

Macro economic notes

Class-bba 2nd sem.

Unit-1

What is Macroeconomics?

Macroeconomics is the study of economics involving phenomena that affects an entire economy, including inflation, unemployment, price levels, economic growth, economic decline and the relationship between all of these. While microeconomics looks at how households and businesses make decisions and behave in the marketplace, macroeconomics looks at the big picture - it analyzes the entire economy.

Introduction

Macro Economics is the study of aggregates or averages covering the entire economy, such as total employment, national income, national output, total investment, total consumption, total savings, aggregate supply, aggregate demand and general price level, wage level and cost structure. Otherwise, it is aggregative economics which examines the interrelations among the various aggregates, their determination and causes of fluctuations in them.

Prof. Ackley defines Macro Economics as "Macro Economics deals with economic affairs 'in the large, it concerns the overall dimensions of economic life. It looks at the total size and shape and functioning of the elephant of economic experience, rather than working of articulation or dimensions of the individual parts. It studies the character of the forest, independently of the trees which compose it."

Scope and Importance of Macro Economics

Macro Economics is of much theoretical and practical importance. Let us see what are the importance and the scope where macro economics are being used.

1. To Understand the working of the Economy

The study of macro economics variables is requisite for considerate the operation of the financial system. Our main economic complexities are associated with the performance of total income, irredundant and the normal price scale in the fiscal. These variables are geometrically measurable in this manner facilitating the probabilities of analysing the effects on the functioning of the economy.

2. In Economic Policies

Macro Economics is extremely useful from the view point of the fiscal policy. Modern Governments, particularly, the underdeveloped economies are confronted with innumerable national problems. They are the problems of over population, inflation, balance of payments, general under production etc. The main conscientiousness of these governments rests in the regulation and control of over population, general prices, general volume of commerce, general productivity etc.

I. In General Unemployment

Redundancy is caused by deficiency of effectual demand. In order eradicate it, effective demand should be raised by increasing total investment, total productivity, total income and consumption. Thus, macro economics has special significance in studying the causes, effects and antidotes of general redundancy.

II. In National Income

The study of macro economics is very significant for evaluating the overall performance of the economy in terms of national income. This led to the construction of the data on national income. National income data help in anticipating the level of fiscal activity and to comprehend the distribution of income among different groups of people in the economy.

III. **In Economic Growth**

The economics of growth is also a study in macro economics. It is on the basis of macro economics that the resources and capabilities of an economy are evaluated. Plans for the overall increase in national income, productivity, employment are framed and executed so as to raise the level of fiscal development of the economy as a whole.

IV. **In Monetary Problems**

It is in terms of macro economics that monetary problems can be analysed and understood properly. Frequent changes in the value of money, inflation or deflation, affect the economy adversely. They can be counteracted by adopting monetary, fiscal and direct control measures for the economy as a whole.

V. **In Business Cycle**

Moreover, macro economics as an approach to fiscal problems started after the great Depression, thus its significance falls in analysing the grounds of fiscal variations and in providing remedies.

3. **For Understanding the Behaviour of Individual Units**

For understanding the performance of individual units, the study of macro economics is imperative. Demand for individual products depends upon aggregate demand in the economy. Unless the causes of deficiency in aggregate demand are analysed it is not feasible to understand fully the grounds for a fall in the demand of individual products. The reasons for increase in costs of a specific firm or industry cannot be analysed without knowing the average cost conditions of the whole economy. Thus, the study of individual units is not possible without macro economics.

Main differences between Microeconomics and Macroeconomics are as under:

Microeconomics:

1. It is the study of individual economic units of an economy.
2. It deals with Individual Income, Individual prices, Individual output, etc.
3. Its central problem is price determination and allocation of resources.
4. Its main tools are demand and supply of a particular commodity/factor.
5. It helps to solve the central problem of 'what, how and for whom' to produce. In the economy

6. It discusses how equilibrium of a consumer, a producer or an Industry Is attained.

7. Price is the main determinant of micro- economic problems.

8. Examples are: Individual Income, Individual savings, price determination of a commodity, individual firm's output, consumer's equilibrium.

Macroeconomics:

1. It is the study of economy as a whole and its aggregates.

2. It deals with aggregates like national Income, general price level, national output, etc.

3. Its central problem is determination of level of Income and employment.

4. Its main tools are aggregate demand and aggregate supply of the economy as a whole.

5. It helps to solve the central problem of full employment of resources in the economy.

6. It is concerned with the determination of equilibrium level of Income and employment of the economy.

7. Income is the major determinant of macroeconomic problems.

8. Examples are: National Income, national savings, general price level, aggregate demand, aggregate supply, poverty, unemployment, etc.

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7. Income is the major determinant of macroeconomic problems.
8. Examples are: National Income, national savings, general price level, aggregate demand, aggregate supply, poverty, unemployment, etc.

[National Income](#)

Concept of National Income

National income means the value of goods and [services](#) produced by a country during a [financial year](#). Thus, it is the net result of all economic activities of any country during a period of one year and is valued in terms of [money](#). National income is an uncertain term and is often used interchangeably with the national dividend, national output, and national [expenditure](#). We can understand this concept by understanding the national income definition.

Browse more Topics under National Income

- [Measurement of National Income](#)
- [The concept of Consumption, Saving, and Investment](#)
- Economic Growth
- Economic Fluctuations

Concept of National Income

The National Income is the total amount of income accruing to a country from economic activities in a years time. It includes payments made to all resources either in the form of wages, interest, rent, and profits.

The progress of a country can be determined by the growth of the national income of the country

National Income Definition

There are two National Income Definition

- Traditional Definition
- Modern Definition



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Traditional Definition

According to Marshall: “The labor and capital of a country acting on its natural resources produce annually a certain net aggregate of commodities, material and immaterial including services of all kinds. This is the true net annual income or revenue of the country or national dividend.”

The definition as laid down by Marshall is being criticized on the following grounds.

Due to the varied category of [goods and services](#), a correct estimation is very difficult.

There is a chance of double counting, hence National Income cannot be estimated correctly.

For example, a product runs in the supply from the producer to distributor to [wholesaler](#) to [retailer](#) and then to the ultimate consumer. If on every movement commodity is taken into consideration then the value of National Income increases.

Also, one other reason is that there are products which are produced but not marketed.

For example, In an [agriculture](#)-oriented country like India, there are commodities which though produced but are kept for self-consumption or exchanged with other commodities. Thus there can be an underestimation of National Income.

Read more about [Income and Expenditure Method here](#) in detail

Simon Kuznets defines national income as “the net output of commodities and services flowing during the year from the country’s productive system in the hands of the ultimate [consumers](#).”

Following are the Modern National Income definition

- GDP
- GNP

Gross Domestic Product

The total value of goods produced and services rendered within a country during a year is its [Gross Domestic Product](#).

Further, GDP is calculated at market price and is defined as GDP at market prices. Different constituents of GDP are:

1. Wages and salaries
2. Rent
3. Interest
4. Undistributed profits
5. Mixed-income
6. Direct taxes
7. Dividend
8. Depreciation

Gross National Product

For [calculation of GNP](#), we need to collect and assess the [data](#) from all productive activities, such as agricultural produce, wood, minerals, commodities, the contributions to production by transport, communications, insurance companies, professions such (as lawyers, doctors, teachers, etc). at market prices.

It also includes net income arising in a country from abroad. Four main constituents of GNP are:

1. Consumer goods and services
2. Gross private domestic income
3. Goods produced or services rendered
4. Income arising from abroad.

GDP and GNP on the basis of Market Price and Factor Cost

a) Market Price

The Actual transacted price including indirect taxes such as GST, Customs duty etc. Such taxes tend to raise the prices of goods and services in the economy.

b) Factor Cost

It Includes the cost of factors of production e.g. interest on capital, wages to labor, rent for land profit to the stakeholders. Thus services provided by service providers and goods sold by the producer is equal to revenue price.

Alternatively,

Revenue Price (or Factor Cost) = Market Price (**net of**) Net Indirect Taxes

Net Indirect Taxes = Indirect Taxes Net of Subsidies received

Hence,

Factor Cost shall be equal to

(Market Price) LESS (Indirect Taxes ADD Subsidies)

Net Domestic Product

The net output of the country's economy during a year is its NDP. During the year a country's capital assets are subject to wear and tear due to its use or can become obsolete.

Hence, we deduct a percentage of such investment from the GDP to arrive at NDP.

So NDP=GDP at factor cost LESS Depreciation.

The Accumulation of all factors of income earned by residents of a country and includes income earned from the county as well as from abroad.

Thus, National Income at Factor Cost shall be equal to

NNP at Market Price LESS (Indirect Taxes ADD Subsidies)

Trade Cycle: Meaning, Features and Theories-

In this article we will discuss about Trade Cycle:- 1. Meaning of Trade Cycle 2. Features of a Trade Cycle 3. Phases 4. Theories.

Meaning of Trade Cycle:

A trade cycle refers to fluctuations in economic activities specially in employment, output and income, prices, profits etc. It has been defined differently by different economists. According to Mitchell, “Business cycles are of fluctuations in the economic activities of organized communities. The adjective ‘business’ restricts the concept of fluctuations in activities which are systematically conducted on commercial basis.

The noun ‘cycle’ bars out fluctuations which do not occur with a measure of regularity”. According to Keynes, “A trade cycle is composed of periods of good trade characterised by rising prices and low unemployment percentages altering with periods of bad trade characterised by falling prices and high unemployment percentages”.

Features of a Trade Cycle:

1. A business cycle is synchronic. When cyclical fluctuations start in one sector it spreads to other sectors.

2. In a trade cycle, a period of prosperity is followed by a period of depression. Hence trade cycle is a wave like movement.
3. Business cycle is recurrent and rhythmic; prosperity is followed by depression and vice versa.
4. A trade cycle is cumulative and self-reinforcing. Each phase feeds on itself and creates further movement in the same direction.
5. A trade cycle is asymmetrical. The prosperity phase is slow and gradual and the phase of depression is rapid.
6. The business cycle is not periodical. Some trade cycles last for three or four years, while others last for six or eight or even more years.
7. The impact of a trade cycle is differential. It affects different industries in different ways.
8. A trade cycle is international in character. Through international trade, booms and depressions in one country are passed to other countries.

Phases of a Trade Cycle:

Generally, a trade cycle is composed of four phases – depression, recovery, prosperity and recession.

Depression:

: During depression, the level of economic activity is extremely low. Real income production, employment, prices, profit etc. are falling. There are idle resources. Price is low leading to a fall in profit, interest and wages. All the sections of the people suffer. During this phase, there will be pessimism leading to closing down of business firms.

Recovery:

Recovery denotes the turning point of business cycle from depression to prosperity. In this phase, there is a slow rise in output, employment, income and price. Demand for commodities go up. There is increase in investment, bank loans and advances. Pessimism gives way to optimism.

The process of revival and recovery becomes cumulative and leads to prosperity.

Prosperity: It is a state of affairs in which real income and employment are high. There are no idle resources. There is no wastage of materials. There is rise in wages, prices, profits and interest. Demand for bank loans increases. There is optimism everywhere. There is a general uptrend in business community.

However, these boom conditions cannot last long because the forces of expansion are very weak. There are bottlenecks and shortages. There may be scarcity of labour, raw material and other factors of production. Banks may stop their loans. These conditions lead to recession.

Recession: When the entrepreneurs realize their mistakes, they reduce investment, employment and production. Then fall in employment leads to fall in income, expenditure, prices and profits. Optimism gives way to pessimism. Banks reduce their loans and advances. Business expansion stops. This state of recession ends in depression.

Theories of Trade Cycle:

Many theories have been put forward from time to time to explain the phenomenon of trade cycles. These theories can be classified into non-monetary and monetary theories.

Non-Monetary Theories of Trade Cycle:

1. Sunspot Theory or Climatic Theory:

It is the oldest theory of trade cycle. It is associated with W.S.Jevons and later on developed by H.C.Moore. According to this theory, the spot that appears on the sun influences the climatic conditions. When the spot appears, it will affect rainfall and hence agricultural crops.

When there is crop failure, that will result in depression. On the other hand, if the spot did not appear on the sun, rainfall is good leading to prosperity. Thus, the variations in climate are so regular that depression is followed by prosperity.

However, this theory is not accepted today. Trade cycle is a complex phenomenon and it cannot be associated with climatic conditions. If this theory is correct, then industrialised countries should be free from cyclical fluctuations. But it is the advanced, industrialised countries which are affected by trade cycles.

2. Psychological Theory:

This theory was developed by A.C. Pigou. He emphasized the role of psychological factor in the generation of trade cycles. According to Pigou, the main cause for trade cycle is optimism and pessimism among business people and bankers. During the period of good trade, entrepreneurs become optimistic which would lead to increase in production.

The feeling of optimism is spread to other. Hence investments are increased beyond limits and there is over production, which results in losses. Entrepreneurs become pessimistic and reduce their investment and production. Thus, fluctuations are due to optimism leading to prosperity and pessimism resulting depression.

Though there is an element of truth in this theory, this theory is unable to explain the occurrence of boom and starting of revival. Further this theory fails to explain the periodicity of trade cycle.

3. Overinvestment Theory:

Arthur Spiethoff and D.H. Robertson have developed the over investment theory. It is based on Say's law of markets. It believes that over production in one sector leads to over production in other sectors. Suppose, there is over production and excess supply in one sector, that will result in fall in price and income of the people employed in that sector. Fall in income will lead to a decline in demand for goods and services produced by other sectors. This will create over production in other sectors.

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Spiethoff has pointed out that over investment is the cause for trade cycle. Over investment is due to indivisibility of investment and excess

supply of bank credit. He gives the example of a railway company which lays down one more track to avoid traffic congestion. But this may result in excess capacity because the additional traffic may not be sufficient to utilise the second track fully.

Over investment and overproduction are encouraged by monetary factors. If the banking system places more money in the hands of entrepreneurs, prices will increase. The rise in prices may induce the entrepreneurs to increase their investments leading to over-investment. Thus Prof. Robertson has successfully combined real and monetary factors to explain business cycle.

This theory is realistic in the sense that it considers over investment as the cause of trade cycle. But it has failed to explain revival.

4. Over-Saving or Under Consumption Theory:

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This theory is the oldest explanation of the cyclical fluctuations. This theory has been formulated by Malthus, Marx and Hobson. According to this theory, depression is due to over-saving. In the modern society, there is great inequalities of income. Rich people have large income but their marginal propensity to consume is less.

Hence they save and invest which results in an increase in the volume of goods. This causes a general glut in the market. At the same time, as majority of the people are poor, they have low propensity to consume. Therefore, consumption will not increase. Increase in the supply of goods and decline in the demand create under consumption and hence over production.

This theory is not free from criticism. This theory explains only the turning point from prosperity to depression. It does not say anything about recovery. This theory assumes that the amount saved would be automatically invested. But this is not true. It pays too much attention on saving and too little on others.

5. Keynes' Theory of Trade Cycles:

Keynes doesn't develop a complete and pure theory of trade cycles. According to Keynes, effective demand is composed of consumption and investment expenditure. It is effective demand which determines the level of income and employment.

Therefore, changes in total expenditure i.e., consumption and investment expenditures, affect effective demand and this will bring about fluctuation in economic activity. Keynes believes that consumption expenditure is stable and it is the fluctuation in investment expenditure which is responsible for changes in output, income and employment.

Investment depends on rate of interest and marginal efficiency of capital. Since rate of interest is more or less stable, marginal efficiency of capital determines investment. Marginal efficiency of capital depends on two factors – prospective yield and supply price of the capital asset. An increase in MEC will create more employment, output and income leading to prosperity. On the other hand, a decline in MEC leads to unemployment and fall in income and output. It results in depression.

During the period of expansion businessmen are optimistic. MEC is rapidly increasing and rate of interest is sticky. So entrepreneurs undertake new investment. The process of expansion goes on till the boom is reached. As the process of expansion continues, cost of production increases, due to scarcity of factors of production. This will lead to a fall in MEC. Further, price of the product falls due to abundant supply leading to a decline in profits.

This leads to depression. As time passes, existing machinery becomes worn out and has to be replaced. Surplus stocks of goods are exhausted. As there is a fall in price of raw-materials and equipment, costs fall. Wages also go down. MEC increases leading to recovery. Keynes states that, "Trade cycle can be described and analyzed in terms of the fluctuations of the marginal efficiency of capital relatively to the rate of interest".

The merit of Keynes' theory lies in explaining the turning points-the lower and upper turning points of a trade cycle. The earlier economists considered the changes in the amount of credit given by banking system to be responsible for cyclical fluctuations. But for Keynes, the change in consumption function with its effect on MEC is responsible for trade cycle. Keynes, thus, has given a satisfactory explanation of the turning points of the trade cycle, "Keynes consumption function filled a serious gap and corrected a serious error in the previous theory of the business cycle". (Metzler).

Critics have pointed out the weakness of Keynes' theory. Firstly, according to Keynes the main cause for trade cycle is the fluctuations in MEC. But the term marginal efficiency of capital is vague. MEC depends on the expectations of the entrepreneur about future. In this sense, it is similar to that of Pigou's psychological theory. He has ignored real factors.

Secondly, Keynes assumes that rate of interest is stable. But rate of interest does play an important role in decision making process of entrepreneurs.

Thirdly, Keynes does not explain periodicity of trade cycle. In a period of recession and depression, according to Keynes, rate of interest should be high due to strong liquidity preference. But, during this period, rate of interest is very low. Similarly during boom, rate of interest should be low because of weak liquidity preference; but actually the rate of interest is high.

6. Schumpeter's Innovation Theory:

Joseph A. Schumpeter has developed innovation theory of trade cycles. An innovation includes the discovery of a new product, opening of a new market, reorganization of an industry and development of a new method of production. These innovations may reduce the cost of production and may shift the demand curve. Thus innovations may bring about changes in economic conditions.

Suppose, at the full employment level, an innovation in the form of a new product has been introduced. Innovation is financed by bank loans. As there is full employment already, factors of production have to be withdrawn from others to manufacture the new product. Hence, due to competition for factors of production costs may go up, leading to an increase in price.

When the new product becomes successful, other entrepreneurs will also produce similar products. This will result in cumulative expansion and prosperity. When the innovation is adopted by many, supernormal profits will be competed away. Firms incurring losses will go out of business. Employment, output and income fall resulting in depression.

Schumpeter's theory has been criticised on the following grounds.

Firstly, Schumpeter's theory is based on two assumptions viz., full employment and that innovation is being financed by banks. But full employment is an unrealistic assumption, as no country in the world has achieved full employment. Further innovation is usually financed by the promoters and not by banks. Secondly, innovation is not the only cause of business cycle. There are many other causes which have not been analysed by Schumpeter.

Monetary Theories of Trade Cycles:

1. Over-Investment Theory:

Prof. Von Hayek in his books on "Monetary Theory and Trade Cycle" and "Prices and Production" has developed a theory of trade cycle. He has distinguished between equilibrium or natural rate of interest and market rate of interest. Market rate of interest is one at which demand for and supply of money are equal.

Equilibrium rate of interest is one at which savings are equal to investment. If both equilibrium rate of interest and market rate of interest are equal, there will be stability in the economy. If equilibrium rate of interest is higher than market rate of interest there will be prosperity and vice versa.

For instance, if the market rate of interest is lower than equilibrium rate of interest due to increase in money supply, investment will go up. The demand for capital goods will increase leading to a rise in price of these goods. As a result, there will be a diversion of resources from consumption goods industries to capital goods industries. Employment and income of the factors of production in capital goods industries will increase.

This will increase the demand for consumption goods. There will be competition for factors of production between capital goods and consumption good industries. Factor prices go up. Cost of production increases. At this time, banks will decide to reduce credit expansion. This will lead to rise in market rate of interest above the equilibrium rate of interest. Investment will fall; production declines leading to depression.

Hayek's theory has certain weaknesses:

1. It is not easy to transfer resources from capital goods industries to consumer goods industries and vice versa.
2. This theory does not explain all the phases of trade cycle.
3. It gives too much importance to rate of interest in determining investment. It has neglected other factors determining investment.
4. Hayek has suggested that the volume of money supply should be kept neutral to solve the problem of cyclical fluctuations. But this concept of neutrality of money is based on old quantity theory of money which has lost its validity.

2. Hawtrey's Monetary Theory:

Prof. Hawtrey considers trade cycle to be a purely monetary phenomenon. According to him non-monetary factors like wars, strike, floods, drought may cause only temporary depression. Hawtrey believes that expansion and contraction of money are the basic causes of trade cycle. Money supply changes due to changes in rates of interest.

When rate of interest is reduced by banks, entrepreneurs will borrow

more and invest. This causes an increase in money supply and rise in price leading to expansion. On the other hand, an increase in the rate of interest will lead to reduction in borrowing, investment, prices and business activity and hence depression.

Hawtrey believes that trade cycle is nothing but small scale replica of inflation and deflation. An increase in money supply will lead to boom and vice versa, a decrease in money supply will result in depression.

Banks will give more loans to traders and merchants by lowering the rate of interest. Merchants place more orders which induce the entrepreneurs to increase production by employing more labourers. This results in increase in employment and income leading to an increase in demand for goods. Thus the phase of expansion starts.

Business expands; factors of production are fully employed; price increases further, resulting in boom conditions. At this time, the banks call off loans from the borrowers. In order to repay the loans, the borrowers sell their stocks. This sudden disposal of goods leads to fall in prices and liquidation of marginal firms. Banks will further contract credit.

Thus the period of contraction starts making the producers reduce their output. The process of contraction becomes cumulative leading to depression. When the economy is at the level of depression, banks have excess reserves. Therefore, banks will lend at a low rate of interest which makes the entrepreneurs to borrow more. Thus revival starts, becomes cumulative and leads to boom.

Hawtrey's theory has been criticised on many grounds:

1. Hawtrey's theory is considered to be an incomplete theory as it does not take into account the non-monetary factors which cause trade cycles.
2. It is wrong to say that banks alone cause business cycle. Credit expansion and contraction do not lead to boom and depression. But they are accentuated by bank credit.

3. The theory exaggerates the importance of bank credit as a means of financing development. In recent years, all firms resort to plough back of profits for expansion.

4. Mere contraction of bank credit will not lead to depression if marginal efficiency of capital is high. Businessmen will undertake investment in spite of high rate of interest if they feel that the future prospects are bright.

5. Rate of interest does not determine the level of borrowing and investment. A high rate of interest will not prevent the people to borrow. Therefore, it may be stated that banking system cannot originate a trade cycle. Expansion and contraction of credit may be a supplementary cause but not the main and sole cause of trade cycle.

Unit-3

Fiscal Policy Types, Objectives, and Tools

Fiscal policy is how [Congress](#) and other elected officials influence the economy using spending and taxation. It is used in conjunction with the [monetary policy](#) implemented by [central banks](#), and it influences the economy using the [money supply](#) and [interest rates](#).¹

The objective of fiscal policy is to create [healthy economic growth](#). Ideally, the economy should grow between 2%–3% a year, unemployment will be at its [natural rate](#) of 3.5%–4.5%, and [inflation will be at its target rate](#) of 2%.² The [business cycle](#) will be in the expansion phase.³

Expansionary Fiscal Policy

There are two types of fiscal policy. The most widely-used is [expansionary](#), which stimulates economic growth. Congress uses it to end the [contraction phase](#) of the business cycle when voters are clamoring for relief from a [recession](#). The government either spends more, [cuts taxes](#), or both. The idea is to put more money into consumers' hands, so they spend more. The increased demand forces businesses to add jobs to increase supply.¹

Politicians debate about which works better. Advocates of [supply-side economics](#) prefer tax cuts because they say it frees up businesses to hire more workers to pursue business ventures. Advocates of demand-side economics say additional spending is more effective than tax cuts.⁴ Examples include public works projects, [unemployment benefits](#), and food stamps. The money goes into the pockets of consumers, who go right out and buy the things businesses produce.

An expansionary [fiscal policy](#) is impossible for state and local governments because they are mandated to keep a balanced budget. If they haven't created a surplus during the boom times, they must cut spending to match lower tax revenue during a recession.⁵ That makes the contraction worse. Fortunately, the federal government has no such constraints; it's free to use expansionary policy whenever it's needed. Unfortunately, it also means Congress created [budget deficits](#) even during [economic booms](#)—despite a national [debt ceiling](#).^{6,7} As a result, the critical [debt-to-gross domestic product ratio](#) has exceeded 100%.⁸

Contractionary Fiscal Policy

The second type of fiscal policy is [contractionary fiscal policy](#), which is rarely used. Its goal is to slow economic growth and stamp out [inflation](#). The long-term impact of inflation can damage the [standard of living](#) as much as a recession. The tools of contractionary fiscal policy are used in reverse. Taxes are increased, and spending is cut. You can imagine how wildly unpopular this is among voters.¹ Only [lame duck](#) politicians could afford to implement contractionary policy.

Tools

The first tool is taxation. That includes income, capital gains from investments, property, and sales. [Taxes provide the income](#) that funds the government. The downside of taxes is that whatever or whoever is taxed has less income to spend on themselves, which is why taxes are unpopular.

The second tool is government spending—which includes [subsidies](#), welfare programs, public works projects, and government salaries. Whoever receives the funds has more money to spend, which increases demand and economic growth.⁹

The federal government is losing its ability to use [discretionary fiscal policy](#) because each year more of the budget must go to mandated programs. As the population ages, the costs of Medicare, Medicaid, and Social Security are rising. Changing the [mandatory budget](#) requires an Act of Congress, and that takes a long time.^{10 11} One exception was the [American Recovery and Reinvestment Act](#). Congress passed it quickly to stop the [Great Recession](#).¹²

Fiscal Policy vs. Monetary Policy

Monetary policy is the process by which a nation changes the money supply. The country's monetary authority increases supply with [expansionary monetary policy](#) and decreases it with contractionary monetary policy. It has many [tools](#) it can use, but it primarily relies on raising or lowering the [fed funds rate](#).¹ This benchmark rates then guides all others.¹³

When interest rates are high, the money supply contracts, the economy cools down, and inflation is prevented. When interest rates are low, the money supply expands, the economy heats up, and a recession is usually avoided.

Monetary policy works faster than fiscal policy. The Fed votes to raise or [lower rates](#) at its regular [Federal Open Market Committee meeting](#) but may take about six months for the impact of the rate cut to percolate throughout the economy.¹⁴ Lawmakers should coordinate fiscal policy with monetary policy, but they usually don't because their fiscal policy reflects the priorities of individual lawmakers. They focus on the needs of their constituencies.

These local needs often overrule national economic priorities, and as a result, fiscal policy often runs counter to what the economy needs. Central banks are forced to use monetary policy to offset poorly planned fiscal policy.

Public Debt: Meaning, Objectives and Problems

Public Debt: Meaning, Objectives and Problems!

Meaning:

In India, public debt refers to a part of the total borrowings by the Union Government which includes such items as market loans, special bearer bonds, treasury bills and special loans and securities issued by the Reserve Bank. It also includes the outstanding external debt.

However, it does not include the following items of borrowings:

- (i) small savings,
- (ii) provident funds,
- (iii) other accounts, reserve funds and deposits.

The aggregate borrowings by the Union Government—comprising the public debt and these other borrowings — are generally known as ‘net liabilities of the Government’.

Objectives:

In India, most government debt is held in long-term interest bearing securities such as national savings certificates, rural development bonds, capital development bonds, etc. In industrially advanced countries like the U.S.A., the term government or public debt refers to the accumulated amount of what government has borrowed to finance past deficits.

In such countries the government debt has a very simple relationship to the government deficit the increase in debt over a period (say one year) is equal to its current budgetary deficit. But, in India, the term is used in a different sense.

The State generally borrows from the people to meet three kinds of expenditure:

(a) to meet budget deficit,

(b) to meet the expenses of war and other extraordinary situations and

(c) to finance development activity.

(a) Public Debt to Meet Budget Deficit:

It is not always proper to effect a change in the tax system whenever the public expenditure exceeds the public revenue. It is to be seen whether the transaction is casual or regular. If the budget deficit is casual, then it is proper to raise loans to meet the deficit. But if the deficit happens to be a regular feature every year, then the proper course for the State would be to raise further revenue by taxation or reduce its expenditure.

(b) Public Debt to Meet Emergencies like War:

In many countries, the existing public debt is, to a great extent, on account of war expenses. Especially after World War II, this type of public debt had considerably increased. A large portion of public debt in India has been incurred to defray the expenses of the last war.

(c) Public Debt for Development Purposes:

During British rule in India public debt had to be raised to construct railways, irrigation projects and other works. In the post-independence era, the government borrows from the public to meet the costs of development work under the Five Year Plans and other projects. As a result the volume of public debt is increasing day by day.

The Burden of Public Debt:

When a country borrows money from other countries (or foreigners) an external debt is created. It owes its all to others. When a country borrows money from others it has to pay interest on such debt along with the principal. This payment is to be made in foreign exchange (or in gold). If the debtor nation does not have sufficient stock of foreign exchange (accumulated in the past) it will be forced to export its goods to the creditor nation. To be able to export goods a debtor nation has to

generate sufficient exportable surplus by curtailing its domestic consumption.

Thus an external debt reduces society's consumption possibilities since it involves a net subtraction from the resources available to people in the debtor nation to meet their current consumption needs. In the 1990s, many developing countries such as Poland, Brazil, and Mexico faced severe economic hardships after incurring large external debt. They were forced to curtail domestic consumption to be able to generate export surplus (i.e., export more than they imported) in order to service their external debts, i.e., to pay the interest and principal on their past borrowings.

The burden of external debt is measured by the debt-service ratio which returns to a country's repayment obligations of principal and interest for a particular year on its external debt as a percentage of its exports of goods and services (i.e., its current receipt) in that year. In India it was 24% in 1999. An external debt imposes a burden on society because it represents a reduction in the consumption possibilities of a nation. It causes an inward shift of the society's production possibilities curve.

Three Problems:

When we shift attention from external to internal debt we observe that the story is different.

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It creates three problems:

- (1) Distorting effects on incentives due to extra tax burden,
- (2) Diversion of society's limited capital from the productive private sector to unproductive capital sector, and
- (3) Showing the rate of growth of the economy.

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These three problems may now be briefly discussed:

1. Efficiency and Welfare Losses from Taxation:

When the government borrows money from its own citizens, it has to pay interest on such debt. Interest is paid by imposing tax on people. If people are required to pay more taxes simply because the government has to pay interest on debt, there is likely to be adverse effects on incentives to work and to save. It may be a happy coincidence if the same individual were tax-payer and a bond-holder at the same time.

But even in this case one cannot avoid the distorting effects on incentives that are inescapably present in the case of any taxes. If the government imposes additional tax on Mr. X to pay him interest, he might work less and save less. Either of the outcome — or both — must be reckoned a distortion from efficiency and well-being. Moreover, if most bondholders are rich people and most tax-payers are people of modest means repaying the debt money redistributes income (welfare) from the poor to the rich.

2. Capital Displacement (Crowding-Out) Effect:

Secondly, if the government borrows money from the people by selling bonds, there is diversion of society's limited capital from the productive private to unproductive public sector. The shortage of capital in the private sector will push up the rate of interest.

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In fact, while selling bonds, the government competes for borrowed funds in financial markets, driving up interest rates for all borrowers. With the large deficits of recent years, many economists have been concerned in the competition for funds; also higher interest rates have discouraged borrowing for private investment, an effect known as crowding out.

This, in its turn, will lead to fall in the rate of growth of the economy. So, decline in living standards is inevitable. This seems to be the most serious consequence of a large public debt. As Paul Samuelson has put it: "Perhaps the most serious consequence of a large public debt is that it

displaces capital from the nation's Stock of wealth. As a result, the pace of economic growth slows and future living standards will decline.”

3. Public Debt and Growth:

By diverting society's limited capital from productive private to unproductive public sector public debt acts as a growth-retarding factor. Thus an economy grows much faster without public debt than with debt.

When we consider all the effects of government debt on the economy, we observe that a large public debt can be detrimental to long-run economic growth. Fig. 22.3 shows the relation between growth and debt. Let us suppose an economy were to operate over time with no debt, in which case the capital stock and potential output would follow the hypothetical path indicated by the solid lines in the diagram.

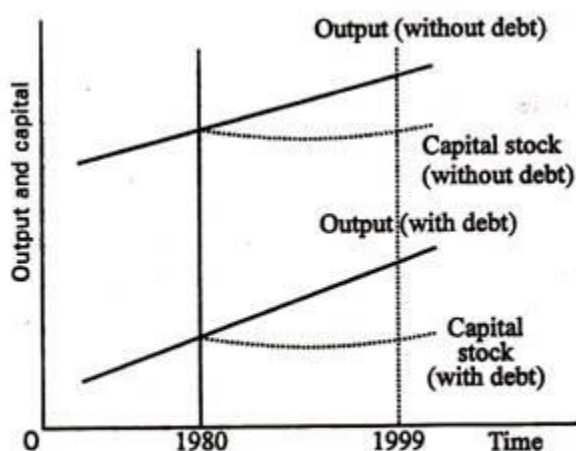


Fig. 22.3. Public Debt, Capital Formation and Growth

Now suppose the government increase a huge deficit and debt; with the accumulation of debt over time, more and more capital is displaced, as shown by the dashed capital line in the bottom of Fig. 22.3. As the government imposes additional taxes on people to pay interest on debt, there are greater inefficiencies and distortions — which reduce output further.

What is more serious is that an increase in external debt lowers national income and raises the proportion of GNP that has to be set aside every year for servicing the external debt. If we now consider all the effects of public debt together, we see that output and consumption will grow more slowly than in the absence of large government debt and deficit as is shown by comparing the top lines in Fig. 22.3.

This seems to be the most important point about the long-run impact of huge amount of public debt on economic growth. To conclude with Paul Samuelson and W. D. Nordhaus: **“A large government debt tends to reduce a nation’s growth in potential output because it displaces private capital, increases the inefficiency from taxation, and forces a nation to service the external portion of the debt.”**

Conclusion:

There is no doubt a feeling among some people that interest payment on the national debt repayment is a drain on the nation’s limited economic resources. It is pure waste of our resources to use them to pay interest on the debt.

This argument is wrong because interest payment on the debt — if domestically held —do not prevent a use of economic resources at all. It is, of course, true that if our debt is held by foreigners, we will suffer a loss of resources.

In the case of domestically held (internal) debt, internal payment on the debt involves a transfer of income from Indian taxpayers to Indian bondholders of the same generation. Since, in most cases, taxpayers and bondholders are different entities, a large national debt inevitably involves income redistribution effects. But internal debt does not involve any using up of the nation’s real economic resources.

Limit to Public Debt:

Though there is no clear end limit to internal debt there should be a definite limit to external debt. Moreover the upper limit to internal debt should be set by the annual rate of growth of per capita GNP.

Points to remember	For quick revision
The costs of the public debt include :	
1. The private sector output given up at the time the debt was incurred.	
2. Lack of constraint on growth of the public sector.	
3. Higher interest rates, discouraging private investment.	
4. Externally held debt that must be repaid.	
5. Problems of income redistribution when the debt is repaid.	

UNIT-4

Money Supply – Meaning and Measures of Money Supply

Money Supply – Meaning and Measures of Money Supply!

(a) Meaning of Money Supply (D2010):

The supply of money means the total stock of money (paper notes, coins and demand deposits of bank) in circulation which is held by the public at any particular point of time.

Briefly money supply is the stock of money in circulation on a specific day. Thus two components of money supply are

(i) currency (Paper notes and coins)

(ii) Demand deposits of commercial banks.

Again it needs to be noted that (like difference between stock and supply of a commodity) total stock of money is different from total supply of money.

Supply of money is only that part of total stock of money which is held by the public at a particular point of time. In other words, money held by

its users (and not producers) in spendable form at a point of time is termed as money supply.

The stock of money held by government and the banking system are not included because they are suppliers or producers of money and cash balances held by them are not in actual circulation. In short, money supply includes currency held by public and net demand deposits in banks.

Sources of Money Supply:

(i) Government (which Issues one-rupee notes and all other coins)

(ii) RBI (which issues paper currency)

(iii) commercial banks (which create credit on the basis of demand deposits).

(b) Alternative measures of Money Supply (money stock):

In India Reserve Bank of India uses four alternative measures of money supply called M_1 , M_2 , M_3 and M_4 . Among these measures M_1 is the most commonly used measure of money supply because its components are regarded most liquid assets. Each measure is briefly explained below.

(i) $M_1 = C + DD + OD$. Here C denotes currency (paper notes and coins) held by public, DD stands for demand deposits in banks and OD stands for other deposits in RBI. Demand deposits are deposits which can be withdrawn at any time by the account holders. Current account deposits are included in demand deposits.

But savings account deposits are not included in DD because certain conditions are imposed on the amount of withdrawals and number of withdrawals. OD stands for other deposits with the RBI which includes demand deposits of public financial institutions, demand deposits of foreign central banks and international financial institutions like IMF, World Bank, etc.

(ii) $M_2 = M_1$ (detailed above) + saving deposits with Post Office Saving Banks

(ii) $M_3 = M_1 + \text{Net Time-deposits of Banks}$

(iii) $M_4 = M_3 + \text{Total deposits with Post Office Saving Organisation (excluding NSC)}$

In fact, a great deal of debate is still going on as to what constitutes money supply. Savings deposits of post offices are not a part of money supply because they do not serve as medium of exchange due to lack of cheque facility. Similarly, fixed deposits in commercial banks are not counted as money. Therefore, M_1 and M_2 may be treated as measures of narrow money whereas M_3 and M_4 as measures of broad money.

In practice, M_1 is widely used as measure of money supply which is also called aggregate monetary resources of the society. All the above four measures represent different degrees of liquidity, with M_4 being the most liquid and M_1 being the least liquid. It may be noted that liquidity means ability to convert an asset into money quickly and without loss of value.

Three Measures of Money Supply

Reviewed by [Raphael Zeder](#) | Last updated Dec 13, 2019 (Published Jun 15, 2017)

Money supply (i.e., money stock) is defined as the total quantity of money circulating in the economy at a particular time. Many countries commonly use it as an indicator of economic performance. However, in our financial system, money is not limited to cash anymore. There are several other [physical and intangible assets](#) that perform many or all of the [functions of money](#). Thus, depending on the scope we chose, the money supply can be larger or smaller. Therefore, most countries distinguish between at least three measures of money supply, M_1 , M_2 , and M_3 . We will look at each of them in more detail below.

M1 – Narrow Measure

M_1 includes all currency (i.e., cash) in circulation, traveler's checks, demand deposits at commercial banks (or other depository institutions) held by the public, and other checkable deposits. It is often referred to as the narrowest measure of money supply or *narrow money*. However, for the sake of completeness and to avoid confusion, please note that some countries also measure a similar, but even narrower money supply M_0 (e.g., UK).

In the United States, the [Federal Reserve reports \$M_1\$](#) on a weekly and monthly basis. The reports always include a *seasonally adjusted* and a *not seasonally adjusted* value. Seasonal adjustment is a statistical technique that is designed to even out periodically recurring patterns that are due to seasonal changes in supply and demand. The idea

behind this is to reveal non-seasonal changes that would otherwise be overshadowed by seasonal changes.

In May 2017, the Federal Reserve reported the US money stock M1 at USD 3,462.4 billion (not seasonally adjusted) and USD 3,428.7 billion (seasonally adjusted). Over the last few years, M1 has consistently increased. In fact, it has grown by 7.1 percent in just one year from April 2016 to April

M2 – Intermediate Measure

M2 includes everything in M1 as well as savings deposits, time deposits below USD 100,000, and balances in retail money market funds. It is often referred to as an intermediate measure because it is broader than M1 but not quite as broad as M3.

It is also [reported weekly and monthly](#) by the Federal Reserve. M2 plays an essential role in any discussion about money supply because it often provides more comprehensive insights than M1 alone. Many economic activities include transactions between different types of accounts, which is only partially included in M1.

In May 2017, the US not seasonally adjusted money supply M2 was reported at USD 13,520.9 billion, and seasonally adjusted at USD 13,431.3 billion. M2 has also experienced steady growth over the last years. According to the latest report, it has increased by 6.0 percent from April 2016 to April 2017.

M3 – Broad Measure

M3 includes everything in M2 as well as time deposits larger than USD 100,000, balances in institutional money market funds, and term repurchase agreements. It is considered the broadest measure of the money supply. Again, for clarification, it should be noted that some countries (e.g., UK) report M4, a similar, but not quite identical measure to M3.

The Federal Reserve stopped reporting M3 back in 2006, because, according to the board, M3 does not include any relevant information on economic activity that is not already embodied in M2. Therefore the costs of collecting and publishing the data outweighed the benefits.

Monetary Policy Explained Including Its Objectives, Types, and Tools

Monetary policy is a [central bank's](#) actions and communications that manage the [money supply](#). That includes credit, cash, checks, and money market [mutual funds](#). The most important of these forms of money is credit. It includes loans, bonds, and mortgages.

Monetary policy increases [liquidity](#) to create economic growth. It reduces liquidity to prevent inflation. Central banks use interest rates, bank reserve requirements, and the amount of government bonds that banks must hold. All these tools affect how much banks can lend. The volume of loans affects the money supply.

Key Takeaways

- The Federal Reserve uses monetary policy to manage economic growth, unemployment, and inflation.
- It does this to influence production, prices, demand, and employment.
- Expansionary monetary policy increases the growth of the economy, while contractionary policy slows economic growth.
- The three objectives of monetary policy are controlling inflation, managing employment levels, and maintaining long term interest rates.
- The Fed implements monetary policy through open market operations, reserve requirements, discount rates, the fed funds rate, and inflation targeting.

Three Objectives of Monetary Policy

Central banks have three monetary policy objectives.¹ The most important is to manage [inflation](#). The secondary objective is to reduce [unemployment](#), but only after [controlling inflation](#). The third objective is to promote moderate long-term [interest rates](#).

The U.S. [Federal Reserve](#), like many other central banks, has specific targets for these objectives. It wants the [core inflation rate](#) to be around 2%.² It seeks an [unemployment rate](#) below 6.5%.³ Beyond that, it prefers a [natural rate of unemployment](#) of between 3.5% and 4.5%.⁴

The Fed's overall goal is [healthy economic growth](#). That's a 2% to 3% annual increase in the nation's [gross domestic product](#).⁵

Types of Monetary Policy

Central banks use [contractionary monetary policy](#) to reduce inflation. They reduce the money supply by restricting the amount of money banks can lend. The banks charge a higher interest rate, making loans more expensive. Fewer businesses and individuals borrow, slowing growth.

Central banks use [expansionary monetary policy](#) to lower unemployment and avoid [recession](#). They increase liquidity by giving banks more money to lend. Banks lower interest rates, making loans cheaper. Businesses borrow more to buy equipment, hire employees, and expand their operations. Individuals borrow more to buy more homes, cars, and appliances. That increases [demand](#) and spurs economic growth.

Monetary Policy vs. Fiscal Policy

Ideally, monetary policy should work hand-in-glove with the national government's [fiscal policy](#). It rarely works this way. Government leaders get re-elected for reducing taxes or increasing spending. As a result, they adopt [expansionary fiscal policy](#). To avoid inflation in this situation, the Fed is forced to use [restrictive monetary policy](#).

For example, after the [Great Recession](#), Republicans in Congress became concerned about the [U.S. debt](#). It exceeded the [debt-to-GDP ratio](#) of 100%.⁶ As a result, fiscal policy became contractionary just when it needed to be expansionary. To compensate, the Fed injected massive amounts of money into the economy with [quantitative easing](#).

Monetary Policy Tools

All central banks have three [tools of monetary policy](#) in common. First, they all use [open market operations](#). They buy and sell government bonds and other [securities](#) from member banks. This changes the reserve amount the banks have on hand. A higher reserve means banks can lend less. That's contractionary policy. In the United States, the Fed sells [Treasuries](#) to member banks.

The second tool is the [reserve requirement](#). The central banks tell their members how much of their money they must have on reserve each night. If it weren't for the reserve requirement, banks would lend 100% of deposits. Not everyone needs all their money

each day, so it is safe for the banks to lend most of it out. That way, they have enough cash on hand to meet most demands for redemption.

When a central bank wants to restrict liquidity, it raises the reserve requirement. That gives banks less money to lend. When it wants to expand liquidity, it lowers the requirement. That gives members banks more money to lend. Central banks rarely change the reserve requirement because it requires a lot of paperwork for the members.

The Fed requires that banks keep 10% of deposits on reserve.⁷

The third tool is the [discount rate](#). That's how much a central bank charges members to borrow funds from its [discount window](#). It raises the discount rate to discourage banks from borrowing. That reduces liquidity and slows the economy. It lowers the discount rate to encourage borrowing. That increases liquidity and boosts growth.

In the United States, the [Federal Open Market Committee](#) sets the discount rate a half-point higher than the fed funds rate. The Fed prefers banks to borrow from each other.

Most central banks have many more tools. They work together to manage bank reserves.

The Fed has two other major tools it can use. Its most well-known is the [fed funds rate](#). This is the interest rate that [banks](#) charge each other to store their excess cash overnight. The target for this rate is set at the [FOMC meetings](#). The fed funds rate impacts all other interest rates, including bank loan rates and mortgage rates.

The Fed, as well as many other central banks, also uses [inflation targeting](#). It clearly sets expectations that the banks want some inflation. The Fed's inflation goal is 2% for the [core inflation rate](#).⁸ That encourages people to stock up now since they know prices are rising later. It stimulates demand and economic growth.

When inflation is lower than the core, the Fed is likely to lower the fed funds rate. When inflation is at the target or above, the Fed will raise its rate.

The [Federal Reserve created many new tools](#) to deal with the [2008 financial crisis](#). These included the Commercial Paper Funding Facility and the [Term Auction Lending Facility](#).⁹ It stopped using most of them once the crisis ended.
