interest rates. D. control of the producer price index.

5. An appreciation of the Ethiopian Birr relative to the US dollar would result in all of the following except: A. increase net exports. B. increase AD. **C. a reduction in the price of imported resources.** D. an increase in the price of exported resources.

UNIT 5