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ECONOMICS

BLOCK : 2

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BLOCK INTRODUCTION

This is the second block of the course and it comprises of seven units. The first unit of this block is unit 8. This unit introduces you to the macro-economic policy instruments. In this unit we will discuss the concepts of full employment, economic growth, price stability, internal and external balances and the role of macro-economic policies for attaining economic stability. The ninth and tenth unit shall discuss the monetary policy formulation in India. The ninth unit will help you to understand the Reserve Bank of India and its functions, monetary policy of India and its various elements and monetary policy formulations prior to economic reform period. The tenth unit outlines the role of RBI in monetary Policy Formulation, various instruments of monetary policy of India and monetary policy formulations in the post economic reform period. The eleventh unit of the course discusses about the macroeconomic theories of the open economy. This unit will help you to understand how the loanable fund and foreign exchange market achieves equilibrium in open economy. Apart from it, this unit also explains how budget deficit and trade policy affect the open economy equilibrium and the role of macroeconomic policies in an Open Economy. The twelfth unit discusses about the Harrod-Domar growth model, Solow's Neo-classical growth model and Kaldor's Model of growth. The thirteenth unit describes the selective emerging macroeconomic issues. In this unit, we will discuss about the globalization and the changing environment of the world economy, global financial crisis of 2009 and issues associated with demonetisation and digitalisation of the national economy .The final unit discusses the pros and cons of stabilizing the economy with the help of monetary and fiscal policies, how the central bank tries to manage zero inflation and whether tax laws should be reformed to encourage savings.

While going through a unit, you will notice some along-side boxes, which have been included to help you to know some of the difficult, unseen terms. Again, we have included some relevant concepts in "LET US KNOW" along with the text. And, at the end of each section, you will get "CHECK YOUR PROGRESS" questions. These have been designed to self-check your progress of study. It will be better if you solve the problems put in these boxes immediately after you go through the sections of the units and then match your answers with "ANSWERS TO CHECK YOUR PROGRESS" given at the end of each unit.

UNIT 8: MACRO ECONOMIC POLICY INSTRUMENTS

UNIT STRUCTURE

8.1 Learning Objectives

8.2 Introduction

8.3 Meaning of Macro Economic policy

8.4 Objectives of Macro Economic Policy Instruments

8.5 Macro Economic Policies for Attaining Economic Stability

8.6 Internal and External Balances

8.7 Control of Money Supply

8.8 Let Us Sum Up

8.9 Further Reading

8.10 Answers to Check Your Progress

8.11 Model Questions

8.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- explain in details about the macro economic policy instruments
- understand the role of macro economic policies for attaining economic stability
- explain the concepts of full employment, economic growth and Price Stability
- know the concept of internal and external balances
- explain about the Control of money supply.

8.2 INTRODUCTION

The instruments that are used by the policy making authority to bring about changes in the macro economic variables of a country are called Macroeconomic policy instruments. These instruments can be divided into two subsets:

- Monetary policy instruments and
- Fiscal policy instruments.

Monetary policy is conducted by the Central bank of a country whereas Fiscal policy which deals with matters connected with the fiscal (government treasury)is conducted by the executive and legislative branches of the government.

8.3 MEANING OF MACRO ECONOMIC POLICY

Macroeconomics is that branch of economics which deals with the overall functioning of the economy. Macroeconomic policies include taxes, government spending and borrowing, exchange rate determinants, and monetary and credit rules. The primary goal of effective macroeconomic policies is to reduce uncertainty and risk in economic decision-making. These policies are critical in shaping the landscape within which factor markets and product markets operate. They have a critical influence on decisions by companies to produce, hire or fire workers, export and import goods, etc. They also determine household decisions to consume, save, and borrow, and government decisions to invest in infrastructure, education and many other aspects of development. A stable macroeconomic environment enhances prospects for growth and improved living standards.



CHECK YOUR PROGRESS

Q.1: State whether True(T) or False(F) :

A ..... macroeconomic environment enhances prospects for growth and improved living standards.

8.4 OBJECTIVES OF MACRO ECONOMIC POLICY INSTRUMENTS

The objectives of macroeconomic policy instruments are as follows-

- Full employment

- Price stability
- Economic growth
- Balance of payments equilibrium and exchange rate stability
- Social objectives.

- **Full employment:** Full employment is the situation when the available human resources are used efficiently and in an optimum manner. Unemployment of labour is closely related to the economy's aggregate output. Higher the unemployment rate, greater the divergence between actual aggregate output and potential out-put. So, one of the objectives of macroeconomic policy is to ensure full employment. Full employment,however, does not mean that nobody is unemployed. Even if 1 or 2 percentage of the labour force remain unemployed, the country is said to be fully employed if that is what is feasible. Full employment, though theoretically conceivable, is difficult to attain in a market-driven economy. In view of this, full employment objective is often translated into 'high employment' objective.

- **Price stability:** In macroeconomics the goal of price stability is of utmost importance. There should be price stability i.e. there should not be excessive fluctuations. By price stability we must not mean an unchanging price level over time. Price fluctuations of a larger degree are always unfavourable.

  It is difficult to define the reasonable rate of inflation. But sustained increase in price level as well as a falling price level produces destabilising effects on the economy. Therefore, one of the objectives of macroeconomic policy is to ensure (relative) price level stability by pursuing a targeted range of price change. This goal not only prevents economic fluctuations but also helps in the attainment of a steady growth of an economy.

- **Economic growth:** One of the important benchmarks to measure the performance of an economy is the rate of increase in output over a period of time. Economic growth typically refers to the rate of increase in the aggregate output of an economy per unit of time. It is measured

as a rate percent per unit of time. For example, if the Gross Domestic Product (GDP) of our country increases from US$2.7 trillion to US$2.97 trillion in one year then our growth rate is said to be 10% per annum {(2.97-2.70/2.7)X100}.There are three major sources of economic growth- the growth of the labour force, capital formation and technological progress. A country seeks to achieve higher economic growth over a long period so that the standards of living or the quality of life of people, on an average, improve. It may be noted here that while talking about higher economic growth, we take into account general, social and environmental factors so that the needs of people of both present generations and future generations can be met.

- **Balance of Payments equilibrium and Exchange Rate stability:** The balance of payments (BOP) is a statement of all transactions made between entities in one country and the rest of the world over a specified period of time. Equilibrium is that state of the balance of payments over the relevant time period which makes it possible to sustain an open economy without severe unemployment on a continuing basis. A country's balance of payments is said to be in equilibrium position when its autonomous receipts (credits) are equal to its autonomous payments (debits). This is a sign of the soundness of a country's economy. But disequilibrium may arise either for short or long periods. A continued disequilibrium indicates that the country is heading towards economic and financial bankruptcy. Every country, therefore, must try to maintain balance of payments in equilibrium.Any change in a country's balance of payments can cause fluctuations in the exchange rate between its currency and foreign currencies. The reverse is also true when a fluctuation in relative currency strength can alter the balance of payments. BOP equilibrium and exchange rate stability are two sides of the same coin.
- **Social objectives:** Macroeconomic policy is used to achieve some social welfare. This means that income distribution needs to be fair and equitable. In a capitalist market-based society some people get more than others. Policymakers use macroeconomic policy

instruments in order to ensure social justice. Irrespective of the economic status or social status of an individual, they have the right to take economic decisions.

8.5 MACRO ECONOMIC POLICIES FOR ATTAINING ECONOMIC STABILITY

Three main types of macroeconomic policies are as follows:

- Fiscal Policy
- Monetary Policy
- Supply-side Policies
- **Fiscal Policy:** Fiscal policy implies changes in government expenditure and taxation. Government expenditure, also called public expenditure, and taxation occur at national and local levels. Governments spend money on a variety of items including benefits (for the retired, unemployed and disabled), education, health care, transport, defense and interest on national debt.

  A government sets out the amount it plans to spend and raise in tax revenue in a budget statement. A budget deficit is when the government's expenditure is higher than its revenue. In this case, the government will have to borrow to finance some of its expenditure.

  In contrast, a budget surplus occurs when government revenue is greater than government expenditure. A balanced budget, which occurs less frequently, is when government expenditure and revenue are equal. A government may deliberately alter its expenditure or tax revenue to influence economic activity.

  If a government wants to raise aggregate demand in order to increase economic growth and employment, it will increase its expenditure and/or cut taxation by lowering tax rates, reducing the items taxed or raising tax thresholds. For example, a government may cut income tax rates.

  This will raise people's disposable income, which will enable them to spend more. Higher consumption is also likely to raise investment.

Fig. 8.1 shows the effect of a reflationary fiscal policy (also called an expansionary fiscal policy).

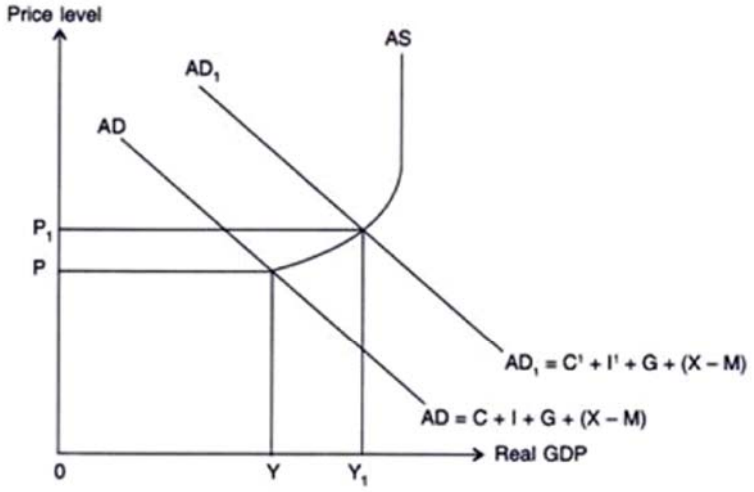


Fig. 8.1 The effect of a reflationary fiscal policy

A government may implement a deflationary fiscal policy (also called a contractionary fiscal policy) to reduce inflationary pressure. A cut in government expenditure on, for instance, education would reduce aggregate demand. Such a reduction may lower the rise in the general price level.

Fiscal policy aims at influencing aggregate demand by altering tax- expenditure-debt programme of the government. The credit for using this kind of fiscal policy in the 1930s goes to J.M. Keynes who discredited the monetary policy as a means of attaining some of the macroeconomic goals - such as the goal of full employment.

As fiscal policy has come into scrutiny in terms of its effectiveness in achieving the desired macroeconomic objectives, the same is true about the monetary policy. One can see several rounds of ups and downs in the effectiveness of both these policy instruments consequent upon criticisms and counter- criticisms in their theoretical foundations.

- **Monetary Policy:** Monetary policy includes changes in the money supply, the rate of interest and the exchange rate, although some economists treat changes in the exchange rate as a separate policy. The main monetary policy measure, currently used in most countries, is changes in the rate of interest.

A rise in the rate of interest helps implement a deflationary monetary policy. It will be likely to reduce aggregate demand by lowering consumption and investment. Households will spend less due to availability of less discretionary income, expensive borrowing and greater incentive to save.

Firms will invest less as they will expect consumption to be lower. Also the opportunity cost of investment will have risen and borrowing will have become expensive. A higher interest rate may also reduce aggregate demand by lowering net exports.

Changes in the money supply, as with changes in interest rates, are implemented by Central Banks. If the money supply is increased by the Bank printing more money, buying back government bonds or encouraging commercial banks to lend more, the aggregate demand increases. On the other hand, a decrease in the money supply reduces aggregate demand.

Monetary policy attempts to stabilise aggregate demand in the economy by influencing the availability or price of money, i.e., the rate of interest in an economy.

Monetary policy may be defined as a policy employing the central bank's control of the supply of money as an instrument for achieving the macroeconomic goals.

- **Supply-side Policies:** Supply-side policies are policies designed to increase aggregate supply and hence increase productive potential. Such policies seek to increase the quantity and quality of resources and raise the efficiency of markets. These include improving education and training, cutting direct taxes and benefits, reforming trade unions and privatization. Improving education and training is designed to raise labour productivity.

  The intention behind cutting direct taxes and benefits is to make work more attractive, relative to living on benefits. If successful, this will make the unemployed search for work more actively and will raise the labour force by encouraging more people (including for instance

married women and the disabled) to seek employment. Reforming labour market may make labour more productive and privatization may increase productive capacity, if private sector firms invest more and work more efficiently than state owned enterprises.



CHECK YOUR PROGRESS

Q.2: Fill in the blanks:

(i)..... are designed to increase aggregate supply and hence increase productive potential.

(ii) A government may implement a ..... fiscal policy to reduce inflationary pressure.

(iii) Aggregate economic growth is measured in terms of Gross National Product (GNP) or .....

8.6 INTERNAL AND EXTERNAL BALANCE

Internal balance is the situation in which real output is at or close to its potential or capacity level. The inflation rate is low and non-accelerating. Low inflation combined with slow or negative growth, or rapid growth combined with high inflation is not considered as a situation of Internal Balance.

External balance is defined as a current account position that can be sustained by capital flows on terms compatible with the growth prospects of the economy without resorting to restrictions on trade and payments, so that the level of international reserves is adequate and relatively stable. External balance does not necessarily correspond to a zero current account balance or a zero overall balance of the balance of payments, but for simplicity both notions, although not equivalent, can be used.

Both internal balance and external balance depend on two fundamental variables— the level of real domestic demand and the real exchange rate— which, in turn, reflect underlying economic conditions and macroeconomic policies. For example, a current account deficit occurs if the real exchange

rate is overly appreciated, excess real domestic demand exists, or both. The opposite situation results in a current account surplus. Likewise, an overly depreciated real exchange rate or excess real domestic demand creates inflationary pressure, and the opposite situation results in depressed output. A country with a balance of payments concern usually also has one other policy objective: to correct either the rate of growth or inflation.

Internal balance and external balance can each be achieved through different combinations of the real exchange rate and the real domestic demand. However, policy authorities generally strive to achieve internal and external balance simultaneously, which requires a particular combination of the real exchange rate and real domestic demand.

8.7 CONTROL OF MONEY SUPPLY

The Quantitative Instruments are also known as the general tools of monetary policy which are related to the quantity or volume of the money. They are designed to regulate or control the total volume of bank credit in the economy. These tools are indirect in nature and are employed for influencing the quantity of credit in the country. These tools include Bank Rate Policy, Open Market Operations, Variation in Reserve Ratio, etc. This method is used by the central bank to influence the total volume of credit in the banking system, without any regard for the use to which it is put to.

The Qualitative Instruments are also known as the Selective Tools of monetary policy that are used for discriminating between different uses of credit. These tools are not directed towards the quality of credit or the use of the credit. This can have influence over the lender and borrower of the credit. These instruments include Marginal requirements, Consumer Credit Regulation, Direct Action, Credit Rationing, Moral Suasion, etc.These methods are used by the central bank to regulate the flows of credit into particular directions of the economy.

Unlike the quantitative methods, which affect the total volume of credit, the qualitative methods affect the types of credit, extended by the commercial banks; they affect the composition rather than the size of credit in the economy.

Both micro and macroeconomic trends are affected by the quantity of money circulating in an economy. At the micro level, a large supply of free and money means more personal spending. At the macroeconomic level, the amount of money circulating in an economy affects things like gross domestic product, overall growth, interest rates, and unemployment rates. The central banks tend to control the quantity of money in circulation to achieve economic objectives and affect monetary policy.



CHECK YOUR PROGRESS

Q.5: Fill in the blanks:

(i) Both internal balance and external balance depend on two fundamental variables — the level of real domestic demand and the .....

(ii) The ..... tend to control the quantity of money in circulation to achieve economic objectives and affect monetary policy.



8.8 LET US SUM UP

- Macroeconomics is that branch of economics that deals with the overall functioning of the economy. Macroeconomic policies include taxes, government spending and borrowing, exchange rate determinants, and monetary and credit rules. The primary goal of effective macroeconomic policies is to reduce uncertainty and risk in economic decision-making.
- Macroeconomic quantities which can be directly controlled by an economic policy maker are called Macroeconomic policy instruments.
- The objectives of macroeconomic policy instruments are full employment, price stability, economic growth,balance of payments equilibrium and exchange rate stability, social objectives.
- Three main types of government macroeconomic policies are Fiscal Policy, Monetary Policy and Supply-side Policies

- Full employment is an economic situation in which all available labour resources are being used in the most effective and efficient manner
- Price stability implies avoiding both long term inflation and deflation.
- Internal balance is the situation in which real output is at or close to its potential or capacity level. External balance is defined as a current account position that can be sustained by capital flows on terms compatible with the growth prospects of the economy without resort to restrictions on trade and payments, so that the level of international reserves is adequate and relatively stable.
- The central banks tend to control the quantity of money in circulation to achieve economic objectives and affect monetary policy.



8.9 FURTHER READING

1) Agarwal, Vanita. (2010). *Macroeconomics Theory and Policy.* New Delhi: Pearson Education India
2) Ahuja, H.L. (2015). *Macro Economics Theory and Policy*. New Delhi: S Chand Publishers.
3) Dwivedi, D.N. (2018). *Macro Economics Theory and Policy*. Noida: Mc Graw Hill Education (India) Private Limited.
4) Paul, R.R. (2005). *Monetary Economics*. New Delhi: Kalyani Publishers.



8.10 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: Stable.

Ans to Q. No. 2: (i) Supply-side policies.(ii) Deblationary, (iii) Gross Domestic Product (GDP)

Ans to Q. No. 3: (i) Real exchange rate, (ii) Central Bank



8.11 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words)

Q 1: Briefly explain Macro Economic Policy Instruments.

Q 2: Briefly explain Macro Economic Policy.

Q 3: Briefly explain the meaning of Full Employment.

Q 4: Briefly explain the meaning of Price Stability.

Q 5: Write short notes on the following-

a) Monetary Policy

b) Fiscal Policy

c) Economic growth

B) Long Questions (Answer each question in about 300-500 words)

Q 1: Discuss the Internal and External Balance.

Q 2: Explain about control of money supply.

Q 3: Discuss in details the Macro Economic Policy instruments for attaining economic stability.

Q 4: Explain in brief the objectives of Macro Economic Policy Instruments.

*** ***** ***

UNIT 9: MONETARY POLICY FORMULATION IN INDIA – I

UNIT STRUCTURE

9.1 Learning Objectives

9.2 Introduction

9.3 The Reserve Bank of India

9.4 Monetary Policy of India and Its Elements

9.5 Monetary Policy Formulations prior to Economic Reform Period

9.6 Let Us Sum Up

9.7 Further Reading

9.8 Answers to Check Your Progress

9.9 Model Questions

9.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- know about the Reserve Bank of India and its functions
- explain the Monetary Policy of India and its various elements
- understand the Monetary Policy formulations prior to economic reform period.

9.2 INTRODUCTION

The Monetary Policy regulates the supply of money and the cost and availability of credit in an economy. The Monetary Policy aims to maintain price stability, full employment and economic growth. It is different from Fiscal Policy as the former brings about a change in the economy by changing money supply and interest rate, whereas fiscal policy is a broader tool with the government. The Fiscal Policy refers to the government's choices regarding the overall level of government purchases or taxes. Fiscal policy influences saving, investment, and growth in the long run. In the short run, fiscal policy primarily affects the aggregate demand. It refers to the revenue and expenditure policy of the Government which is generally

used to cure recession and maintain economic stability in the country. Hence the financial sector and the economy of a country are affected by both the monetary and fiscal policies. They can help to make the overall economic situation and business prospects bright or check an unwarranted boom or unhealthy demand explosion. They can encourage investment and production in certain priority sectors and discourage them in the non-priority sectors. They are also capable of influencing technological choice and investment and production patterns. In short, the fiscal and monetary policies can influence the aggregate supply and demand and the associated level of employment, wages, interest, rent, prices and profit. The Government and the Central Bank (i.e. the Reserve Bank, in India) make use of various fiscal and monetary weapons respectively to achieve stability and growth by influencing and regulating the behaviour of the various classes of spenders, savers, consumers and investors.

9.3 THE RESERVE BANK OF INDIA

The Reserve Bank of India (RBI) is India's Central Bank, also known as the banker's bank. The RBI controls monetary and other banking policies. The Reserve Bank of India (RBI) was established on April 1, 1935, in accordance with the Reserve Bank of India Act, 1934. The head office of the Reserve Bank is permanently situated in Mumbai from 1937. The primary objectives of RBI are to supervise and undertake initiatives for the financial sector consisting of commercial banks, financial institutions and non-banking financial companies (NBFCs).

The following are the major functions normally performed by the Reserve Bank of India -

- **Note Issue :** The Reserve Bank has the monopoly for printing the currency notes in the country. It has the sole right to issue currency notes of various denominations except one rupee note (which is issued by the Ministry of Finance). The Reserve Bank has adopted the **Minimum Reserve System** for issuing/printing the currency notes. Since 1957, it has been maintaining gold and foreign exchange

reserves of Rs. 200 Cr. of which at least Rs. 115 Cr. should be in gold and the remaining in the foreign currencies.

- **Banker to the Government :** The RBI is also working as the banker of the Government and therefore all funds of both Central and State Government are kept with it. It acts as an agent of the Government and manages its public debt. RBI is also offering "ways and, means advance" to the Government for short periods.
- **Banker's Bank :** The RBI is also working as the banker of other banks working in our country. It regulates the whole banking system of the country, keep certain percentage of their deposits as minimum reserve, work as the lender of the last resort to its scheduled banks and operates clearing houses for all other banks.
- **Credit Control :** The RBI is entrusted with the sole authority to control credit created by the commercial banks by applying both the qualitative and quantitative credit control measures like variation in bank rate, open market operation selective credit controls etc.
- **Custodian of Foreign Exchange Reserves :** The RBI is entrusted with sole authority to determine the exchange rate between rupee and other foreign currencies and also to maintain the reserve of foreign currency earned by the Government. The RBI also maintains its relation with the International Monetary Fund (IMF).
- **Developmental Functions :** The RBI is also working as a developmental agency by developing various sister organisations like Agricultural Refinance Development Corporation, NABARD, Industrial Development Bank of India etc. for rendering agricultural credit and industrial credit in our country.



CHECK YOUR PROGRESS

Q.1: When was the Reserve Bank of India established?

.....

.....

Q.2: Who has the right to issue one rupee note in our country? (Answer in about 20 words)

.....

.....

Q.3: What is meant by Monetary Policy? (Answer in about 30 words)

.....

.....

.....

Q.4: What is meant by Fiscal Policy? (Answer in about 30 words)

.....

.....

.....

9.4 MONETARY POLICY OF INDIA AND ITS ELEMENTS

Monetary policy is concerned with the changes in the supply of money and credit. It refers to the policy measures undertaken by the central bank to influence the availability, cost and use of money and credit with the help of monetary instruments to achieve specific objectives.

Monetary Policy of India has been traditionally formulated and executed by the Reserve Bank of India to achieve specific objectives. It refers to that policy by which central bank of the country controls (i) the supply of money and (ii) cost of money or the rate of interest, with a view to achieve particular objectives. The objectives are to maintain price stability and ensure adequate flow of credit to the productive sectors of the economy. Stability for the national currency (after looking at prevailing economic conditions), growth in employment and income are also looked into. The monetary policy affects the real sector through long and variable periods, while the financial markets are also impacted through short-term implications.

Following are the main elements of the Monetary Policy of India:

- It regulates the stocks and the growth rate of money supply.
- It regulates the entire banking system of the economy.

- It provides incentives to promote savings and to raise the savings-income ratio.
- It ensures adequate availability of credit for growth and tries to achieve price stability.

9.5 MONETARY POLICY FORMULATIONS PRIOR TO ECONOMIC REFORM PERIOD

Indian monetary policy, as it was designed and implemented during the planning period of 1952 to 1991, with a heavy accent on government intervention, differed considerably from the normal concept of monetary policy in economic literature, which is identified with the regulation of quantity of money through indirect methods of changing the cost and availability of bank credit, rather than through direct methods of controlling its quantity. It was required to reconcile many objectives as embedded in India's first Five-Year Plan (1951–1956). The objectives were:

- Price stability should be maintained.
- Savings of the community should be mobilized, and its financial component (i.e., savings held in bank deposits, shares, etc.) should be steadily enlarged.
- Savings so mobilized should be allocated to the sectors in accordance with national economic goals as set out in the country's Five-Year Plans.
- The resource needs of the major sectors in the economy, that is, the public sector should be met as a priority.

MONETARY POLICY FRAMEWORK :

When economic reforms were initiated before 1991 the basic goal of monetary policy was to neutralize the impact of large fiscal deficits of the Government. To boost public sector investment for accelerating economic growth there was large increase in Government expenditure under various Five Year plans which was financed by borrowing by the Government and deficit financing (i.e., nonetisation of budget deficit).Thus, prior to economic reform monetary policy was formulated in a crude way by going through the

following procedure. To begin with, a desirable level of supply of money was estimated on certain assumptions based partly on historical experience and partly on expectations about the movement of future economic events such as output growth and trends in prices; demand for money was assumed to grow in proportion to income growth. The magnitude of quantity of money so projected to match the demand for it was considered to be non-inflationary. Working backward, using the balance sheet of the banking system, reserve money, that is, currency in circulation plus cash with banks and their deposits held with the RBI was calculated. It was the changes in the reserve money that the RBI targeted in order to ensure an appropriate level of bank credit both to the government and the private sector.

PHASES OF INDIAN MONETARY POLICY

The Indian Monetary Policy can be summarised in certain phases. The phases are briefly explained below:

- **Sterling Parity (1935-1949) :** In the early years of 1935-1949, the primary task of monetary policy was to maintain a fixed exchange rate in terms of a sterling-rupee parity. In order to manage the consequent changes in money supply, the RBI was equipped with three monetary tools: the bank rate, OMOs (open market operations) and the CRR (cash reserve ratio).The CRR was to be used in exigencies rather than as an active instrument of credit control. The RBI first announced its official policy rate, the bank rate, at 3.5 per cent in July 1935, which was the same rate as was maintained by its predecessor, the Imperial Bank of India. With the partition of the country in 1947, India lost a predominantly agrarian province, which had consequences for inflation and civil unrest stifled industry. Relief and rehabilitation measures strained the government budget. Deficit financing increased money supply. On the face of a supply shock, monetary policy was ineffective in controlling inflation. The focus of monetary policy was on regulating liquidity in the system through OMO—by buying and selling of government securities—so as to maintain exchange rate parity. During this period, annual inflation rate

showed considerable volatility in the range of (-) 18.4 per cent to 86.7 per cent. Inflation was particularly severe during 1941-1944 and again in 1947-1949.

- **Developmental Years (1949-1969) :** The year 1949 marked a paradigm shift in central banking in India. In line with the trend around the world, the government nationalised the RBI on 1st January, 1949. Another important development in 1949 was the enactment of the Banking Regulation Act for sound development of the banking sector. The Act also required banks to maintain SLR (statutory liquidity ratio) of 20 per cent of their NDTL (Net Demand and Time Liabilities) with the RBI in the form of cash, gold or approved securities. This provided a secured source for government borrowings besides an additional instrument of monetary and liquidity management to the RBI. Monetary policy had to move in sync with the national five-year plans to bridge the resource gap, though the inflation risk of deficit financing was always there. A number of steps were taken to reduce government expenditure and boost food supplies by giving greater emphasis on agriculture in the first five-year plan. The bank rate was raised in November 1951. These measures had a sobering effect and inflation was moderated during the first half of the 1950s. Starting from the second five-year plan, the need for supporting plan financing through accommodation of government deficit by the RBI began to significantly influence the conduct of monetary policy. The SLR (statutory liquidity ratio) was raised to 25 percent of the NDTL of banks in 1964. In the 1960s, inflation was considered to be structural and inflation volatility was primarily caused by agricultural failures.So there was greater reliance on selective credit controls. This led to the introduction of several quantitative control measures to contain inflationary pressures while ensuring credit to preferred sectors. The quota-slab system, which determined the cost of credit from RBI to commercial banks, was replaced by a measure of NLR (Net Liquidity Ratio). Besides selective credit control, a CAS (Credit Authorisation Scheme) aimed at aligning credit policy more closely with the requirement of the five-

year plans was introduced. Barring the period 1964-1968, inflation mostly remained moderate.

- **Credit Planning (1969-1985) :** Nationalisation of major banks in 1969 marked another phase in monetary and financial policy. The period 1969-1985 was characterised by greater 'social control' of credit and fiscal dominance. The focus of monetary policy was on credit planning. India fought a war with Pakistan in 1971, encountered two droughts in 1973 and 1979 coinciding with two oil price shocks. There was also breakdown of Bretton-Woods system of global exchange rate arrangements in 1973. These developments had severe inflationary consequences. Inflation mounted from 10 percent in 1972-73 to 20 percent in 1973-74 and 25 percent by 1974-75. The 1980s began with elevated inflation and a BoP crisis necessitating recourse to a loan of SDR 5 billion from the International Monetary Fund (IMF). The dominance of fiscal policy over monetary policy accentuated. The system of ad-hock treasury bills which had begun in 1956, for temporary financial accommodation to the government from the RBI, became the dominant instrument of automatic monetisation of budgetary deficit. Additionally, to raise resources from banks for the government, the SLR was progressively increased from the statutory minimum then of 25 percent of banks' NDTL in 1969 to 37 percent by July 1985. And to neutralise the inflationary impact of deficit financing, CRR was gradually raised from its statutory minimum then of 3 percent to 10 percent of NDTL during the period. The bank rate had also risen from 5 percent to 10 percent. Average inflation during this period rose sharply to 8.2 percent per annum.
- **Monetary Targeting (1985-Till economic reforms) :** The period 1985-1998 can be characterised as monetary targeting period where the focus shifted to inflation management through control of money supply. The monetary targeting framework was based on the recommendations of the Chakravarty Committee (1985). Under this framework, reserve money (M_0) was used as the operating target,

and broad money (M_3) as an intermediate target. However, it was not a strict form of constant rate of M_3 growth. Monetary targeting was flexible to accommodate changes in real GDP growth. In practice, it was an indicative monetary targeting framework with a feedback from real economic activity. Nevertheless, this framework provided a nominal anchor in terms of desired rate of growth of M_3 for the conduct of monetary policy. A number of money market instruments such as IBPCs (Inter-Bank Participation Certificates), CDs (Certificates of Deposit) and CP (Commercial Paper) were introduced based on the recommendations of the Vaghul Committee (1987). In 1985, the government set out a LTP (Long-Term Fiscal Policy). But fiscal dominance continued in terms of large government borrowings. The statutory pre-emption of bank resources through CRR and SLR had peaked to 53.5 per cent of banks' NDTL by 1990. The macro-balance had turned adversa, and the Gulf War of 1990 precipitated a BoP crisis. India had to turn to the IMF for financing. The exchange rate of the rupee was adjusted downwards by 18.7 per cent vis-a-vis the US dollar. Most importantly, the BoP crisis of 1991 triggered wide ranging reforms unshackling the Indian economy. As they say the rest is history. Structural reforms and financial liberalisation in the 1990s led to a shift in the financing paradigm for the government and commercial sectors with increasingly market-determined interest and exchange rate. Automatic monetisation of government budget deficit was eschewed in 1997. The CRR and SLR were brought down to 9.5 per cent and 25 per cent of banks' NDTL by 1997. By the second half of the 1990s, the RBI was able to move away from direct instruments to indirect market-based instruments in its liquidity management operations. During the monetary targeting period, inflation remained in single digit except for the period 1990-1993 and 1994-95. In the 13-years of monetary targeting during 1985-1998, the real GDP increased at the rate of 5.4 percent per annum, wholesale price inflation increased by 8.0 percent per annum and consumer price inflation increased by 9.1 percent per annum.



CHECK YOUR PROGRESS

Q.5: What is the main goal of Monetary Policy of India? (Answer in about 30 words)

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Q.6: Discuss briefly about the objectives of Monetary Policy of India. (Answer in about 50 words)

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9.6 LET US SUM UP

- The Reserve Bank of India is India's central bank. It is also known as the banker's bank. The primary objectives of RBI are to supervise and undertake initiatives for the financial sector consisting of commercial banks, financial institutions and non-banking financial companies (NBFCs).
- Monetary Policy of India is formulated and executed by the Reserve Bank of India to achieve certain specific objectives.
- The Monetary Policy regulates the supply of money and the cost and availability of credit in the economy.
- Various objectives of Indian monetary policy were required to reconcile during India's first Five-Year Plan (1951–1956).
- Prior to economic reform monetary policy was formulated in a crude way where a desirable level of supply of money was estimated on certain assumptions based partly on historical experience and partly on expectations about the movement of future economic events such as output growth and trends in prices.



9.7 FURTHER READING

1) Mohanty, Deepak. (2017). Eight Decades of Monetary Policy in India. "https://www.researchgate.net/publication/321938442_Eight_Decades_of_Monetary_Policy_in_ India".

2) Monetary Policy Framework – "https://www.encyclopedia.com/international/encyclopedias-almanacs-transcripts-and-maps/monetary-policy-1952-1991".

3) http://www.yourarticlelibrary.com/economics/indian-economy/monetary-policy-of-india-main-elements-and-objectives/39553.

4) https://en.wikipedia.org/wiki/Monetary_policy_of_India.



9.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: The Reserve Bank of India (RBI) was established on 1st April, 1935, in accordance with the Reserve Bank of India Act, 1934.

Ans to Q. No. 2: The Ministry of Finance has the sole right to issue currency of one rupee note.

Ans to Q. No. 3: Monetary policy refers to the policy of the Reserve Bank of India in matters of interest rates, money supply and availability of credit. It is through the monetary policy that RBI controls inflation in the country.

Ans to Q. No. 4: Fiscal Policy refers to the government's choices regarding the overall level of government purchases or taxes. Fiscal policy influences saving, investment, and growth in the long run. In the short run, fiscal policy primarily affects the aggregate demand.

Ans to Q. No. 5: The primary objective of monetary policy is to maintain price stability while keeping in mind the objective of growth. Price stability is a necessary precondition for sustainable growth. To maintain price stability, inflation needs to be controlled.

Ans to Q. No. 6: The objectives monetary policy of India is to maintain price stability and ensure adequate flow of credit to the productive sectors of the economy. Stability for the national currency, growth in employment and income are also looked into. The monetary policy affects the real sector through long and variable periods while the financial markets are also impacted through short-term implications.



9.9 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words)

Q 1: Write a brief note on the Monetary Policy of India.

Q 2: Explain the role of RBI as 'Banker to the Government'.

Q 3: Write a brief note on elements of Monetary Policy.

Long Questions (Answer each question in about 300-500 words)

Q 1: Discuss the major functions performed by the Reserve Bank of India.

Q 2: Write a note on monetary policy formulations prior to economic reforms of 1991.

Q 3: Briefly describe about the Monetary Policy Framework.

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UNIT 10: MONETARY POLICY FORMULATION IN INDIA – II

UNIT STRUCTURE

10.1 Learning Objectives

10.2 Introduction

10.3 Objectives of Monetary Policy

10.4 Role of RBI in Monetary Policy Formulation

10.5 Various instruments of Monetary Policy

10.6 Monetary Policy Formulations in the Post Economic Reform Period

10.7 Let Us Sum Up

10.8 Further Reading

10.9 Answers to Check Your Progress

10.10 Model Questions

10.1 LEARNING OBJECTIVES

After going through this unit, you will be able to

- know about the role of RBI in Monetary Policy Formulation
- understand the various instruments of Monetary Policy of India
- explain the Monetary Policy formulations in the post Economic Reform Period.

10.2 INTRODUCTION

Monetary policy is the macroeconomic policy laid down by the Reserve Bank of India. It is the process by which the management of money supply and interest rates takes place. The central bank tweaks interest rates to achieve macroeconomic objectives such as liquidity, consumption and inflation. In a bid to keep inflation under specified level, the government in 2016 had decided to set up Monetary Policy Committee headed by RBI Governor entrusted with the task of fixing the benchmark policy rate (repo rate). The six-member panel, which had its first meeting in October 2016,

was given the mandate to maintain annual inflation at 4 percent until March 31, 2021 with an upper tolerance of 6 percent and a lower tolerance of 2 percent.

10.3 OBJECTIVES OF MONETARY POLICY

Monetary policy of India refers to that policy which is concerned with the measures taken to regulate the volume of credit created by the banks. The main objectives of monetary policy are to achieve price stability, financial stability and adequate availability of credit for growth.

1) Inflation - Monetary policies can target inflation levels. A low level of inflation is considered to be healthy for the economy. If inflation is high, a contractionary policy can address this issue.

2) Unemployment - Monetary policies can influence the level of unemployment in the economy. For example, an expansionary monetary policy generally decreases unemployment because the higher money supply stimulates business activities that lead to the expansion of the job market.

3) Currency exchange rates - Using its fiscal authority, a central bank can regulate the exchange rates between domestic and foreign currencies. For example, the central bank may increase the money supply by issuing more currency. In such a case, the domestic currency becomes cheaper relative to its foreign counterparts.

4) Price Stability - Another major objective of monetary policy in India is to maintain price stability in the country. It implies Control over inflation. Price level, is affected by money supply. Monetary policy regulates money supply to maintain price stability.

5) Promote Economic Growth - An important objective of monetary policy is to make available necessary supply of money and credit for the economic growth of the country. Those sectors which are quite significant for the economic growth are provided with adequate availability of credit.

6) Promote Savings and Investment – By regulating the rate of interest and checking inflation, monetary policy promotes saving and investment. Higher rates of interest promote saving and investment.

10.4 ROLE OF RBI IN MONETARY POLICY FORMULATION

The Central Bank, the RBI formulates, implements and monitors the monetary policy. In fact, the monetary policy and the fiscal policy are the two tools of macroeconomic policy. The monetary policy mainly ensures that there is price stability coupled with economic growth. The key areas that these policy targets are the interest rates, bank credits and money supply.

The RBI also uses some tools to regulate the monetary policy. These include Open Market operations, Bank Rate, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Repo rate, Reversa Repo rate etc. There are also some Qualitative instruments that the RBI uses which impact the money supply indirectly.

A few key terms are explained below:

- **Bank Rate -** It is the interest rate at which RBI lends money to domestic banks, often in the form of very short-term loans. Managing the bank rate is a method by which central banks affect economic activity.
- **Cash Reserve Ratio (CRR) –** It refers to the proportion of deposits the commercial bank is required to keep in the form of cash with the RBI.
- **Statutory Liquidity Ratio (SRR) -** It refers to the proportion of deposits the commercial bank is required to maintain with them in the form of designated securities in addition to the cash reserve ratio.
- **Repo Rate -** It is the interest rate at which RBI lends money to commercial banks in the event of any shortfall of funds**.**
- **Reverse Repo Rate -** The interest rate at which RBI borrows from commercial banks is called the reverse repo rate.

MONETARY POLICY COMMITTEE

The Reserve Bank of India Act, 1934 (RBI Act) was amended by the Finance Act, 2016, to provide for a statutory and institutionalized framework for a Monetary Policy Committee, for maintaining price stability, while keeping in mind the objective of growth. The Monetary Policy Committee is entrusted with the task of fixing the benchmark policy rate (repo rate) required to contain inflation within the specified target level. As per the provisions of the RBI Act, three of the six members of the Monetary Policy Committee will be from the RBI and the other three members will be appointed by the Central Government. The Government of India, in consultation with RBI, notified the 'Inflation Target' in the Gazette of India Extraordinary dated 5 August 2016 for the period beginning from the date of publication of the notification and ending on the March 31, 2021 as 4%. At the same time, lower and upper tolerance levels were notified to be 2% and 6% respectively.



CHECK YOUR PROGRESS

Q.1: When was the Reserve Bank of India (RBI) vested with the responsibility of conducting monetary policy? (Answer in about 20 words).

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Q.2: What measure does RBI use to reduce inflation? (Answer in about 20 words).

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Q.3: How many members are there in the Monetary Policy Committee? (Answer in about 10 words).

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10.5 VARIOUS INSTRUMENTS OF MONETARY POLICY

There are several direct and indirect instruments that are used for implementing monetary policy.Now let us take a look at the various instruments of monetary policy that the RBI has at its disposal.

- **Repo Rate:** The (fixed) interest rate at which the Reserve Bank provides overnight liquidity to banks against the collateral of government and other approved securities under the liquidity adjustment facility (LAF).
- **Reverse Repo Rate:** The (fixed) interest rate at which the Reserve Bank absorbs liquidity, on an overnight basis, from banks against the collateral of eligible government securities under the LAF.
- **Liquidity Adjustment Facility (LAF):** The LAF consists of overnight as well as term repo auctions. Progressively, the Reserve Bank has increased the proportion of liquidity injected under fine-tuning variable rate repo auctions of a range of tenors. The aim of term repo is to help develop the inter-bank term money market, which in turn can set market-based benchmarks for pricing of loans and deposits, and hence improve the transmission of monetary policy. The Reserve Bank also conducts variable interest rate reversa repo auctions, as necessitated under the market conditions.
- **Marginal Standing Facility (MSF):** A facility under which scheduled commercial banks can borrow an additional amount of overnight money from the Reserve Bank by dipping into their Statutory Liquidity Ratio (SLR) portfolio up to a limit at a penal rate of interest. This provides a safety valve against unanticipated liquidity shocks to the banking system.
- **Corridor:** The MSF rate and reverse repo rate determine the corridor for the daily movement in the weighted average call money rate.
- **Bank Rate:** It is the rate at which the Reserve Bank is ready to buy or re-discount bills of exchange or other commercial papers. The

Bank Rate is published under Section 49 of the Reserve Bank of India Act, 1934. This rate has been aligned to the MSF rate and, therefore, changes automatically as and when the MSF rate changes alongside the changes of policy repo rate.

- **Cash Reserve Ratio (CRR):** The average daily balance that a bank is required to maintain with the Reserve Bank as a share of such percent of its net demand and time liabilities (NDTL) that the Reserve Bank may notify from time to time in the Gazette of India.
- **Statutory Liquidity Ratio (SLR):** The share of NDTL that a bank is required to maintain in safe and liquid assets, such as unencumbered government securities, cash and gold etc. Changes in SLR often influence the availability of resources in the banking system for lending to the private sector.
- **Open Market Operations (OMOs):** These include both, outright purchase and sale of government securities, for injection and absorption of durable liquidity, respectively.
- **Market Stabilisation Scheme (MSS):** This instrument for monetary management was introduced in 2004. Surplus liquidity of a more enduring nature arising from large capital inflows is absorbed through the sale of short-dated government securities and treasury bills. The cash so mobilized is held in a separate government account with the Reserve Bank.

10.6 MONETARY POLICY FORMULATIONS IN THE POST ECONOMIC REFORM PERIOD

The Monetary Policy of the RBI has undergone massive changes during the economic reform.Under the reform period an emphasis was given to stable the macroeconomic situation and low inflation policy. The major changes in the Indian Monetary policy during the decade of 1990 are briefly discussed below:

- **Reduced Reserve Requirements:** The Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR) are gradually reduced during

the economic reforms period in India. It is reduced from the earlier high level of 15% plus incremental CRR of 10.5% to current 6% level.The SLR is also reduced from early 30.5% to current minimum of 24% level. This has left more loan-able funds with commercial banks.

- **Increased Micro Finance:** In order to strengthen the rural finance the RBI has focused more on the Self Help Group (SHG). It comprises small and marginal farmers, agriculture and non-agriculture labour, artisans and rural sections of the society. However still only 30% of the target population has been benefited.
- **Fiscal Monetary Separation:** In 1994, the Government and the RBI signed an agreement through which the RBI has stopped financing the deficit in the government budget. Thus it has separated the monetary policy from the fiscal policy.
- **Changed Interest Rate Structure:** During the 1990s, the interest rate structure was changed from its earlier administrated rates to the market oriented or liberal rate of interest. Interest rate slabs are now reduced up to 2% and minimum lending rates are abolished. Similarly, lending rates above Rs. 2,00,000 are freed.
- **Introduction of CRAR:** Capital to risk weighted assets ratio (CRAR) was started in 1992. Almost all the banks in India have reached the capital adequacy ratio (CAR) above the statutory level of 9%.
- **Diversification of Banking:** The Indian Banking sector was well-diversified during the economic reforms period. Many of the banks have started new services and new products. Some banks have established subsidiaries in Merchant Banking, mutual funds, insurance, venture capital etc.
- **New Generation Banks:** During the reforms many new generations banks have successfully emerged on the financial horizon. Bank such as ICICI Bank, UTI Bank have given a big challenge to the Public Sector Banks leading to a greater degree of competition.

- **Improved Profitability and Efficiency:** During the reform period, the productivity and efficiency of many commercial banks has improved. It has happened due to reduced, non-performing loans, use of technology, use of computers and some other relevant measures adopted by the govt.
- **Changes in Accordance to the External Reforms:** During the 1990s, the external sector has undergone major changes. They comprise of lifting various controls on imports, reduced tariffs, etc. The Monetary policy has shown the impact of liberal inflow of the foreign capital and its implication on domestic money supply.

EVALUATION OF MONETARY POLICY IN INDIA

During the reforms though the monetary policy has achieved higher success in its implementation but it is not free from limitations or demerits. It needs to be evaluated on a proper scale.

- **Failed in Tackling Budgetary Deficit:** The higher level of the budget deficit has made the monetary policy ineffective. The automatic monetisation of the deficit has led to high monetary expansion since **monetised deficit** is the extent to which the RBI helps the central government in its borrowing programme. In other words, monetised deficit means the increase in the net RBI credit to the central government, such that the monetary needs of the government could be met easily.
- **Limited Coverage:** The Monetary policy covers only commercial banking system leaving other non-bank institutions untouched. It limits the effectiveness of the Monetary Policy in India as it covers only the commercial banking system.
- **Unorganized Money Market:** In our country there is a huge size of the unorganized money market. It does not come under the control of the RBI. Thus any tool of the monetary policy does not affect the unorganized money market making monetary policy less effective.
- **Predominance of Cash Transaction:** In India still there is huge dominance of the cash in total money supply. It is one of the main

obstacles in the effective implementation of the monetary policy. Because monetary policy operates on the bank credit rather on cash.

- **Increase Volatility:** As the Monetary policy has adopted changes in accordance to the changes in the external sector in India, it could lead to a high amount of the volatility. It was established that the nominal interest rate, output growth, and inflation fall in reaction to an increase in the volatility of monetary policy.



CHECK YOUR PROGRESS

Q.4: What are CRR and SRR? (Answer in about 50 words).

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Q.5: What is meant by Repo Rate and Reversa Repo Rate? (Answer in about 30 words).

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10.7 LET US SUM UP

- The Reserve Bank of India (RBI) is vested with the responsibility of conducting monetary policy. This responsibility is explicitly mandated under the Reserve Bank of India Act, 1934.
- The Reserve Bank of India, through the Monetary Policy control, the interest rates, money supply and availability of credit with a view to achieve the ultimate objectives of economic policy.

- The Reserve Bank of India uses contractionary monetary policy to reduce inflation and expansionary monetary policy to lower unemployment and avoid recession.
- A Monetary Policy Committee was constituted comprising of 6 members for maintaining price stability, while keeping in mind the objective of growth.
- There are a number of direct and indirect instruments that are used for implementing monetary policy such as Open Market operations, Bank Rate, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), Repo rate, Reversa Repo Rate etc.
- The Monetary Policy of the RBI has undergone massive changes after 1991. In the post reform period an emphasis was given to stabilise the macroeconomic situation and low inflation policy.
- The monetary policy has achieved higher success in its implementation though it is not free from limitations or demerits. It needs to be evaluated on a proper scale.



10.8 FURTHER READING

1) Mehta, Chandra Mukund. (2011). **"**Monetary Policy in India: - Reforms And It's Evaluation".http://psrcentre.org/images/extraimages/35.% 201211439.pdf.
2) Mohan, Rakesh. (2006). "Financial Sector Reforms and Monetary Policy: The Indian Experience". http://www.rakeshmohan.com/docs/ RBIBulletinJuly 2006-1.pdf.
3) Reddy, V.Y. "Monetary policy operating procedures in India" . https:// www.bis.org/publ/plcy05e.pdf.
4) https://www.toppr.com/guides/economics/money-and-banking/ instruments-of-monetary-policy-and-the-reserve-bank-of-india/
5) https://www.clearias.com/monetary-policy/.
6) https://en.wikipedia.org/wiki/Monetary_policy_of_India

10.9 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: The Reserve Bank of India (RBI) is vested with the responsibility of conducting monetary policy. This responsibility is explicitly mandated under the Reserve Bank of India Act, 1934.

Ans to Q. No. 2: The Reserve Bank of India uses contractionary monetary policy to reduce inflation. They reduce the money supply by restricting the amount of money banks can lend.

Ans to Q. No. 3: The Monetary Policy Committee is a six-member committee constituted by the Central Government.

Ans to Q. No. 4: Cash Reserve Ratio (CRR) is the average daily balance that a bank is required to maintain with the Reserve Bank as a share of such percent of its net demand and time liabilities (NDTL) that the Reserve Bank may notify from time to time in the Gazette of India whereas Statutory Liquidity Ratio (SLR) refers to the proportion of deposits the commercial bank is required to maintain with them in the form of liquid assets in addition to the cash reserve ratio.

Ans to Q. No. 5: Repo rate is the interest rate at which RBI lends money to commercial banks in the event of any shortfall of funds and Reverse Repo Rate is the interest rate at which RBI borrows from commercial banks.

10.10 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words)

Q 1: State the objectives of Monetary Policy of India.

Q 2: State is the role of RBI in Monetary Policy formulation.

Q 3: Write a brief note about the Monetary Policy Committee.

B) Long Questions (Answer each question in about 300-500 words)

Q 1: What are the various instruments of the Monetary Policy of India?

Q 2: Briefly discuss the various objectives of Monetary Policy of India.

Q 3: Write a note about the monetary policy formulations in the post economic reforms period of 1991.

Q 4: Discuss briefly about the limitations of the Monetary Policy of India.

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UNIT 11: MACROECONOMIC THEORY OF THE OPEN ECONOMY

UNIT STRUCTURE

11.1 Learning Objectives

11.2 Introduction

11.3 Supply and Demand for Loanable Funds and for Foreign Currency Exchange

11.4 Equilibrium in the Open Economy

11.5 Macroeconomic Policies in an Open Economy for Government Budget Deficits, trade policy

11.6 Let us Sum Up

11.7 Further Reading

11.8 Answers to Check Your Progress

11.9 Model Questions

11.1 LEARNING OBJECTIVES

After going through this unit, you will be able to -

- know how loanable fund and foreign exchange market achieve equilibrium in open economy
- explain how budget deficit and trade policy affect the open economy equilibrium
- understand the role of macroeconomic policies in an Open Economy.

11.2 INTRODUCTION

An open economy is one that interacts with the other economies of the world through international trade and finance. The openness of an economy provides the opportunity to the citizens of a country to choose goods and services from a much variety of items and also gives the opportunity to invest their savings outside the country. Along with such benefits, the openness of the economy also exposes the economy to certain unavoidable risk. In case

of an open economy a country's spending in any given year need not equal to its output of goods and services. Sometimes a country can spend more than it produces by borrowing from abroad, or sometimes it can spend less than it produces and lend the difference to foreigners. If we look at the closed economy model, (i.e.; Y= C+ I + G), it is seen that all output is sold domestically and expenditure has three components: consumption(C), investment (I) and government expenditure (G). But in case of open economy the model becomes (Y = C+ I+ G+ NX); where NX is the net export (i.e.; the difference between export and import). Due to presence of net export (NX), the discussion regarding macroeconomic theory of open economy is different from the closed economy analysis. Therefore, this unit is an attempt to discuss how an open economy works to achieve the equilibrium position. In other words, this unit examines what determines the price of domestic goods relative to foreign goods, the rate at which the domestic currency trades for foreign currencies and how protectionist trade policies influence the amount of international trade and the exchange rate.

11.3 SUPPLY AND DEMAND FOR LOANABLE FUNDS AND FOR FOREIGN CURRENCY EXCHANGE

In the context of an open economy, it is seen that among all other factors the rate of interest mostly affect the decision of the investors whether to invest domestically or abroad. Such as if the rate of interest is higher in the domestic country then foreign investment is less attractive for domestic investors and vice-versa. Similar decision is also taken by the foreign investors. Thus, due to this behaviour of the investors the net flow of capital to other countries is negatively related to the domestic real interest rate (r). Symbolically, CF = f (r); where CF indicates net flow of capital and r is the domestic real interest rate. A higher domestic interest rate discourages domestic investors from lending abroad and encourages foreign investors to lend here.

The market for loanable funds (where the interest rate is determined) and the market for foreign exchange (where the exchange rate is determined) are under consideration to understand how the large open economy works.

- **The market for Loanable funds:** In order to see how the supply and demand of loanable funds work, let us consider

$$S = I + CF$$

As we know that an open economy's saving (S) is used to finance domestic investment (I) and to finance the net capital outflows. National saving is fixed by the level of output, fiscal policy and the consumption function. Investment and net capital outflow both depend on the domestic real interest rate. Therefore,

$$\bar{S} = I(r) + CF(r)$$

The fig. 11.1 shows the market for loanable funds. The national savings $(\bar{S})$ is the supply curve of loanable funds and the *I(r)+CF(r)* curve is the demand curve for loanable funds. The interest rate adjusts to bring supply and demand to equilibrium. At the equilibrium interest rate (r'), the supply of loanable funds from saving balances the demand for loanable funds from domestic investment and capital investment abroad.

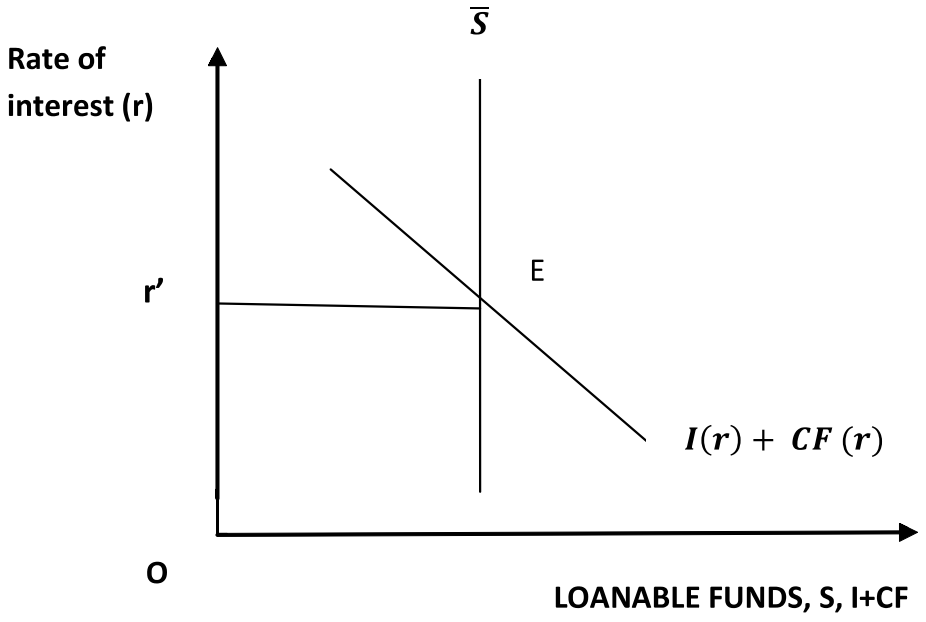


Fig.11.1: Market for loanable funds

- **The market for Foreign exchange:** In foreign exchange market the exchange rate helps the countries to trade with each other.

There are two types of exchange rates - nominal exchange rate and real exchange rate. The nominal exchange rate indicates the rate at which

domestic currency is exchanged for foreign currency. On the other hand, the real exchange rate is the rate at which goods are traded among the countries. The real exchange rate is sometimes called the terms of trade.

In order to understand the foreign exchange market, let us use the national income identities such as

$$NX = S - I = CF$$

Where, NX is the trade balance or net export, CF is net capital outflow and S and I is the saving and investment respectively. As the NX is the function of real exchange rate (ε), so we can write

$$NX(\varepsilon) = CF$$

Thus, the real exchange rate is the price that equilibrates the trade balance and the net capital outflow. If (S – I) > 0 and NX > 0, then the economy is in trade surplus. In this case, we are exporting more goods than we are importing and we are net lenders in world financial markets. In case of trade deficits {i.e.; NX <0 & (S – I) < 0}, we are net borrower in world financial markets and importing more than we are exporting. And, we are in balanced trade when NX = 0 and (S – I) = 0

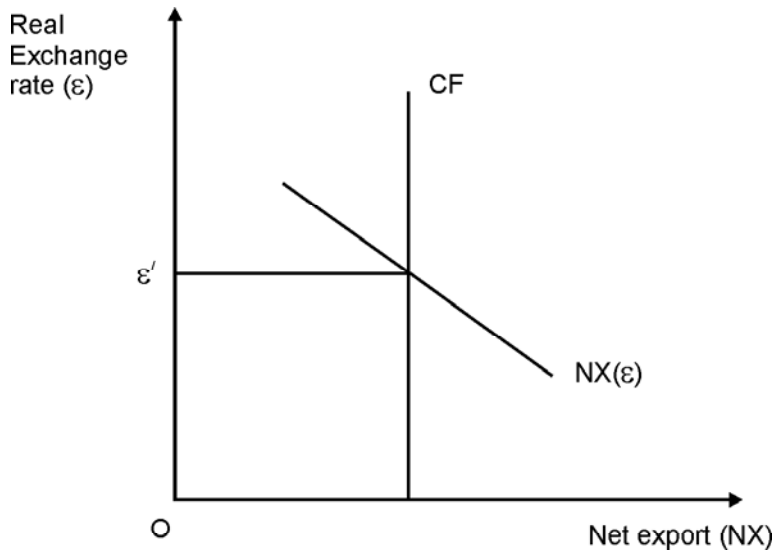


Fig.11.2 : Determination of real exchange rate

In fig.11.2, real exchange rate is determined. At the equilibrium exchange rate (ε'), the supply of domestic currency from the net capital outflow (CF) balances the demand for domestic currency from our net exports of goods and services (NX).



CHECK YOUR PROGRESS

Q.1: Define open economy. (Answer in about 30 words)

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Q.2: Define a foreign exchange market. (Answer in about 30 words)

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11.4 EQUILIBRIUM IN THE OPEN ECONOMY

The net capital outflow links both the loanable fund market and foreign exchange market. The supply and demand for loanable funds determine a total quantity of loanable funds or the real interest rate which in turn affects net capital outflows. On the other hand, the supply and demand of domestic currency determine the real exchange rate, which also affects the net capital outflows.

In order to understand how net capital outflows links both the loanable fund market and foreign exchange market let us take help of a three panel diagram.

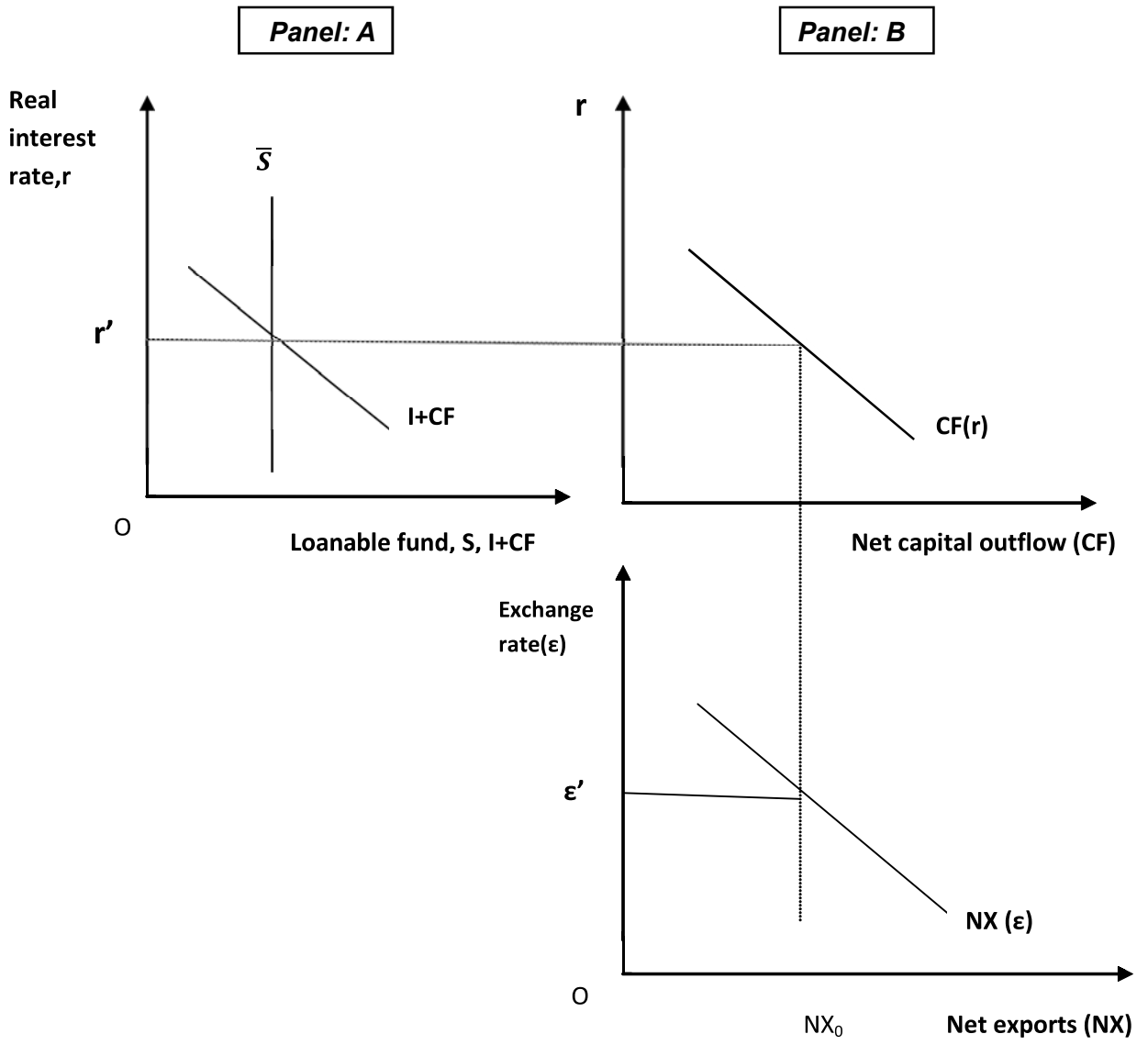


Fig.11.3: Equilibrium in the open economy

The panel (A) of Fig.11.3 shows the equilibrium in the market for loanable funds. The S curve and (I+CF) curve intersects each other and determines the real rate of interest r'. Panel (B) shows the relationship between equilibrium interest rate and the net capital outflow which in turn determines the supply of domestic currency to be exchanged into foreign currency. And panel (C) represents the foreign exchange market equilibrium position. At ε' exchange rate the amount of net export is NX_0. Here the real exchange rate adjusts to balance this supply of domestic currency with the demand coming from net exports.



CHECK YOUR PROGRESS

Q.3: Define net export. (in about 30 words)

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Q.4: Distinguish between depreciation and appreciation of currency. (Answer in about 50 words)

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11.5 MACROECONOMIC POLICIES IN AN OPEN ECONOMY FOR GOVERNMENT BUDGET DEFICITS, TRADE POLICY

Government budget deficit: Now, to analyse how economic policies works in an open economy let us consider the expansionary fiscal policy. The expansionary fiscal policy reduces the national saving. Needless to say when a government runs a budget deficit, it results the negative national saving. Therefore, both the cases shift the saving curve to the left.

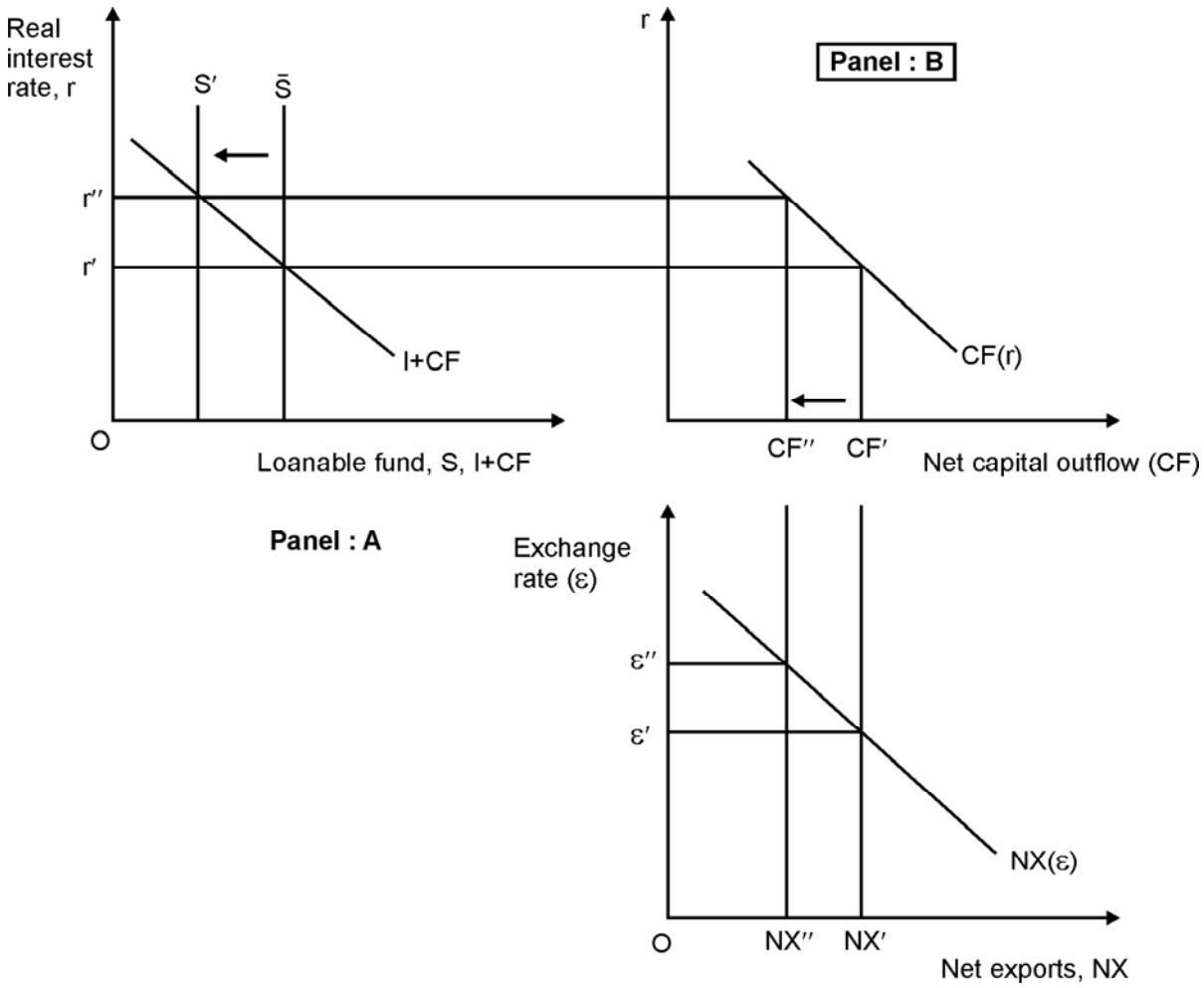


Fig.11.4 Effects of fiscal policy in open economy equilibrium

In panel (A) of fig, 11.4, the supply of loanable funds, $\bar{S}$ curve shifts to S' which increases the real rate of interest to r". This increase in the real interest rate reduces the net capital outflow to CF" (shown in B).The fall in the net capital outflow reduces the supply of domestic currency to be exchanged into foreign currency. As a result the exchange rate appreciates and the net exports fall. In the panel (C), the real exchange rate increases to ε" from ε' due to reduction of net exports from NX' to NX".

Trade policy: A trade policy is also known as commercial policy which defines standards of goals, rules and regulations that pertain to trade relations between countries. These policies are specific to each nation and are formulated by its public officials. Through trade policy every nation aims

to boost their respective international trade. Normally, a country's trade policy focuses on to impose best policy related to tariffs and quotas to ensure security and safety of domestic economic agents in international trade.

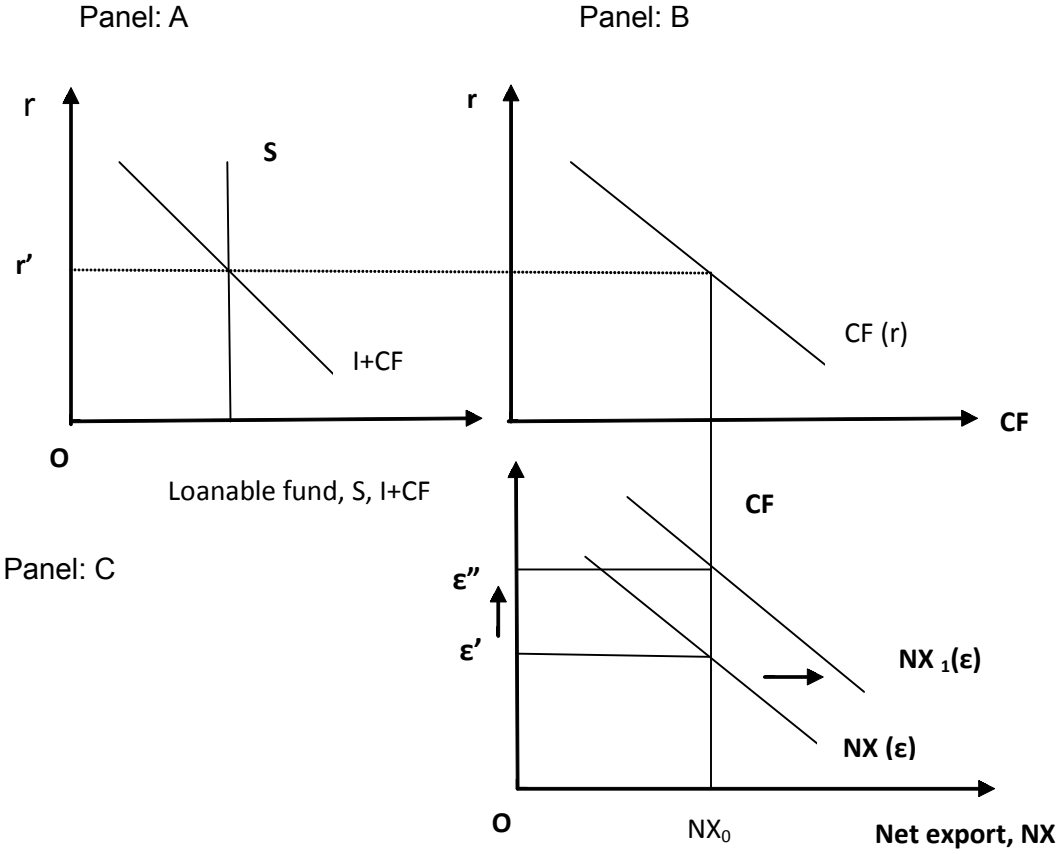


Fig. 11.5: Effects of trade restriction in open economy

It is known to us that the trade restrictions (such as import quota) reduces the imports at any real exchange rate and increases the net exports. The imposition of import quota doesn't affect the loanable fund market and net capital outflow, but it shifts the demand for net exports in the foreign exchange market which helps to appreciate the exchange rate. The rise in the exchange rate makes the domestic goods expensive relative to foreign goods, which depresses exports and stimulates the imports.

In panel (C) of fig. 11.5, it is seen that due to protectionist policy (such as imposition of import quota) the net export curve (NX) shifts to (NX1) which raises the exchange rate to ε" and leave the net exports unchanged. But in panel A and B no change is seen.



CHECK YOUR PROGRESS

Q.5: What is meant by expansionary fiscal policy? (Answer in about 50 words)

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Q.6: What is trade policy? (Answer in about 50 words)

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11.6 LET US SUM UP

- An open economy is one that interacts with the other economies of the world through international trade and finance.
- Although open economy has various positive signs but it has negative signs too.
- The open economy model is Y = C+ I+ G+ NX; where Y is total output, C is consumption, I is investment, G is government expenditure and NX is the net export.
- In an open economy, the rate of interest mostly affects the decision of the investors whether to invest domestically or abroad. If the rate of interest is higher in the domestic country then foreign investment is less attractive for domestic investors and vice-versa.
- The loanable fund market determines the rate of interest whereas the foreign exchange market determines the exchange rate.
- The net capital outflow links both the loanable fund market and foreign exchange market.
- The expansionary fiscal policy and government budget deficit reduces the national saving.

- A trade policy defines standards of goals, rules and regulations that pertain to trade relations between countries.
- Trade policy aims to boost nation's international trade.
- Trade restrictions reduce the imports at any real exchange rate and increase the net exports.
- The imposition of import quota doesn't affect the loanable fund market and net capital outflow, but it shifts the demand for net exports in the foreign exchange market which helps to appreciate the exchange rate.



11.7 FURTHER READING

1) Mankiw, N. G. (2009). *Macroeconomics.* New York: Worth Publishers. 7th edition.
2) Blanchard, O & Johnson, D. R. (2012). *Macroeconomics*. Pearson Education International. 6th edition.
3) Rana, K. C & Verma, K. N. (2011). *International Economics*. Vishal Publishing Co.



11.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: An open economy is one that interacts with the other economies of the world through international trade and finance. The open economy model is (Y = C+ I+ G+ NX) where C is consumption, I is investment, G is government expenditure and NX is net export.

Ans to Q. No. 2: Foreign exchange market refers to the market in which national currencies are traded for one another. The commercial banks, foreign exchange brokers, authorized dealers and the monetary authorities are the major participants in foreign exchange market.

Ans to Q. No. 3: Net exports are the difference between a country's total value of exports and total value of imports (i.e., Total export- total

import = net export). It is also known as a trade balance.

Ans to Q. No. 4: Depreciation of a currency implies a fall in the external value of a currency under flexible exchange rate system. On the other hand, the term appreciation is opposite to depreciation. Appreciation means rise in the external value of a currency.

Ans to Q. No. 5: The government of an economy can use expansionary fiscal policy by increasing the government expenditure and also by reducing the tax rate. The increase in government expenditure directly affects the aggregate demand and on the other hand, the reduction of tax rate increases the purchasing power of the consumers which also affect the aggregate demand.

Ans to Q. No. 6: A trade policy is some standards of goals, rules and regulations that pertain to trade relations between countries. These policies are formulated by public officials of a nation to boost their international trade.



11.9 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words)

Q 1: What is real exchange rate?

Q 2: Distinguish between an open economy and closed economy.

Q 3: Explain the significance of interest rate in determining exchange rate.

Q 4: Distinguish between fiscal policy and monetary policy.

Long Questions (Answer each question in about 300- 500 words)

Q 1: Explain how net capital outflow helps to determine the equilibrium position in the open economy.

Q 2: Discuss briefly about supply and demand for loanable funds and for foreign currency exchange.

Q 3: Discuss how deficit budget affects the foreign exchange market.

Q 4: Explain the role of protectionist trade policy in the foreign exchange market.

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UNIT 12: INTRODUCTION TO GROWTH THEORY

UNIT STRUCTURE

12.1 Learning objectives

12.2 Introduction

12.3 Harrod-Domar Growth Model and Instability of Equilibrium

12.4 Solow's Neo-Classical Growth Models

12.5 Kaldor's Model of Growth

12.6 Let Us Sum Up

12.7 Further Reading

12.8 Answer to Check Your Progress

12.9 Model Questions

12.1 LEARNING OBJECTIVES

After going through this unit, you will able to

- understand the meaning of growth
- discuss Harrod-Domar Growth model
- explain the Solow's Neo-classical growth models
- discuss Cambridge criticism of neo-classical analysis of growth
- understand the Kaldor's Model of growth.

12.2 INTRODUCTION

Economic growth is considered as an important branch of economic theory. Without growth economic development is not possible. Generally people use these two terms 'economic growth' and 'economic development' in the same sense but economists distinguish between the two. "Economic growth is supposed to be a natural or normal process requiring no special efforts on the part of the community. Economic development, on the other hand, involves structural changes without which the inertia of social system cannot be overcome and decisive break with the past achieved". For example, economic advancement of USA in the 19th century can be called as economic growth while the economic

advancement of former Russia and also the Asian and African countries are regarded as economic development because it is the result of their conscious efforts.

There are quite a few theories of growth in economic literature. Here we are discussing three important growth models of Harrod-Domar, Solow and Kaldor.

12.3 HARROD-DOMAR GROWTH MODEL AND INSTABILITY OF EQUILIBRIUM

Two prominent Economists, Harrod and Domar have made a notable contribution to the theory of economic growth. Harrod gave his model in his article,"An essay on dynamic theory" published in Economic Journal (U.K) in 1939 and Domar developed his growth model in his book, "Essay in the Theory of Economic Growth" in 1946. Since both have given similar results the two models constitute one single growth model and is called Harrod-Domar (H-D) model of growth. The main points of this model are-

- Investment is the basic cause of steady growth
- Output and employment of the economy increase by increased capacity depending on the pattern of income.
- Full employment to be maintained over time
- Equilibrium growth rate depends on the propensity to save
- Chronic inflation and deflation occur in economy when actual growth rate is greater than and less than warranted growth rate respectively.

Thus the important character of this model is that it considers both demand and supply side of investment process. So H-D model states that to maintain full employment equilibrium level of output, investment and growth of income must be equal.

Assumptions: H-D growth model is based on the following assumptions

- H-D model assumes that full employment level of income exists in the economy
- There is absence of government interference and foreign trade.

- There are no lags in adjustment
- The average and marginal propensity to save are equal
- It assumes that the propensity to save and the capital coefficient (K/ Y) are constant.

Domar Model: In the Domar model, Domar tries to establish an equation where increase in productive capacity is in one hand and income is on other hand. The solution of this equation will yield the required rate of growth. According to Domar,

$s = \Delta Y \div \Delta K$

$= 1/\Delta K/\Delta Y$

WhereY = increase in real income

K= increase in Capital

Y= Marginal capital coefficient or c-o ratio or Accelerator Coefficient.

It should be remembered that now all the new capital invested goes to increase the productive capacity. A part of it may go to replace the existing capital. The difference between s and δ is the increase in productive capacity per dollar of capital invested only in new plants and the productive capacity of the whole economy. Accordingly, $\delta < s$.

Now I times δ is the total net increase in output that the economy can produce for each unit of investment. It ($I\delta$) represents the aggregate supply side of the economy. The demand side of the system also depends upon I which appears on the supply side of the system. Investment (I) creates income via multiplier. Let Investment increase at an absolute annual rate of ΔI, and let the absolute increase in income be denoted by ΔY, and the propensity to save by α. Then the increase in income will equal the multiplier ($1/\alpha$) times the increase in investment. Thus,

$\Delta Y = 1/\alpha (\Delta I)$……(1) (Demand side of Investment)

Since, in equilibrium, Y= δ…… (by assumption)

Thus, $\Delta Y = I \delta$ (National income and productive capacity should increase at the same rate so that full employment is maintained)

Equation (2) is the fundamental equation of the model.

Or $1/\alpha(\Delta I) = I\delta$ ……(2) from (1)

Demand side of investment = Supply side of investment

(Annual increase in income) = (Annual increase in productive capacity)

$$\frac{\Delta I}{I} = \alpha\delta$$ ……(3) (Fundamental equation)

Where, $\frac{\Delta I}{I}$ = Absolute annual increase in investment divided by the volume of investment itself = Annual percentage rate of growth of investment

Again from (1), $\Delta Y = 1/\alpha(\Delta I)$ …..(i)

$Y = 1/\alpha$ (By integration) …..(ii)

Dividing (i) by(ii) $\Rightarrow$ $\Delta Y = 1/\alpha(\Delta I)/1/\alpha I$

Or $\Delta Y / Y = \Delta I / I$ ……(4)

Now from (2) and (3) we get $\Delta Y / Y = \Delta I / I = \alpha\delta$ ……(5)

Therefore full employment requires that investment and income should go at the annual percentage rate of $\alpha\delta$.

The Harrod Model: Harrod's model of economic growth is a dynamic model based on the Keynesian analysis. His analysis is based on the two basic assumptions

- During a particular period of time, net saving of the community is a constant proportion of income
- Desired level of investment depends on the rate of increase in output in the previous years

Income behavior as a response to entrepreneurial decision relating to investment is derived depending on the above two assumptions.

When income is increasing, correspondingly the entrepreneur's will also be satisfied with actual investment because saving or investment form a fixed proportion of income and increase in investment depends on the rate of increase in income. The rate of growth of income can be called 'warranted rate of growth'. The main problem of Harrod model is to find out the factors of this rate of growth of income.

According to Harrod there are three types of growth rates-

- Actual growth rate (G)
- Warranted growth rate (Gw)
- Natural growth rate (Gn)

Harrod starts with the basic equation-

Gc = S…….(1)

Where, G = rate of growth of income; C =increase in capital during the period divided by the increase in output during the period; S= saving expressed a proportion of income.

$$\Rightarrow \Delta Y / Y \;.I/ \Delta Y = S / Y$$

$$\Rightarrow \frac{1}{Y} = S / Y$$

The second basic equation is $G_w C_r$=S……(2)

Equation (2) represents equilibrium condition for a steady growth rate.

Here, G_w = warrented growth rate

C_r = Capital requirement or capital coefficient required sustaining the warranted rate of growth .

S= Marginal propensity to save

Equation (2) implies that if full capacity utilization is to be maintained, income must grow at the annual rate of S/C_r. It is the equilibrium condition for a steady growth rate, which is shown in the following diagram.

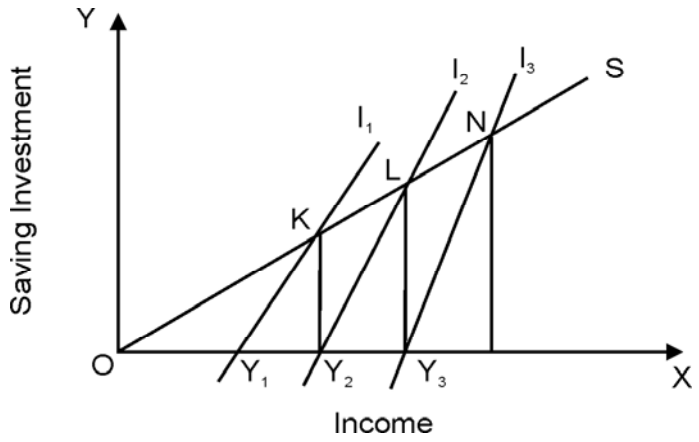


Fig. 12.1 : Equilibrium condition for a steady growth rate

In the above diagram, ox represents income and oy represents saving and investment. os is the saving function. At oy_2 level of income saving investment equality is maintained where current income level is greater than previous by y_1y_2.Thus warranted rate of growth rate will be y_1y_2/oy_2. Similarly new investment line intersects at L M respectively. As a result economy will grow at higher saving investment level and income level increases.

The National Growth Rate: National growth rate is the rate of advance which allow the increase in population and technological improvement. It is the maximum feasible rate of growth according to Mrs. Robinson. The Equation of this growth rate is

$$GnCr=S$$

If Gn greater than Gw then G can also exceed Gw. When G exceeds Gw there will be a tendency for a boom to develop and if it falls below Gw cyclical depression is likely to occur, thus saving is beneficial so long as Gw is less than Gn. Therefore the following equation must be fulfilled to maintain full employment.

$$Gn=Gw=G$$

Divergence among G, GW and Gn : To achieve full employment in the economy all three growth rates i.e., Actual (G), Warranted (Gw) and Natural (Gn) growth rate must be equal to each other. This is known as 'Knife Edge' or 'Razor's Edge' problem of Harrod-Domar model. But it is very difficult to establish. If there arises any divergence among G, Gw and Gn then economy will suffer inflation or secular stagnation. If G > Gw, investment will increase faster than saving and growth rate of income will be faster than Gw. On the other hand, if G < Gw, saving will increase faster than investment and growth rate of income will be lesser than Gw. According to Harrod, if warranted growth rate is greater than natural growth rate i.e., Gw > Gn then secular stagnation will develop in the economy. On the contrary, if Gw < Gn then it implies that Gw also is less than G. As a result secular inflation will arise in the economy. Under these circumstances, there is a shortage of capital while labour will be abundant. Profit of businessman will be high as desired investment is more than realised investment.



CHECK YOUR PROGRESS

Q.1: Mention the three growth rates of Harrod. (Answer in about 20 words)

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Q.2: Mention the main assumption of Harrod. (Answer in about 40 words)

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12.4 SOLOW'S NEO-CLASSICAL GROWTH MODELS

Nobel laureate economist Robert Solow has introduced a growth model in neo classical framework which is the basis for the modern theory of economic growth. He has improved upon Harrod Domar model by considering the possibilities of factor substitution and diminishing return.

Thus Solow developed a long run growth model without the assumption of fixed proportion of factors of proportion

Assumption: Solow model of growth is based on the following assumptions-

- It assumes a linear homogenous production function of first degree such as Y=F(K,L) where, Y= output; K= capital; L= labour.
- It assumes that saving is the constant fractions of the level of output. Solow assumes that investment is in direct and rigid proportion to income i.e I=dk/dt=sY where s= propensity to save ; k = capital stock.
- The growth rate of labour force is exogenously determined. It grows at an exponential rate. Which is given as $L=L_0e^{nt}$, where L= supply of labour.
- Only two factors capital and labours are assumed and they are paid according to marginal rate of productivity and they are also substitutable.

- Full employment of resources in the economy.
- Output is in the form of one single composite commodity.
- It assumes flexible price and wages.
- Output is assumed as net output after deducting depreciation.
- Technical progress does not influence the productivity and efficiency of labour
- Capital stock is fully utilized.

On the basis of these assumptions Solow tries to explain his model of growth in the following way-

The Model: Solow considers that rate of production is Y(t) which implies the real income of the society.

Sy(t)= rate of saving

K(t)= capital stock

dK/dt= rate of increase in capital

In eqilbrium,

Saving= investment

We have the identity, K= SY…… (1)

Since output is produced by L, K, therefore the production function is given by

Y=F(K, L)……(2)

Putting (2) in (1) => K = SF (K,L)……(3)

Where L= total employment

F= functional relationship

Equation (3) implies the supply side of the system. Now we are to include demand side. As a result, L is assumed to grow at a constant rate relative to n

Thus $L(t)= L_o e^{nt}$……(4)

Where L = Available supply of labour

Putting L in equation (3) we get

$K=sF(k, L_o e^{nt})$……..(5)

Equation (4) implies supply curve for labour or rate of growth of labour from period 0-1

Solow observes that 'the exponentially growing labour force is offered for employment in perfectly inelastic manner. The labour supply is a vertical line which shifts to the right in time as the labour force grows. Then real wage rate adjusts so that all available labour is employed and the marginal productivity equilibrium determines the wage rate which will actually rule. The equality between wage rate and marginal productivity can be expressed as W=dF(k,L)/dL.

By putting equation (4) in (3) we get the basic equation $k=sF(K, L_0e^{nt})$. Prof Solow sums up his model as, 'At any moment of time the available labour supply is given by equation (4) and the available stock of capital is also a datum. Since the real return to factors will adjust to bring about full employment of labour and capital,we can use the production function of equation (2) to find the current rate of output. Then the propensity to save tells how much of net output will be saved and invested. Hence we know the net accumulation of capital during the current period. Added to the already accumulated stock, this gives us the capital available for the next period and the whole process can be repeated.'

Possibilities of Growth: Solow has tried to find out the possibilities of growth on the basis of his model. To find out the steady growth rate he introduced the following fundamental equation-

$$R= SF(r,I)^1- nr\ldots\ldots\ldots\ldots\ldots\ldots(6)$$

Where, r = rate of change of capital labour ratio

SF(r,I) = increment of capital

nr = increment of labour

n= relative rate of change of the labour force.

F(r,I)= Output per worker as a function of capital per worker.

In other words equation (6) implies total product curve as varying amounts r of capital are employed with one unit of labour.

Solow has explained his growth path based on equation (6) with the help of the following figure-

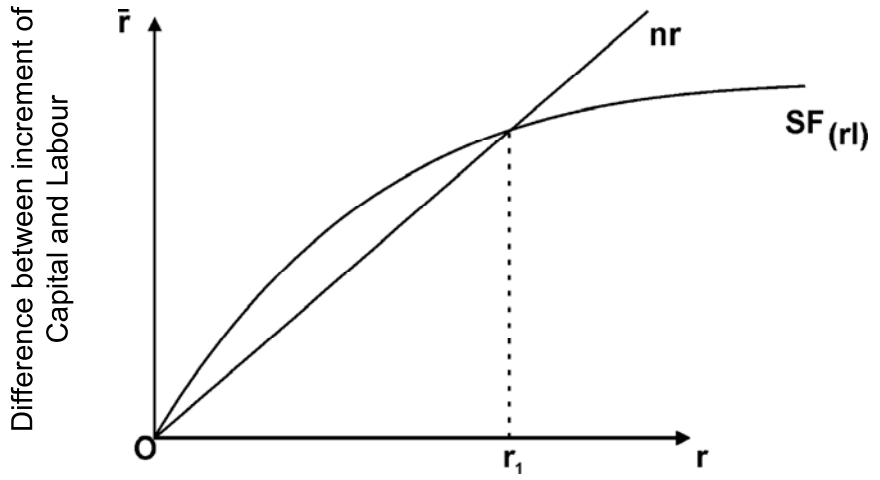


Fig. 12.2 : Growth Path

In the above figure, nr is the line passing through origin. The total productivity curve is the function of SF(r,I) and this is convex upwards. It implies diminishing marginal productivity of capital exists. At nr=SF(r,I) and $\bar{r} = 0$, then $r = \bar{r}$. When $\bar{r} = 0$, the capital labour ratio corresponding to point $\bar{r}$ is established.

Since in Solow's model, constant returns to scale is assumed, real output will grow at the same rate of n and output per head of labour, force will remain constant.

Path of Divergence:

If there is any divergence between r and $\bar{r}$ then it implies

- When $r > \bar{r}$
- When $r < \bar{r}$

If $r > \bar{r}$ then from equation (6) it is seen that r will be decreased to $\bar{r}$. On the other hand if $r < \bar{r}$ then r will increase towards $\bar{r}$. Thus equilibrium will be established at pt E and sustained growth will be achieved and equilibrium value of $\bar{r}$ is stable.

But this stability will depend on the shape of productivity curve SF(r,I) which is shown in the following figure-

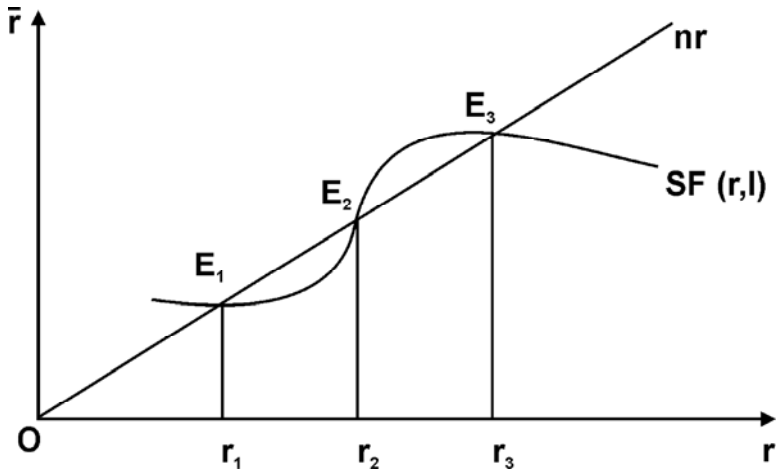


Fig. 12.3 : Stability of Growth Path

The productivity curve SF(r,1) intersects at E_1, E_2, E_3 points respectively. The corresponding capital labour ratio is r_1, r_2, r_3 respectively. r_3 is a stable point whereas r_2 is not stable. Considering to r_1, first if we move slightly towards right nr>SF(r,1) and r is –ve, then it implies that r decreases.

Thus it has a tendency to ship back to r_1. Now if we move towards to left i.e., nr< SF(r,1) and r is +ve, then it indicates that r increases and there is a tendency to move up to point r_1. Therefore, a slight movement away from r_1 creates a condition that forces a movement towards showing that r_1 is stable equilibrium point. Similarly, r_3 is also stable equilibrium if we move slightly towards the right of r_2, SF(r, 1)nr and r is +ve and there is a tendency to move away from r_2. On the other hand, if we move towards left of r_2 nr>SF(r,1) and r is –ve and it has a downward tendency toward r_1. Then depending upon initial capital labour ratio, the system will develop to balance growth at capital labour ratio r_1 and r_3. If the initial ratio is between O and r_2, the equilibrium is at r_1 and if the ratio is higher than r_2 then equilibrium is at r_3.

Solow concludes his model in the following way-

When production takes place under neo-classical condition of variable proportions and constant returns to scale, no simple opposition between

natural and warranted rates of growth is possible; there may not be any knowledge. The system can adjust to any gain rate of growth of labour force and eventually approach a state of steady proportional expansion. i.e,

$$\Delta K/K = \Delta L/L = \Delta Y/Y$$

Criticism of neo-classical analysis of growth

- This analysis emphasis with balance between Harrod's warranted and natural growth rate i.e. Gw and Gn but it simply ignores the problem of balance between G and Gw.
- In Solow's model, to operate the adjustment mechanism satisfactorily, perfect flexibility of factor prices is essential. If factor prices are rigid then it will face the same problem of Harron-Domer.
- Again, if the investment function is introduced in the Solow model then, Harrodian problem of intensity will immediately appear in the model.
- It totally ignores the problem of capital stock and assumes capital as a homogeneous factor which is an unrealistic assumption.
- This analysis assumes unrealistic assumption of homogeneous capital. But in reality capital goods are highly heterogeneous. It is not easy to generate a conclusion of steady growth where there are varieties of capital goods.



CHECK YOUR PROGRESS

Q.3: State the fundamental condition of Solow's growth theory. (Answer in about 50 words)

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Q.4: Mention the two main assumption of Solow's growth theory. (Answer in about 50 words).

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12.5 KALDOR'S MODEL OF GROWTH

Kaldor's model of economic growth was first published in a research paper during the mid 1950s. His model of economic growth is based on the basis of Harrodian dynamic approach and the Keynesian analysis. Kaldor's model of distribution is mainly concerned with the application of Keynesian theory to the problem of distribution.

According to Kaldor, "The purpose of a theory of economic growth is to show the nature of the non-economic variables which ultimately determine the rate at which the general level of production of an economy is growing, and thereby contribute to an understanding of the question of why some societies grow so faster than other". Following are the main assumptions of Kaldor's model-

- There are two factors of production - capital and labour (K and L) and thus only two types of income - profits and wages (P and W). All profits are saved and all wages are consumed.
- There are constant returns to scale and production function remain unchanged over time. Capital and labour are complementary.
- There is perfect competition as such the rates of wages and profits are same over different places.
- The marginal products of workers are greater than that of capitalists.
- There is a state of full employment so that total output or income (Y) is given.

- There is an unlimited supply of labour at a constant wage in terms of wage goods.

The Model: By assumption we get Y= w + p

I=S

$S=s_w+s_p$, Where $\mathbf{s_w}$ = Aggregate saving out of wage

s_p = Aggregate saving out of profit

$I= s_w + s_p$

$I=s_w w + s_p p$ (since investment is considered as given and assume simple proportional saving function $s_w = s_w w$; $s_p = s_p p$)

$I= S_p P + S_w W$

$I= S_p P+S_w(Y-P)$ ……(Y=W+P)

$I= S_p P+ S_w Y- S_w P$

$I=P(S_p -S_w)+ S_w Y$

$I/Y=P(S_p -S_w)/Y + S_w$ (Dividing both side by Y)

$I/Y-S_w=P(S_p -S_w)/Y$

$P(S_p -S_w)//Y= I/Y-S_w$……(1)

$P/Y=I/Y(S_p -S_w)- S_w/(S_p-S_w)$ ……..(2)

Therefore it is clear from (2) that given the marginal propensities of labours and capitalist, the share of profits in income depends simply on the ratio of investment to output. The basic underlying economic rationale for Kaldors's theorem is that the share of profit in the total income (P/Y) is a function of the investment-income ratio (I/Y). Under full employment condition, an increase in investment must in real terms, bring about an increase in both the ratio of investment to income (I/Y) and also an increase in the savings income ratio. This is necessary if equilibrium at a higher-level of real investment is to be obtained.

If the saving-income ratio did not rise, the result would be a continuous upward movement of the general price level. According to Kaldor, the shift in the distribution of income is essential to bring about the higher saving income ratio, which is the necessary condition for continued full employment equilibrium with a higher absolute level of investment in real terms.

Stability Conditions:

This model operates when

$S_p = S_w$ and $S_p > S_w$

The stability condition of the model is $S_p > S_w$

This is because if S_p is less than S_w, a fall in prices would cause a fall in demand which will result in a further price reduction. Similarly, a rise in prices will be cumulative. According to Kaldor the degree of stability will depend on the difference of marginal propensities i.e. on $(1/S_p - S_w)$. This is called the coefficient of sensitivity of income distribution because it indicates the change in the share of profits in income which follows a change in the share of investment in output.

If the difference between S_p and S_w is small, then the coefficient will be large, and small changes in I/Y will cause relatively large changes in income distribution P/Y and vice versa. If marginal propensity to save out of wage is zero (Sw=o), the employment of profit will be equal to the sum of investment and capitalist consumption: P=1/SP/I. Where I/SP= capitalist consumption

Limitation: Kaldor model shows that P/Y, P/VY, and W/L are functions of I/Y which are independently determined by P/Y or W/L. But it is not true due to following reasons-

- P/Y can only attain its indicated value if the real wage is greater than minimum wage i.e $w^{/}$, since the real wage cannot fall below a certain minimum subsistence level. Thus this model is subjected to the restriction $W>W^1$
- The indicated share of profits cannot remain below the level which yields minimum rate of profit necessary to induce capitalists to invest their capital. This is called risk Premium rate, M or r. Hence Kaldor theory is subjected to another restriction P/VY>r
- Due to the presence of perfect competition or collusive arguments among traders, another restriction arises out of the fact that besides minimum profit rate on capital there may be a certain minimum profit.

- One additional restriction is that capital output ratio (v), should not itself be influenced by the profit rate. Otherwise the investment/output ratio will itself become dependent on the rate of profit.
- Kaldors model assumes a period function which does not allow any possibilities of substitute.
- Kaldors period function also neglects the monetary and price phenomenon and thus presents an unrealistic picture of economic growth.
- This theory assumes an unrealistic association that it attributes all profits to the capitalists which means that worker's savings are transferred to the capitalists as gift.



CHECK YOUR PROGRESS

Q.5: Mention two limitations of Kaldor growth theory. (Answer in about 50 words)

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Q.6: What are the two main assumptions of Kaldor growth theory? (Answer in about 50 words)

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12.6 LET US SUM UP

- Economic growth is considered as an important branch of economic theory.

- Economic growth is supposed to be a natural or normal process requiring no special efforts on the part of the community.
- Economists introduce numbers of growth theory for development of economic growth. Among them we have discussed three important growth models of Harrod-Domar, Solow and Kaldor.
- In the Domar model, Domar tries to establish an equation keeping increase in productive capacity in one hand and income in other hand. The solution of this equation will yield the required rate of growth.
- Harrod's model of economic growth is a dynamic model based on the Keynesian analysis.
- According to Harrod there are three types of growth rates - Actual growth rate (G),Warranted growth rate (Gw), Natural growth rate (Gn).
- Neoclassical economist Robert Solow introduced a growth model based on Keynesian Harrod-Domar model which is the basis for the modern theory of economic growth.
- He has improved upon Harrod-Domar model by considering the possibilities of factor substitution and diminishing return.
- Thus Solow developed a long run growth model without the assumption of fixed proportion of factors of proportion.
- Kaldor's model of economic growth was first published in a research paper during the mid 1950.
- Kaldor's model of distribution is mainly concerned with the application of Keynesian theory to the problem of distribution.
- According to Kaldor, The purpose of a theory of economic growth is to show the nature of the non-economic variables which ultimately determine the rate at which the general level of production of an economy is growing, and thereby contribute to an understanding of the question of why some societies grow faster than others.



12.7 FURTHER READING

1) Goel, R.L. (1986-87). *Economics of Growth and Planning*. Meerut: Meenakshi Prakashan.

2) Somashekar, N.T. (2003). *Development and Environmental Economics*. New Delhi: New Age International Publisher.



12.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: According to Harrod there are three types of growth rates-

- Actual growth rate (G)
- Warranted growth rate (Gw)
- Natural growth rate (Gn)

Ans to Q. No. 2: The main assumptions of Harrod are -

- During a particular period of time, net saving of the community is a constant proportion of income.
- Desired level of investment depends on the rate of increase in output in the previous years.

Ans to Q. No. 3: The fundamental equation is

$$R = SF(r,I) - nr$$

Where, r = rate of change of capital labour ratio

SF (r,I) = increment of capital

nr = increment of labour

n = relative rate of change of the labour force.

F(r,I) = Output per worker as a function of capital per worker.

Ans to Q. No. 4: The two main assumptions of Solow's growth model are:

- It assumes a linear homogeneous production function of first degree such as Y=F(K,L) where, Y= output; K= capital; L=labour
- It assumes that saving is the constant fractions of the level of output. Solow adopts that investment is in direct and rigid proportion to income i.e., I=dk/dt=sY where s= propensity to save; k= capital stock

Ans to Q. No. 5: Two limitations of Kaldor's growth model are:

- Due to the presence of perfect competition or collusive arguments among traders, another restriction arises out of the fact that

besides minimum profit rate on capital there may be a certain minimum profit.

- One additional restriction is that capital output ratio (v), should not itself be influenced by the profit rate. Otherwise the investment/output ratio will itself become dependent on the rate of profit.

Ans to Q. No. 6: Two assumptions of Kaldor's growth model are:

- There are two factors of production - capital and labour (K and L) and thus only two types of income - profits and wages (P and W). All profits are saved and all wages are consumed.
- There are constant returns to scale and production function remains unchanged over time. Capital and labour are complementary.



12.9 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words)

Q 1: Differentiate between Economic growth and Economic Development.

Q.2 Distinguish between actual growth rate (G) and warranted growth rate (Gw).

Q.3 State the fundamental equation as introduced by Solow to find out the steady growth rate.

Long Questions (Answer each question in about 300-500 words)

Q 1: Critically explain the Harrod-Domar theory of economic Growth.

Q 2: Critically explain Solow's theory of economic Growth.

Q 3: Critically explain Kaldor theory of economic Growth.

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UNIT 13: SELECT EMERGING MACROECONOMIC ISSUES

UNIT STRUCTURE

13.1 Learning Objectives

13.2 Introduction

13.3 Globalisation and the Changing Environment of the World Economy

13.4 Global Financial Crisis of 2009

13.4.1 Global Financial Crisis of 2009: Lessons Learnt

13.5 Demonetisation and Digitalisation of the National Economy

13.5.1 Demonetisation and Digitalisation of the National Economy: Relevant Issues

13.6 Let Us Sum Up

13.7 Further Reading

13.8 Answers to Check Your Progress

13.9 Model Questions

13.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- understand the globalization and the changing environment of the world economy
- know the global financial crisis of 2008 and the lessons learnt from it
- discuss the demonetisation and digitalisation of the national economy and the relevant issues.

13.2 INTRODUCTION

Globalisation is the process of economic integration of domestic economy with the world economy. It pertains to the opening of the economies to the market forces of the outside world. Globalisation pertains to increased interdependency among the economies of the world. It is also regarded as

the driving force for economic development. It enables the economies to expand across globe and build mutually beneficial relationships. Globalisation facilitates exchange of resources, ideas and interaction of people across geographical and political boundaries of the nations.

The phenomena of 'globalisation' became popular in the 1990s and by now is a historical fact. The advancement of science and technology resulted in reduction in cost of transportation and communication which in turn gave a further boost to the process of globalisation. Wittmann defines globalisation as a "common term for the social, political, economic and cultural coalescence of the world. It stands as a collective term for numerous and complex processes in society, economy, politics and culture". According to Srinivasan, globalization is a "benevolent force that creates opportunities for rapid growth and faster poverty alleviation, namely in the economies that are ready for it, that is, in those economies in which domestic economic, political and social environment is conducive to underpinning the globalization processes".

13.3 GLOBALISATION AND THE CHANGING ENVIRONMENT OF THE WORLD ECONOMY

Globalisation refers to the process of increasing interaction and integration of people across nations. When this happens in the arena of economic activities, it is called economic globalisation. In the last three decades or so we have been witnessing unprecedented interdependence and trade and economic relations among the countries of the world. As on date, the world economy appears to be the only closed economy we can think of. This has brought about certain important changes to all the economies of the world. We are briefly outlining some of the important ones in this section.

- **Economic Reforms**: Economic reforms are vital for globalisation. Public policies have been crucial on the character and pace of globalisation process. Globalisation needs reforms in the domestic economy and internal markets. The closed economies in the transition process to become global economy are often urged to shift from

inward-looking economic policies to open-type market policies. Privatisation is one of the key elements of globalisation process. Many of the functions which used to be in the hands of governments are being disaggregated and privatised. The economies are adopting *laissez-faire* approach in the process of globalisation allowing the foreign companies to venture into domestic market. The reforms have been easier in mixed economies like India compared to former centrally planned economies like Russia.

- **Greater Competition:** Globalisation creates greater competitive environment for sharing of resources across borders. It contributes in reducing the cost of investment and boosts domestic production and enhances economic growth.
- **Greater Efficiency of Resource Use:** Increased competition in global product and service markets induces the corporate to reduce costs by bringing greater efficiency in the production process. They can even take advantage of economies of scale as they have to satisfy the demands of consumers internationally. The big companies can even afford to make higher investment in research and development leading to best use of economic resources at lowest possible cost. Globalisation is a process which also enables putting an end to drain on natural resources as the same level of economic output can be produced using fewer resources in an open economy compared to a closed economy. Thus, freer trade in a global world will reduce resource use per unit of output. Increased economic integration has also facilitated decline in costs of transportation and communication, which ultimately results in lower costs of goods, services, and factors of production. Because of increased demand and supply conditions in a globalised world and better specialisation, the use of resources is more productive.
- **Increased trade and international investment flows:** Globalisation is characterised by increased world trade as a percentage of world GDP and rise foreign capital flows. Increased trade and international investment flows promotes economic growth and financial development. It aims at removal of barriers to trade and investment and

unprecedented international mobility of capital.Globalisation facilitates better international capital mobility. It ensures global resource allocation and channels world savings to its most productive uses. The changing environment of world economy in the process of globalisation has resulted in liberalisation in terms of trade and investment. Further, to facilitate smooth process of globalisation, the economic policy reforms have been focusing on 'deregulation' which has enhanced the flows of capital, goods and services. Globalization is a process which involves international integration of markets, increased international trade, enhanced foreign direct investment, development and growth of activities of transnational companies, more international financial flows and higher and better information-communication technology (ICT).

- **Growth of multinational corporations:** Globalisation facilitates the companies to raise more funds from foreign investors. It enables them to increase their scale of operations. They get access to more markets and customers.
- **Global employment opportunities:** It allows the masses to benefit from global employment opportunities which come up with increased presence of multinational corporations (MNCs) across borders. It also provides them an opportunity to familiarise themselves with latest technology from other countries through MNCs.



CHECK YOUR PROGRESS

Q.1: What is meant by globalization? (Answer in about 30 words)

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Q.2: Can advancement of science and technology be regarded as a contributor towards the process of globalisation? (Answer in about 30 words)

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Q.3: How does globalization facilitate growth of multinational corporations? (Answer in about 30 words)

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13.4 GLOBAL FINANCIAL CRISIS OF 2009

During the global financial crisis of 2009, the financial systems of the world were in meltdown. This crisis affected each and every economy directly or indirectly and resulted in considerable slowdown in most of the developed countries. The root cause of the global financial crisis was the sub-prime mortgage crisis in US. Under sub-prime mortgage the non-credit-worthy borrowers and defaulters in past could also secure loan and eventually they went bad as the consumer demand plummeted. The loans were of a temporary nature intended to be granted to borrowers who were expected to sell their property early or enhance their income just after the purchase. However, as the home bubble burst and the property prices witnessed a sharp decline and loan defaults increased, the huge number and amount of defaults resulted in significant depreciation in the securities mortgaged.

The global crisis came into limelight for the first time with the collapse of Lehman Brothers on September 15, 2008 which was followed by failure of many other institutions like Lehman Brothers, Merrill Lynch, Goldman Sachs etc. which ultimately resulted in the global financial crisis.

Causes of global financial crisis-

- **Deregulation:** Light regulation of commercial banks, even weaker regulation of investment banks and almost no regulation of the 'shadow banking system' - hedge and private equity funds and bank-created Special Investment Vehicles (SIVs) was one of the important reason of failure of most of the institutions.
- **Creation of excessive risk:** The US economy witnessed a paradigm and policy shift from tight to light financial market regulation in the early 1980s.This shift was pushed by financial institutions and justified

by efficient financial market theory. Profit linked perks in this deregulated economy often induced the key managerial personnel of various financial institutions to take excessive risk when financial markets were buoyant. One of the prime reasons for the sub-prime crisis was the over enthusiasm and lack of self discipline of the parties involved. The parties involved in these growing mortgage securitisation were — banks and mortgage brokers who sold the loans, investment bankers who packaged the loans into securities, banks and specialist institutions who serviced the securities and rating agencies who gave them their seal of approval. The creation of excessive risk to gain higher returns led to the failure of the financial institutions and the global financial crisis. This high risk emerged due to the strategy of banks and other financial institutions to augment housing loans to non- credit-worthy customers with relatively low income levels and with high risk of default.

- **Financial innovation and complex financial products:** Innovative financial products were designed to achieve growth in the saturated US market. To increase the market share and enhance customer base the banking industry created complex and non-transparent financial products and securities. The worth of these securities could not be determined correctly and their prices crashed. They could not be sold on markets and were illiquid when the housing boom ended and defaults increased.
- **Hiding of risky assets off balance sheet:** Since there were no norms to maintain provisions against off balance sheet asset, banks were induced to hold these risky and toxic financial securities off balance sheet with no capital required to support them. Thus, loopholes in the Basel capital adequacy rules and the collapse in the prices of these complex financial products were the major causes of massive bank losses that resulted in the global financial crisis.

13.4.1 Global Financial Crisis of 2009 : Lessons Learnt

- **Crisis management strategy:** During the boom period none of the parties involved in the sub-prime lending including bankers,

borrowers, regulators or general public was prepared to witness the depression. For survival and growth, an organisation should be ready to adapt to changes. Changes may occur due to internal or external reasons. Hence, any organisation must have a crisis management strategy in place to prevent, manage and recover from crises.

- **Early warning signals:** The organisation should have early warning/ scanning strategies in place. It should be able to diagnose internal and external threats affecting the organisation. They should have emergency response system to tackle the crisis in the early stage. The organisation scanners should be able to identify and reflect the deviations in the planned corporate strategy and actual situation. For instance failure at Lehman Brothers to act upon the incidents of defaults in many of the third tier sub-prime mortgages in the beginning led to its collapse subsequently.
- **Diversification of risk:** The crisis hovers around the individual mortgages created by advancing housing loan to borrowers with no or low credit worthiness. These mortgaged securities were bundled and then sold again. As the home bubble burst, all the underlying securities under sub-prime derivatives witnessed a sharp decline in their values. Thus, lack of a well-diversified portfolio resulted in the crisis which reinforces the age old saying that "Do not put all your eggs in one basket." There is a need to devise a methodology to examine the risk associated with different types of asset-backed securities and the underlying mortgages.
- **Risk and return analysis:** Another factor leading to crisis was poor analysis of return and associated risk in the sub-prime lending. As loans were given to less than perfect borrowers, the higher risk on these sub-prime lending outbalanced the returns. Hence, proper risk and return analysis by the lenders is of prime importance.
- **Principles of sound lending:** In the traditional banking system, the creditworthiness of borrowers is personally scrutinised by

the lenders. It was not the case in sub-prime lending whereby most bankers were more interested in collateral than character. Profit linked perks induced most of the bankers to compromise with principles of sound lending. A sense of corporate responsibility and accountability must be infused at all level in the organisation. The management and staff must be encouraged to take ownership of their actions. The top management must be sensitive to the situation and must take active part in the affairs of the company to avoid crisis like situation.



CHECK YOUR PROGRESS

Q.4: Mention any three causes of global financial crisis. (Answer in about 20 words).

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Q.5: When did the global crisis come into limelight for the first time? (Answer in about 20 words).

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Q.6: Name two emerging economies which were severely affected by the global financial crisis of 2008. (Answer in about 20 words).

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Q.7: Why an organisation should have a crisis management strategy? (Answer in about 50 words).

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ACTIVITY 13.1

Visit the website https://data.wto.org/ and analyse.

- The effect of globalisation in India on International trade context post liberalisation i.e. 1991.
- The effect of global financial crisis on the economies of US, Japan, Korea, India and China based on the data of International Trade from the year 2007-2012.

13.5 DEMONETISATION AND DIGITALISATION OF THE NATIONAL ECONOMY

Meaning of demonetisation: It is a mechanism to declare currencies of certain denominations non legal tender. It is followed by withdrawal of these currencies from circulation.

History of demonetization: The recent demonetisation was announced in November 2016. However, this was not for the first time that currencies were demonetised in India. For the first time, the currency notes of Rs.1,000 and Rs.10,000 were demonetised in 1946. As the notes were of high denomination, it did not have much impact on the lives of common people. However, it affected severely the functioning of stock market and State Bank of India. In the second instance of demonetisation in 1978, Rs.1000, Rs.5000 and Rs. 10,000 notes were demonetized.The impact on the general public was limited as the demonetised currencies formed a small portion of total money supply. In the third instance of demonetisation on November 8, 2016, 86 percent of the currency was demonetised by demonetising Rs.500 and Rs. 1000 notes. The amount of currency in circulation was Rs.16,415 billion. The notes of Rs.1,000 denomination accounted for 38.6 per cent (Rs. 6,326 billion) and Rs.500 accounted for 47.8 per cent (Rs. 7,854 billion) and it had a huge impact on the lives of the common people.

Meaning of digitalisation: Digitalisation refers to increased use of plastic cards, e-wallets, mobile payments, Net banking, Aadhaar based payment system etc.

Objectives of demonetisation and digitalisation: Demonetisation and digitalisation is believed to bring crucial changes in national economy. It is expected to eliminate corruption, black money, fake currency, money laundering activities, militancy and terrorism funding. One of the most important objectives of demonetisation in 2016 was to promote digitalisation of the national economy.

13.5.1 Demonetisation and Digitalisation of the National Economy: Relevant Issues

After the recent demonetisation, the economy had to undergo huge cash crunch. The Government issued 2,000 rupees currency notes, but it was not enough as the banks were not prepared to handle the sudden cash crunch in the nation. Again, government notified a limit on cash withdrawal by citizens. Further, government announced incentives and reduced taxes to enhance cashless transactions. In these circumstances, the most viable option to counter the problem of scarcity of cash was to go cashless by using digital payment methods.The problem of cash scarcity pushed the masses to use this alternative mode of doing transactions and it acted as boost towards the government's move of greater digitalisation of the national economy. Demonetisation and digitalisation are important steps towards becoming a cashless economy. Digitalisation helps in cost cutting for banks and reduction in transaction time by customers. It is a secure mode for transactions. However, there are some issues associated with digitalised economy which is discussed in brief below:

- **Problem of innovation acceptance:** The digital payments methods are new and technology based. Use of digital payment methods needs some minimal knowledge and familiarity with the technology. The non-technical citizens face problems while doing cashless transactions. Thus, innovation acceptance by users becomes challenging.
- **Risk of data theft:** At the time of need, as was the case during the demonetisation period, often people (those who are

technologically illiterate) take the help of others which increased the risk of theft of crucial data.

- **Educating the masses**: Before and after the demonetisation period, the government had invested huge amount of resources for facilitating access to and usage of digital payment systems. The challenge pertains to educating the masses about the benefits of a cashless economy. Digitalisation and demonetisation will be successful only when the citizens of the country adopt and accept the digital methods of doing transactions.
- **Not a cashless economy:** Before the demonetisation in 2016, government launched Pradhan Mantri Jan Dhan Yojana in 2014.The aim was to provide access to banking system and enhancing use of digital methods of payment and go cashless. However, India has a history of not being a cashless economy. During the demonetisation period the unorganised and informal sector was hit the hardest. The unbanked section of the society particularly in rural areas faced difficulties until the arrival of new notes. At the time of 2016 demonetization, total currency in circulation in India was about 12% of the GDP which was much above the world average of 4%. Although post demonetization this has come down little bit, more sustained efforts would be necessary to make India less dependent on cash.



CHECK YOUR PROGRESS

Q.8: What is meant by digitalisation? (Answer in about 20 words).

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Q.9: When was the currency notes demonetised for the first time in India? (Answer in about 20 words).

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Q.10: What is meant by demonetisation? (Answer in about 20 words).

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Q.11: What are the objectives of demonetisation and digitalisation? (Answer in about 50 words).

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Q.12: What kind of changes can be expected due to demonetisation and digitalisation of the national economy? (Answer in about 60 words).

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13.6 LET US SUM UP

- Globalisation is the process of economic integration of domestic economy with the world economy. It pertains to the opening of the economies to the market forces of the outside world.
- The world economy witnesses certain changes before and after the process of globalisation begins. Economic reforms are vital for globalisation. Globalisation creates greater competitive environment for sharing of resources across borders. It also facilitates increased efficiency in resource use due to increased competition. Again, globalisation is characterised by increased trade and international

investment flows. It is the driving factor for growth of multinational corporations. It also creates global employment opportunities.

- During the global financial crisis of 2009, the financial systems of the world were in meltdown.
- The root cause of the global financial crisis was the sub-prime mortgage crisis in US. Under sub-prime mortgage the non-credit worthy borrowers and defaulters in past could also secure loan and eventually they went bad as the consumer demand plummeted.
- Other causes of global financial crisis include deregulation, creation of excessive risk, financial innovation and complex financial products, and hiding of risky assets off balance sheet.
- Global financial crisis of 2009 taught significant lessons to the various stakeholders of financial markets. It indicated the need for having strategies, devices and methods in place for 'crisis management' and getting 'early warning signals' about occurrence of any crisis. It reinforced the age old principle of 'diversification of risk' and highlighted the importance of 'risk and return analysis' and following the 'principles of sound lending'.
- Demonetisation is a mechanism to declare currencies of certain denominations illegal tender. It is followed by withdrawal of these currencies from circulation.
- Demonetisation has taken place three times in Indian economy. The demonetisation of 1946 and 1978 did not have much impact on the lives of common people as the notes were of high denomination and the demonetised currencies formed a small portion of total money supply. However, the demonetization of 2016 had a huge impact on the lives of the common people.
- Digitalisation refers to increased use of plastic cards, e-wallets, mobile payments, Net banking, Aadhaar based payment system etc.
- Demonetisation and digitalisation is believed to bring crucial changes in national economy.

- Some of the relevant issues relating to demonetisation and digitalisation of the national economy are-problem of innovation acceptance, risk of data theft, educating the masses about digital methods and history of not being a cashless economy.



13.7 FURTHER READING

1) Clem, Tisdell. (2001).'Transitional economies and economic globalisation: Social and environmental consequences'. International Journal of Social Economics. Vol. 28 Issue: 5/6/7. https://doi.org/10.1108/03068290110360849

2) Crotty, J. Cambridge. (2009). 'Structural causes of the global financial crisis: a critical assessment of the new financial architecture'. Journal of Economics.

3) Georgios, I. Zekos. (2003). 'MNEs, globalisation and digital economy: legal and economic aspects'. Managerial Law. Vol. 45. Issue: 1/2. https://doi.org/10.1108/03090550310770875

4) Goel, Sandeep. (2018). 'The big bath of demonetization in India: strike on black money for corporate governance'. Journal of Money Laundering Control. Vol. 21 No. 4.

5) Michel, Dumont; Nikolina, Stojanovska; Ludo, Cuyvers. (2011). 'World inequality, globalisation, technology and labour market institutions'. International Journal of Manpower. Vol. 32. Issue: 3. https:// doi.org/10.1108/01437721111136750.

6) Paul, Justin. (2015). *Business Environment: Text Cases*. McGraw Hill Education (India) Private Limited. Third Edition.

7) Sivathanu, Brijesh. (2019). 'Adoption of digital payment systems in the era of demonetisation in India: An empirical study'. Journal of Science and Technology Policy Management. Vol. 10 No. 1.

8) Sivathanu, Brijesh. (2019). 'Adoption of digital payment systems in the era of demonetization in India: An empirical study'. Journal of Science and Technology Policy Management. Vol. 10 No. 1.

9) Steven, H. Appelbaum; Seth, Keller; Harold, Alvarez; Catherine, Bédard. (2012). 'Organizational crisis: lessons from Lehman Brothers and Paulson & Company'. International Journal of Commerce and Management. Vol. 22 .Issue: 4.

10) Stephens, A. A.; Atwater, J. B.; Kannan, V. R. (2013). 'From tulip bulbs to subprime mortgages examining the subprime crisis: The case for a systemic approach.' The Learning Organization. Vol. 20 Issue: 1.

11) Veronika, Wittmann. (2014). 'World society and globalisation'. Journal for Multicultural Education. Vol. 8Issue: 3. https://doi.org/10.1108/JME-05-2014-0021

12) Vito, Bobek; Romana, K. Vide. (2005). 'The signification and the feasibility of measuring globalization of economy'. Industrial Management & Data Systems. Vol. 105. Issue: 5. https:// doi.org/ 10.1108/02635570510599977

13) https://ssrn.com/abstract=3151238

14) https://onlinelibrary.wiley.com/doi/full/10.1111/j.1539-6924.2009.01230.x

13.8 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: Globalisation is the process of economic integration of domestic economy with the world economy. It pertains to the opening of the economies to the market forces of the outside world.

Ans to Q. No. 2: Yes. The advancement of science and technology resulted in reduction in cost of transportation and communication which in turn gave a further boost to the process of globalisation.

Ans to Q. No. 3: Globalisation facilitates the companies to raise more funds from foreign investors. It enables them to increase their scale of operations. They get access to more markets and customers.

Ans to Q. No. 4: Creation of excessive risk, financial innovation and complex financial products; and hiding of risky assets off balance sheet.

Ans to Q. No. 5: The global crisis came into limelight for the first time with collapse of Lehman Brothers on September 15, 2008.

Ans to Q. No. 6: The emerging economies like Japan and Korea which had high international business ties were severely affected.

Ans to Q. No. 7: For survival and growth, an organisation should be ready to adapt to changes. Changes may occur due to internal or external reasons. Crises occur due to inability of an organisation to adapt to changes. Hence, any organisation must have a crisis management strategy in place to prevent, manage and recover from crises.

Ans to Q. No. 8: Digitalisation refers to increased use of plastic cards, e-wallets, mobile payments, Net banking, Aadhaar based payment system etc.

Ans to Q. No. 9: For the first time, the currency notes of Rs.1,000 and Rs.10,000 were demonetised in 1946.

Ans to Q. No. 10: Demonetisation is a mechanism to declare currencies of certain denominations illegal tender. It is followed by withdrawal of these currencies from circulation.

Ans to Q. No. 11: Objectives of demonetization and digitalisation are: Demonetisation and digitalisation is believed to bring crucial changes in national economy. It is expected to eliminate corruption, black money, fake currency, money laundering activities, militancy and terrorism funding. One of the most important objectives of demonetisation in 2016 was to promote digitalisation of the national economy.

Ans to Q. No. 12: Demonetisation and digitalisation is believed to bring crucial changes in national economy. It is expected to eliminate corruption, black money, fake currency, money laundering activities, militancy and terrorism funding. Demonetisation and digitalisation are important steps towards becoming a cashless

economy. Digitalisation helps in cost cutting for banks and reduction in transaction time by customers. It is a secure mode for transactions.



13.9 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words)

Q 1: Why are economic reforms vital for globalisation?

Q 2: How does globalization facilitate greater efficiency of resource use?

Q 3: Explain in brief-'Globalisation facilitates better international capital mobility'.

Q 4: Why can creation of excessive risk be regarded as one of the prime causes of global financial crisis of 2009?

Q 5: Why is the sub-prime mortgage crisis in US regarded as the root cause of the global financial crisis?

Q 6: Why did the first and second instances of demonetisation of currencies not have much impact on the lives of common people whereby the recent instance had a huge impact?

Q 7: Write about the history of demonetisation in India.

Long Questions (Answer each question in about 300-500 words)

Q 1: Discuss the process of globalisation and the changing environment of the world economy.

Q 2: Explain the main causes of global financial crisis of 2009.

Q 3: Discuss the lessons learnt from the global financial crisis of 2009.

Q 4: Discuss the relevant issues associated with demonetisation and digitalisation of the national economy.

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UNIT 14: SELECT DEBATES OVER MACRO ECONMIC POLICY

UNIT STRUCTURE

14.1 Learning Objectives

14.2 Introduction

14.3 Stabilizing the Economy with the Help of Monetary and Fiscal Policies

14.4 Formation of Monetary Policies: By Rule or by Discretion

14.5 Role of Central Bank in Managing Zero Inflation

14.6 Government Need to Balance its Budget

14.7 Reformation of Tax Laws to Encourage Savings

14.8 Let Us Sum Up

14.9 Further Reading

14.10 Answers to Check Your Progress

14.11 Model Questions

14.1 LEARNING OBJECTIVES

After going through this unit you will be able to -

- learn the pros and cons of stabilizing the economy with the help of monetary and fiscal policies
- understand the formation of monetary policies
- explain how the central bank try to manage zero inflation
- learn the pros and cons of the need to balance budget by government
- explain whether tax laws should be reformed to encourage savings.

14.2 INTRODUCTION

Macro economics has occupied an important place in modern economics and it possesses both theoretical and practical aspects. It is useful for making policies which help to improve the welfare of the country.

There are various topics in macro economics which are still debatable and need to be addressed from different perspectives. The role of monetary and fiscal policy in stabilizing economy, use of rule or discretion in formation of monetary policy, maintaining zero inflation by central government, factors in favor and against the need to balance budget by government, encouraging savings through tax policy are few such topics that are being debated in different economic forums. In this unit we would attempt to put some light on the debate.

14.3 STABILIZING THE ECONOMY WITH THE HELP OF MONETARY AND FISCAL POLICIES

Meaning of Monetary and Fiscal policy:

Two important tools of macro-economic policy are monetary and fiscal policy. Monetary policy is concerned with the management of supply of money in a growing economy. It aims at price stability, full employment and economic growth. RBI formulates and implements the monetary policy in our country. Monetary policy increases liquidity to create economic growth and reduces liquidity to prevent inflation. Fiscal policy on the other hand is mainly concerned with the determination of state income and expenditure policy. With time, the importance of fiscal policy is increasing. An effective fiscal policy is composed of policy decisions relating to entire financial structure of the government including tax revenue, public expenditure, loans, transfer, debt management, budgetary deficit and so on.

The monetary policy is different from fiscal policy as the former brings about a change in the economy by changing money supply and interest rates. For instance, RBI buys government bonds to drive up bond yields and inject money into the market to increase money supply during deflation and during inflation RBI sells bonds to suck money out of the system. Fiscal policy, on the other hand, is a deliberate change in the government revenue and expenditure to influence the level of national output and price. For instance, at the time of recession the government can cut taxes in order to generate demand and raise taxes during inflationary times.

The question at hand is should policy makers try to stabilize economy through these macro-economic tools?

Economy in general keeps on fluctuating. In the downward phase when household and firms becomes pessimist, they cut back on spending and this reduces the aggregate demand for goods and services. This in turn reduces production. As production gets reduced firms lay off workers and unemployment rises. Such recession has no benefit for the society as it denotes a mere waste of resources. Thus policy makers can stabilize aggregate demand and, thereby production and employment. When aggregate demand is inadequate to ensure full employment, policymakers should boost government spending, cut taxes, and expand the money supply. When aggregate demand is excessive, risking higher inflation, policymakers should cut government spending, raise taxes, and reduce the money supply. Such policy actions put macroeconomic theory to its best use by leading to a more stable economy, which benefits everyone.

But the use of monetary and fiscal policy to stabilize economy is not as simple in reality as it seems to be in theory. There are various obstacles to the use of such policies in practice. One problem is that monetary and fiscal policy does not affect the economy immediately but instead work with a lag. Monetary policy affects aggregate demand by changing interest rates, which in turn affect spending, especially residential and business investment. But many households and firms set their spending plans in advance. As a result, it takes time for changes in interest rates to alter the aggregate demand for goods and services. Many studies indicate that changes in monetary policy have little effect on aggregate demand until about six months after the change is made. Fiscal policy works with a lag because of the long political process that governs changes in spending and taxes. Because of these long lags, policymakers who want to stabilize the economy need to look ahead to economic conditions that are likely to prevail when their actions will take effect. Unfortunately, economic forecasting is highly imprecise, in part because macroeconomics is such a primitive science and in part because the shocks that cause economic fluctuations are intrinsically unpredictable. Thus, when policymakers change monetary or fiscal policy, they must rely on educated guesses about future economic conditions.

In addition, the effect of fiscal stimulus is muted when the money put into the economy through tax savings or government spending is spent abroad through imports instead of keeping it in the local economy. These macro-economic tools are used in concert to help keep economic growth stable with low inflation, low unemployment, and stable prices. But it is not as simple as it seems to be because both sets of policy carry with them their own pros and cons. Used effectively however, the net benefit is positive to society, especially in stimulating demand following a crisis.



CHECK YOUR PROGRESS

Q.1: What is meant by monetary and fiscal policy? (Answer in about 30 words)

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Q.2: State the difference between monetary and fiscal policy. (Answer in about 70 words)

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Q.3: State any one reason in favor of the fact that policy makers should try to stabilize economy through monetary and fiscal policy? (Answer in about 70 words)

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14.4 FORMATION OF MONETARY POLICIES: BY RULE OR BY DISCRETION

Monetary policy influence economic growth by creating a favorable climate for saving as well as investment. Savings are encouraged by anti-inflationary measures and investments are stimulated while banks advances medium and long term finance for developmental activities on easy terms like at a low rate of interest. Success of monetary policy depends upon the overall effectiveness of monetary authority. Thus they are given discretionary power in their conduct of monetary policy.But the question arises here is whether such kind of power to the monetary authority is valid or whether such policies should be framed by rule.

Reasons in support of formation of monetary policy by rule:

Discretion in the formation of monetary policy has two major drawbacks. Firstly, since monetary authority has all kinds of power to regulate the economic scenario, it becomes crucial to set guidelines so that there is no abuse of power. For instance, police has all the power to maintain civic order but even then when they are sent to a community to maintain order they are given guidelines by government as allowing them to use their power in whatever way they want may be dangerous. Thus undisciplined discretion allowed to monetary policy makers may be dangerous. An example of abuse of power is the political business cycle. The term *political business cycle* is used mainly to describe the stimulation of the economy just prior to an election in order to improve prospects of the incumbent government getting reelected.

Secondly, discretionary monetary policy might lead to more inflation than desired. Central bankers, knowing that there is no long-run trade-off between inflation and unemployment, often announce that their goal is zero inflation. But even then they are not able to achieve price stability. Perhaps it is because, once the public forms expectations of inflation, policymakers face a short run trade-off between inflation and unemployment. They are tempted to renege on their announcement of price stability in order to achieve lower unemployment. This discrepancy between

announcements (what policymakers say they are going to do) and actions (what they subsequently do in reality) is called the time inconsistency of policy. Because policymakers are so often time inconsistent, people are skeptical about when central bankers announce their intentions to reduce the rate of inflation. As a result, people always expect more inflation than monetary policy makers claim they are trying to achieve. Higher expectations of inflation, in turn, shift the short-run Phillips curve upward, making the short-run trade-off between inflation and unemployment less favorable than it otherwise might be.

Thus in order to avoid such problems central bank should commit to policy rule which will eliminate abuse of power and incompetence.

Reasons in support of formation of monetary policy by discretion:

Although there are many drawbacks in discretion of monetary policy, such power helps policy makers to confront situations which can't be foreseen. The discretion power to policy makers helps them to respond to shocks in the economy like sudden decrease in the stock market or sudden increase in oil prices etc. The problems in discretion of power are more of hypothetical in nature. Thus the decision to replace discretion by rule involves the critical task of deciding on a precise rule. Despite much research examining the costs and benefits of alternative rules, economists have not reached a consensus about what a good rule would be. Until there is a consensus, society has little choice but to give central bankers discretion to conduct monetary policy as they see fit.



CHECK YOUR PROGRESS

Q.4: Why are policy makers given discretion in formation of monetary policy? (Answer in about 60 words)

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Q.4: Explain the term political business cycle. (Answer in about 30 words)

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Q.4: State one reason in support of formation of monetary policy by discretion. (Answer in about 20 words)

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14.5 ROLE OF CENTRAL BANK IN MANAGING ZERO INFLATION

In the words of *Pigou*, "inflation takes place when money income is expanding relatively to the output of work done by productive agents for which it makes payment". Inflation affects both production and distribution of income in a country. Inflationary rise in price do not affect adversely in the production at national level. All men and materials remain employed and stock of real wealth like land, building etc is not diminished and total real income or output available for distribution between different sections of people remain same. Thus inflation has no adverse effect on national income or level of employment. But when inflation go beyond a certain specified limit it causes reduction in production and increase in unemployment. This may be due to various factors like – agriculturalist may decline to sell surplus stock in the hope of higher prices, production may be interrupted by labour strikes, firms may find it to hoard rather than produce etc. After certain time because of surplus stock thus accumulated profit reduces, production reduces and unemployment comes into existence. The query regarding how much inflation the central bank should be willing to tolerate is always debatable. And whether zero should be the targeted inflation rate is also a critical one.

Reasons in support of central bank aiming zero inflation:

Although in underdeveloped countries inflation helps to some extent in overall growth, but at the same time, it is also true that inflation hinders economic growth. The cost of inflation is summed up in the following points:

- A major impact of inflation is on people who have fixed income with no scope to increase their pay like pensioners.
- Inflation aggravates income inequality; often the rich become richer while the poor become poorer. The social costs of disinflation is vast as the fall in income is not proportionate. The lost income is not spread equitably over the population, hence much of the cost of reducing inflation is borne by those who can least afford to pay.
- Inflation badly affects balance of payment position both in current as well as capital account.
- Uncertain inflation leads to hindrances in rational planning of consumption as well as investment expenditure both in private and public sector.
- If inflation continues it might take the shape of hyper inflation which will result in chaos in economic as well as social life.

Because of these reasons some economists feel that a central bank should adopt as primary policy reducing inflation at least next to zero, other economists suggest that Parliament should enact a law to make it mandatory for government to keep prices low. Inflation is disliked by the public in general. Rise in inflation is treated as one of the nation's leading problem.

But combating inflation is a costly affair. The government in order to reduce inflation raises interest rates on credit and reduces the flow of money in the economy. But because of such measures firms stop borrowing working capital from the commercial banks, and they stop expanding production. This trend leads to recession which in turn results in inflation.

Economists who say that a central bank should aim at reducing inflation to zero or near zero point out that the costs of disinflation are temporary, while the benefits are more permanent. They exhort to accept short-term unemployment for the perceived long-term benefit.

Supporters of zero inflation cite examples from United States economic history. In the early 1980s Paul Velcker, the chairman of the Federal Reserve system of the United States tightened monetary policy and reduced inflation from about 10 percent in 1980 to about 4 percent in 1983. Though in 1982 unemployment reached its highest level since the Great Depression of the 1930s, the economy eventually recovered from the recession. The recession had cost President Jimmy Carter a second term as the Ronald Reagan administration over a healthy economy, a result of Paul Velcker's monetary policy.

Reasons in support of central bank not aiming zero inflation:

The reasons for which Central Bank should not aim for zero inflation are as follows:

- Low inflation indicates low growth in the economy. A normal period of economic growth would typically indicate a moderate rate of inflation at around 2%. Zero inflation indicates that there is an intense pressure to encourage savings and recovery is very fragile.
- Economy aiming at zero inflation generally faces issues like delay in purchase habits by consumer. Falling prices encourage people to wait for the price to fall further in case of luxury goods.
- Another potential problem of zero inflation is that it becomes harder for firms to adjust wages and prices. When inflation is 2% it is easier for relative prices and wages to adjust because firms can freeze prices and wages, and effectively it is a cut in real terms of 2%. However if inflation is zero then a firm would have to cut nominal wages by 2%, which is harder for people to accept psychologically.

Thus central bank can aim at zero inflation only if it can be done with no cost. But in reality it's hard to carry out such practice. When inflation is reduced, economy faces a period of high unemployment and low output. It is risky to believe that the central bank could achieve credibility so quickly as to make disinflation painless.

Therefore the aim should be to maintain a low level of inflation rather than zero inflation.



CHECK YOUR PROGRESS

Q.7: Define the term inflation. (Answer in about 30 words)

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Q.8: Describe any two factors in support of zero inflation. (Answer in about 50 words)

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Q.9: Explain one demerit of reaching zero inflation. (Answer in about 30 words)

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Q.10: What kind of changes can be expected due to demonetisation and digitalisation of the national economy? (Answer in about 60 words).

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14.6 GOVERNMENT NEED TO BALANCE ITS BUDGET

The term budget has been derived from the French word *'Bougette'* which means a small leather bag or a wallet i.e money bag or purse. Budget

constitutes of two main components:

- Budget Receipts
- Budget Expenditure

Budget receipts refer to estimated money receipts of a government from all sources during a fiscal year. It comprises of Revenue Receipt and Capital Receipt.

Budget Expenditure refers to anticipated expenditure which is spent for normal functioning during a fiscal year. It is divided into two heads- Revenue expenditure and Capital expenditure.

Whenever the government spends more than it collects in tax revenue, it covers this budget deficit by issuing government debt. The question at hand is should policy maker focus on balancing government budget?

Reasons in support of government to balance budget:

The deficit in the budget is balanced by issuing government debt. The most direct impact of government debt is the burden placed on future generation of tax payers. The accumulated debt and interest leaves a difficult task for tax payers. Either they have to pay higher taxes, enjoy less government spending, or both, in order to make resources available to pay-off the debt and accumulated interest or they can delay the day of reckoning and put the government into even deeper debt by borrowing once again to pay-off the old debt and interest. Thus in short, deficit budget basically lowers the standard of living of the future generation.

Apart from this there are various other macro-economic effects of budget deficit. Budget deficits represent negative public saving. They lower national saving (the sum of private and public saving). Reduced national saving causes real interest rates to rise and investment to fall. Reduced investment leads over time to a smaller stock of capital. A lower capital stock reduces labor productivity, real wages, and the economy's production of goods and services. Thus, when the government increases its debt, future generations are born into an economy with lower incomes as well as higher taxes.

There are situations in which budget deficit is justified like in case of war which causes increased government debt. If not debt, then such high expenditure during war would have to be financed by tax payers. This is not a favorable scenario as high tax rates would be unfair to the current generations of taxpayers who already have to make the sacrifice by fighting the war.

Similarly, it is reasonable to allow a budget deficit during a temporary down-turn in economic activity. When the economy goes into a recession, tax revenue falls automatically, because the income tax and the payroll tax are levied on measures of income. If the government tried to balance its budget during a recession, it would have to raise taxes or cut spending at a time of high unemployment. Such a policy would tend to depress aggregate demand precisely at the time it needed to be stimulated and, therefore, would tend to increase the magnitude of economic fluctuations.

Reasons not favoring the government need to balance budget:

The problem of government debt is often exaggerated. Although government debt is a burden on future generation yet it is not as large as compared to the average person's lifetime income. It is not correct to see the effects of budget deficit in isolation. The deficit budget is one large picture of how the government spends and raise money. In making these decisions over fiscal policy, policymakers affect different generations of taxpayers in many ways. The government's budget deficit or surplus should be considered together with these other policies.

Suppose the government reduces the budget deficit by cutting spending on public investments, such as education. But such decision will not help the young generation. The government debt will be smaller when they enter the labor force, which means a smaller tax burden. Yet if they are less well educated than they could be, their productivity and income will be lower. Reducing the budget deficit rather than funding more education spending could, all things considered, make future generations worse off.

The issue of budget deficit should not be looked through a single perspective as it would be dangerous. It will take away attention from various

other policies that redistribute income across generations. For example, in the 1960s and 1970s, the U.S. federal government raised Social Security benefits for the elderly. It financed this higher spending by increasing the payroll tax on the working-age population. This policy redistributed income away from younger generations toward older generations, even though it did not affect the government debt. Thus, the budget deficit is only a small part of the larger issue of how government policy affects the welfare of different generations.

To some extent, the adverse effects of government debt can be reversed by forward-looking parents. Suppose a parent is worried about the impact of the government debt on his children. The parent can offset the impact simply by saving and leaving a larger bequest. Critics of budget deficits sometimes assert that the government debt cannot continue to rise forever, but in fact it can. Just as a bank evaluating a loan application would compare a person's debts to his income, we should judge the burden of the government debt relative to the size of the nation's income.



CHECK YOUR PROGRESS

Q.10: What are the two main components of budget? (Answer in about 60 words)

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Q.11: State one reasons favoring the government need to balance budget. (Answer in about 50 words)

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14.7 REFORMATION OF TAX LAWS TO ENCOURAGE SAVINGS

A major dilemma for policy maker is to decide whether to form tax policies to encourage savings or not.

Reasons in support of reforming tax policies to encourage savings:

The national saving is a key determinant of a nation's long run economic prosperity. If saving rate is high, more resources are available for investment in new plant and equipment. With the increased investment in plants and equipment the labour productivity, wages, and income also rise. Thus there is a strong co-relation between national saving and economic well-being. If laws are made more attractive people would like to save more which will lead to a prosperous future. But if tax policies are framed to discourage saving people will not be encouraged to save. Tax system will discourage saving if it tax the return on saving quite heavily. For example, consider a 25-year-old worker who saves $1,000 of her income to have a more comfortable retirement at the age of 70. If she buys a bond that pays an interest rate of 10 percent, the $1,000 will accumulate at the end of 45 years to $72,900 in the absence of taxes on interest. But suppose she faces a marginal tax rate on interest income of 40 percent, which is typical of many workers once federal and state income taxes are added together. In this case, her after-tax interest rate is only 6 percent, and the $1,000 will accumulate at the end of 45 years to only $13,800. That is, accumulated over this long span of time, the tax rate on interest income reduces the benefit of saving $1,000 from $72,900 to $13,800-or by about 80 percent.

At times certain types of capital income are taxed twice. Suppose a person uses some of his saving to buy stock in a corporation. When the corporation earns a profit from its capital investments, it first pays tax on this profit in the form of the corporate income tax. If the corporation pays out the rest of the profit to the stockholder in the form of dividends, the stockholder pays tax on this income a second time in the form of the individual income tax. This double taxation substantially reduces the return

to the stockholder, thereby reducing the incentive to save. Even if parents would like to save a good amount for their children rather than spending it themselves tax policies discourage them to do so. Tax policies like inheritance tax discourage such savings.

Thus policy makers should consider reforming tax policies to encourage more savings for the better economic growth.

Reasons in support of not reforming tax policies to encourage savings:

Although saving is desirable it is not the only purpose for which tax policies are framed. A major task of policy maker is to distribute tax burden fairly. If incentives to save are increased they increase the tax burden on those who can least afford it. High-income households generally save more than lower income households. As a result, any tax change that favors people who save will also tend to favour people with high income. Policies such as tax-advantaged retirement accounts may seem appealing, but they lead to a less egalitarian society. By reducing the tax burden on the wealthy who can take advantage of these accounts, they force the government to raise the tax burden on the poor.

Moreover studies have found that saving is not sensitive to the rate of return on saving. Thus tax provisions that raise the effective return by reducing the taxation of capital income will further enrich the wealthy without inducing them to save more than they otherwise would.

There is no economic theory that gives clear prediction on the fact whether a higher rate of return would increase saving. The outcome depends on the relative size of two conflicting effects, called the substitution effect and the income effect. On one hand, a higher rate of return raises the benefit of saving, each dollar saved today produces more consumption in the future. This substitution effect tends to raise saving. On the other hand, a higher rate of return lowers the need for saving, a household has to save less to achieve any target level of consumption in the future. This income effect tends to reduce saving. Both these theories cancel each other hence it can be said that saving will not change when lower taxation of capital income raises the rate of

return.

Moreover national saving is not just dependent on tax policies. National saving is the sum of private and public saving. Instead of trying to alter the tax code to encourage greater private saving, policymakers can simply raise public saving by reducing the budget deficit, perhaps by raising taxes on the wealthy. This offers a direct way of raising national saving and increasing prosperity for future generations.

CHECK YOUR PROGRESS



Q.12: How do saving impact economic well-being? (Answer in about 50 words)

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Q.13: State one reason in support of not reforming tax policies to encourage savings. (Answer in about 20 words)

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14.8 LET US SUM UP

- Recession has no benefit for the society as it denotes a mere waste of resources. Thus policy makers can stabilize aggregate demand and, thereby production and employment. When aggregate demand is inadequate to ensure full employment, policymakers should boost government spending, cut taxes, and expand the money supply. When aggregate demand is excessive, risking higher inflation, policymakers should cut government spending, raise taxes, and reduce the money supply. Such policy actions put macroeconomic theory to its best use by leading to a more stable economy, which benefits everyone.

- Monetary and fiscal policy do not affect the economy immediately but instead work with a long lag. Monetary policy affects aggregate demand by changing interest rates, which in turn affect spending, especially residential and business investment.
- Discretion in the formation of monetary policy has two major drawbacks. Firstly, since monetary authority has all kinds of power to regulate the economic scenario thus it becomes crucial to set guidelines so that there is no abuse of power. Secondly, discretionary monetary policy might lead to more inflation that desired. Central bankers, knowing that there is no long-run trade-off between inflation and unemployment, often announce that their goal is zero inflation.
- Although there are many drawbacks in discretion of monetary policy but such power helps policy makers to confront to situations which can't be foreseen. The discretion power to policy makers helps them to respond to shocks in the economy like sudden decrease in the stock market or sudden increase in oil prices etc.
- The benefits of zero inflation have to be weighed against the costs of achieving it. Thus central bank can aim at zero inflation only if it can be done with no cost. But in reality it's hard to carry out such practice. When inflation is reduced, economy faces a period of high unemployment and low output. It is risky to believe that the central bank could achieve credibility so quickly as to make disinflation painless. Therefore the aim should be to maintain a low level of inflation rather than zero inflation.
- Price stability may be desirable but the benefits of zero inflation compared to moderate inflation are small, whereas the costs of reaching zero inflation are large. Estimates of the sacrifice ratio suggest that reducing inflation by 1 percent-age point requires giving up about 5 percent of one year's output. Thus central bank can aim at zero inflation only if it can be done with no cost. But in reality it's hard to carry out such practice.
- The reasons in support of government to balance budget is that the deficit in the budget is balanced by issuing government debt. The most direct impact of government debt is the burden placed on future generation of tax payers.

- The reasons not favoring the government need to balance budget is that the problem of government debt is often exaggerated. Although government debt is a burden on future generation yet it is not as large as compared to the average person's lifetime income. It is not correct to see the effects of budget deficit in isolation. The deficit budget is one large picture of how the government spends and raises money. In making these decisions over fiscal policy, policymakers affect different generations of taxpayers in many ways. The government's budget deficit or surplus should be considered together with these other policies.
- The national saving is a key determinant of a nation's long run economic prosperity. Tax system will discourage saving if it tax the return on saving quite heavily.
- Saving is desirable but it is not the only purpose for which tax policies are framed. A major task of policy maker is to distribute tax burden fairly. If incentives to save are increased they increase the tax burden on those who can least afford it.



14.9 FURTHER READING

1) Chakraborty, S.K. (2010). *Macro Economics*. Mumbai: Himalaya Publishing House Pvt. Ltd.

2) Saleem. S. (2010). *Business Environment*. New Delhi: Pearson Education.



14.10 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q. No. 1: Monetary policy is concerned with the management of supply of money in a growing economy. It aims at price stability,

full employment and economic growth. Fiscal policy on the other hand is mainly concerned with the determination of state income and expenditure policy.

Ans to Q. No. 2: The monetary policy is different from fiscal policy as the former bring about a change in the economy by changing money supply and interest rates. For instance, RBI buys government bonds to drive up bond yields and inject money into the market to increase money supply during deflation and during inflation RBI sells bonds to suck money out of the system. Fiscal policy, on the other hand, is a deliberate change in the government revenue and expenditure to influence the level of national output and price. For instance, at the time of recession the government can cut taxes in order to generate demand and raise taxes during inflationary times.

Ans to Q. No. 3: Economy in general keeps on fluctuating. In the economic phase when household and firms becomes pessimist, they cut back on spending and this reduces the aggregate demand for goods and services. This in turn reduces production. As production gets reduced firms lay off workers and unemployment rises. Such recession has no benefit for the society as it denotes a mere waste of resources. Thus policy makers can stabilize aggregate demand through monetary and fiscal policy and thereby increase production and employment.

Ans to Q. No. 4: Monetary policy influence economic growth by creating a favorable climate for saving as well as investment. Savings are encouraged by anti-inflationary measures and investments are stimulated while banks advances medium and long term finance for developmental activities on easy terms like at a low rate of interest. Success of monetary policy depends upon the overall effectiveness of monetary authority. Thus they are given discretionary power in their conduct of monetary policy

Ans to Q. No. 5: The term *political business cycle* is used mainly to describe the stimulation of the economy just prior to an election in order

to improve prospects of the incumbent government getting reelected.

Ans to Q. No. 6: The discretion power to policy makers helps them to respond to shocks in the economy like sudden decrease in the stock market or sudden increase in oil prices etc.

Ans to Q. No. 7: In the words of *Pigou*, "inflation takes place when money income is expanding relatively to the output of work done by productive agents for which it makes payment".

Ans to Q. No. 8: Two factors in support of zero inflation are:

i. Inflation aggravates income inequality; often the rich become richer while the poor become poorer. The social costs of disinflation is vast as the fall in income is not proportionate. The lost income is not spread equitably over the population, hence much of the cost of reducing inflation is borne by those who can least afford to pay.

ii. Uncertain inflation leads to hindrances in rational planning of consumption as well as investment expenditure both in private and public sector.

Ans to Q. No. 9: The costs of reaching zero inflation are large. Estimates of the sacrifice ratio suggest that reducing inflation by 1 percentage point requires giving up about 5 percent of one year's output. Thus if inflation has to be reduced by 4% people will have to face a loss of 20% of a years output.

Ans to Q. No. 10: Budget constitutes of two main components:

a. Budget Receipts
b. Budget Expenditure

Ans to Q. No. 11: The deficit in the budget is balanced by issuing government debt. The most direct impact of government debt is the burden placed on future generation of tax payers. The accumulated debt and interest leaves a difficult task for tax payers. Either they have to pay higher taxes, enjoy less

government spending, or both, in order to make resources available to pay-off the debt and accumulated interest or they can delay the day of reckoning and put the government into even deeper debt by borrowing once again to pay-off the old debt and interest. Thus in short, balancing budget basically lowers the standard of living of the future generation.

Ans to Q. No. 12: The national saving is a key determinant of economic well-being. If saving rate is high, more resources are available for investment in new plant and equipment. With the increased investment in plants and equipment the labour productivity, wages, and income also rise. Thus there is a strong co-relation between national saving and economic well-being.

Ans to Q. No. 13: A major task of policy maker is to distribute tax burden fairly. If incentives to save are increased it increases the tax burden on those who can least afford it.



14.11 MODEL QUESTIONS

A) Short Questions (Answer each question in about 150 words)

Q 1: State the reasons why policy makers should not try to stabilize economy through monetary and fiscal policy.

Q 2: Mention the reasons in support of formation of monetary policy by rule.

Q 3: Why should tax policies not be reformed to encourage saving?

B) Long Questions (Answer each question in about 300-500 words)

Q 1: Explain the pros and cons of the need of government to balance budget?

Q 2: State the impact of saving in the economic well-being. Why should policy makers reform tax laws to encourage savings?

Q 3: What is meant by inflation? Mention the pros and cons of zero inflation.

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REFERENCES

- **Books**

1) Agarwal, Vanita. (2010). *Macroeconomics Theory and Policy.* New Delhi: Pearson Education India.
2) Ahuja, H.L. (2017). *Macro Economic Theory and Policy*. New Delhi: S. Chand Publishing and Company Ltd.
3) Blanchard, O & Johnson, D. R. (2012). *Macroeconomics*. Pearson Education International. 6th edition.
4) Chopra, P. N. (2011). *Advanced Economic Theory Micro and Macro*. New Delhi: Kalyani Publishers. 12th Edition.
5) Dwivedi, D.N. (2018). *Macro Economics Theory and Policy*. Noida: Mc Graw Hill Education (India) Private Limited
6) Goel, R.L. (1986-87). *Economics of Growth and Planning*. Meerut: Meenakshi Prakashan.
7) Gupta, K.R., Mandal, R.K. & Gupta, A. (2008). *Macro Economics*. New Delhi: Atlantic Publishers & Distribution (P) Ltd. *5th Revised & Enlarged Edition.*
8) Gupta, R. D. & Rana, A. S. (2009). *Keynes and Post-Keynesian Economics*. Ludhiana: Kalyani Publisher.
9) Gupta, S. B. (2003). *Monetary Economics: Institutions, Theory and Policy*. New Delhi: S. Chand & Company Ltd.
10) Jhinghan, M. L. (2012). *Monetary Economics*. Delhi: Vrinda Publications (P) Ltd.
11) Keleher, R.E. (1982). *Historical Origins of Supply - Side Economics*. Economic Review, Federal Reserve Bank of Atlanta.
12) Mankiw, N.G. (2012). *Macroeconomic*. New York: Worth Publisher. 8th Edition.
13) Mehta, Chandra Mukund. (2011). *Monetary Policy in India: - Reforms And It's Evaluation*.http://psrcentre.org/images/extraimages/35.%201211439.pdf.

14) Mithani, D. M. (2002). *A Course in Macroeconomics*. Mumbai: Himalaya Publishing House.
15) Mohan, Rakesh. (2006). *Financial Sector Reforms and Monetary Policy: The Indian Experience*. http://www.rakeshmohan.com/docs/RBIBulletinJuly 2006-1.pdf.
16) Mohanty, Deepak. (2017). *Eight Decades of Monetary Policy in India*. https://www.researchgate.net/publication/321938442_Eight_Decades_of_Monetary_Policy_in_ India.
17) Paul, Justin. (2015). *Business Environment: Text Cases*. McGraw Hill Education (India) Private Limited. Third Edition.
18) Paul, R. R. (2008). *Monetary Economics.* Ludhiana: Kalyani Publisher.
19) Rana, K. C & Verma, K. N. (2011). *International Economics*. New Delhi: Vishal Publishing Co.
20) Rana, K.C. & Verma, K. N. (2009). *Macroeconomic Analysis*. New Delhi: Vishal Publishing Co.
21) Reddy, V.Y. *Monetary policy operating procedures in India.* https://www.bis.org/publ/plcy05e.pdf.
22) Seth, M. L. (2010). *Macro Economics*. Agra: Laxami Narayan Agarwal Educational Publishers (LNA).
23) Shapiro, E. (1988). *Macroeconomic Analysis*. New Delhi: Galgotia Publications pvt.ltd
24) Sheth, M. L. (2002). *Monetary Economics*. Agra: Laxami Narayan Agarwal Educational Publishers (LNA).

- **Journals**

1) 'A Monetary Explanation of the Great Stagflation of the 1970s', NBER, February, 2000. "Monetarism", Econlib. "Milton Friedman," Econlib.
2) Clem, Tisdell. (2001).'Transitional economies and economic globalisation: Social and environmentalconsequences'. International Journal of Social Economics. Vol. 28 Issue: 5/6/7. https://doi.org/10.1108/03068290110360849

3) Crotty, J. Cambridge. (2009). 'Structural causes of the global financial crisis: a critical assessment of the 'new financial architecture'. Journal of Economics.
4) Georgios, I. Zekos. (2003). 'MNEs, globalisation and digital economy: legal and economic aspects'. Managerial Law. Vol. 45. Issue: 1/2. https://doi.org/10.1108/03090550310770875
5) Goel, Sandeep. (2018). 'The big bath of demonetization in India: strike on black money for corporate governance'. Journal of Money Laundering Control. Vol. 21. No. 4.
6) Michel, Dumont; Nikolina, Stojanovska; Ludo, Cuyvers. (2011). 'World inequality, globalisation, technology and labour market institutions'. International Journal of Manpower. Vol. 32. Issue: 3. https:// doi.org/10.1108/01437721111136750.
7) Sivathanu, Brijesh. (2019). 'Adoption of digital payment systems in the era of demonetization in India: An empirical study'. Journal of Science and Technology Policy Management. Vol. 10. No. 1.
8) Stephens, A. A.; Atwater, J. B.; Kannan, V. R. (2013). 'From tulip bulbs to subprime mortgages examining the subprime crisis: The case for a systemic approach.' The Learning Organization. Vol. 20 Issue: 1.
9) Steven, H. Appelbaum; Seth, Keller; Harold, Alvarez; Catherine, Bédard. (2012) 'Organizational crisis: lessons from Lehman Brothers and Paulson & Company'. International Journal of Commerce and Management. Vol. 22 .Issue: 4.
10) Veronika, Wittmann. (2014). 'World society and globalisation'. Journal for Multicultural Education. Vol. 8. Issue: 3. https://doi.org/ 10.1108/JME-05-2014-0021
11) Vito, Bobek; Romana, K. Vide. (2005). 'The signification and the feasibility of measuring globalization of economy'. Industrial Management & Data Systems. Vol. 105. Issue: 5. https:// doi.org/ 10.1108/02635570510599977.

- **Websites**

1) http://www. investopedia.com
2) http://www.economicsdiscussion.net/articles/monetarism-versus-keynesianism-*explained/8421*

3) http//www. Economicshelp.org>blog
4) http//en.m.wikipedia.org
5) http://www.fsb.miamioh.edu/fsb/ecopapers/docs/hallte-2010-08-paper.pdf
6) https://www.economics.ox.ac.uk/department-of-economics-discussion-paper-series/economists-on-samuelson-and-solow-on-the-phillips-curve
7) https://www.investopedia.com/ask/answers/012615/what-difference-between-keynesian-economics-and-monetarist-economics.asp
8) https://www.economicshelp.org/blog/1113/concepts/keynesianism-vs-monetarism/
9) https://www.fool.com/knowledge-center/differences-between-monetarist-theory-and-keynesia.aspx
10) https://www.britannica.com/topic/Bitter-Face-Off-Between-Keynesian-Economics-and-Monetarism-The-1905030
11) https://www.investopedia.com/ask/answers/100314/whats-difference-between-monetary-policy-and-fiscal-policy.asp.
12) https://www.economicshelp.org/blog/1850/economics/difference-between-monetary-and-fiscal-policy.
13) http://www.yourarticlelibrary.com/economics/indian-economy/monetary-policy-of-india-main-elements-and-objectives/39553.
14) https://en.wikipedia.org/wiki/Monetary_policy_of_India.
15) https://www.toppr.com/guides/economics/money-and-banking/instruments-of-monetary-policy-and-the-reserve-bank-of-india/
16) https://www.clearias.com/monetary-policy/.
17) https://en.wikipedia.org/wiki/Monetary_policy_of_India
18) https://ssrn.com/abstract=3151238
https://onlinelibrary.wiley.com/doi/full/10.1111/j.1539-6924.2009.01230.x

Name of the Paper: .....
Course Code: .....

Centre for Internal Quality Assurance (CIQA)
Krishna Kanta Handiqui State Open University
City Office: Housefed Complex, Guwahati-781006

Learner's Feedback on Course

Dear Learner,

Regarding the course as mentioned above, we would like to know your opinions and comments so as to improve the quality of self learning materials in future. Please respond to the following statements by ticking the number you feel most reflect your opinion. After completion of the additional comments, please detach the page and send/mail the same to us at the address given below.

The Director, Centre for Internal Quality Assurance, KKHandiqui State Open University
Housefed Complex, Dispur, Guwahati-781006
(E-mail id: ciqa@kkhsou.in)

1) Approximately how many hours did you spend for studying the units in the course? ☐☐☐

2) Please give your opinions (by ✓ mark) to the following items based on your reading of the block:

Sl. No.	Statements	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I)	The SLMs of the course fulfil the learning objectives set out in the beginning of each unit					
II)	The units of the SLM could satisfy my academic needs and expectations					
III)	The Unit writers have excellent knowledge about the course contents					
IV)	Language and contents of the units were presented at a level which I could readily understand					
V)	Ample opportunity for participation in the activities provided in the units					
VI)	Used enough Illustrations (Diagrams, tables etc.) for conceptual clarity					
VII)	Quality of content is engaging, relevant, and up-to-date					
VIII)	The self check questions are very helpful					
IX)	The Possible/model questions and the answers to check my progress have benefited me a lot					

Additional Comments: *(Please feel free to provide your open comments)*

1) Which aspects of the SLM, according to you, worked well?

.....

.....

2) What sort of changes/improvements do you feel KKHSOU could implement to improve the overall quality of the SLM?

.....

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Thank you for taking the time to complete this form.