



Methodologi
cal
Underpinnin
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Unit highlights:

⇒ Defination of
macroeconomics

⇒ Key concernts of
macroeconomics

Lesson-1: The Subject Matter of Macroeconomics and Its Methodological Underpinnings.

Lesson Objectives:

After studying this lesson, you will be able to

- w see what types of questions are raised in macroeconomics and how they do differ from those of microeconomics;
- w appreciate why macro- and microeconomic approaches are both useful and, in fact, complementary to each other;
- w see what the major macroeconomic policy objectives are;
- w understand why these objectives often conflict, posing difficult choice problem for the policy makers.

What macroeconomics is about

Modern economics is usually divided into two broad domains- microeconomics and macroeconomics. The questions to which answers are sought in each domain are important. They are important because finding reasonably satisfactory answer to these questions is intimately linked to a country's economic welfare. What types of questions are asked in macroeconomics? How and why do they differ from questions asked in microeconomics?

Two broad domains of economics.

At a very general level, one can say that the job of macroeconomics is to analyze the behavior of the economy as a whole. It is concerned with the overall levels of a country's output, employment and prices. By contrast, microeconomics studies the behaviors of individual decision making units such as individual households, firms or landlords. In microeconomics, the unit of study is the part, not the whole (as in macroeconomics).

Macroeconomics deals with economy wide variables.

For instance, in microeconomics we try to explain how much a single firm will produce, what input combination it will use to minimize the cost of producing a given level of output and what price it will charge in order to maximize profits. In doing so, microeconomics essentially assumes that total output, total employment of factors and total spending for all goods and services are given. Then it tries to explain how the composition of total output and total employment is determined in terms of output and employment of individual firms and industries.

Microeconomics is concerned with decision problems of individual decision making units, such as households and firms.

Resource are reallocated in response to changes in relative prices of products and factors. A study of this process is the concern of microeconomics.

Demand for particular products and services can change as a result of changes in relative prices. Microeconomics, in this case, will try to answer how the relative price changes are likely to trigger reallocation of a country's resources in the production of various goods and services. In other words, it will try to predict the altered composition of goods and services following the changes in relative prices. Individual decision making units (e.g. households and firms) in making their decisions try to pursue their best interests (e.g. maximization of satisfaction or profits). Millions of such isolated decisions are coordinated by market mechanism through price signals. For example, if the price of product A rises relative to the price of product B, it will be a market signal for the producer of A to increase the production of A, while for the producer of B it is a signal to reduce the production of product B. Resources are, as a result, diverted from the production of B to the production of A. Moreover, in the interest of cost minimization (a necessary condition for profit maximization) a firm will be induced to employ factors of production in those activities where they are relatively more productive.

The "given's" of microeconomics are variables in macroeconomics and vice versa.

In short, optimal allocation of given resources is the principal concern of microeconomics, ignoring the question of whether the economy's resources are fully employed or not. Macroeconomics, on the other hand, ignores the question of whether the resources actually employed are efficiently allocated or not, and concentrates on the question of whether and why some of the economy's resources remain unutilized. Macroeconomics takes as given the composition of demand and supply in various markets so as to concentrate on economy wide issues such as unemployment and inflation. In contrast, microeconomics, by ignoring the issues of inflation and unemployment, focuses on how individual markets allocate resources and distribute incomes. Another way of making the above point is to say that macroeconomics takes as given (composition of output and employment) what are variables to be analyzed and understood in microeconomics, and that what microeconomics takes as given (total output and employment) are variables in macroeconomic analysis.

Microeconomic approaches are both useful and indeed, complementary to each other.

The distinction between the two domains (micro- and macroeconomics) may seem to have been pushed too far. Isn't the distinction too artificial? It must be remembered that the basic purpose of economics is to analyze the economic processes that determine a society's material well-being. If this is so, then it must be admitted that the distinction (and the methodological difference it implies) has proved to be immensely useful. A nation's material well-being depends on both how fully the given resources are utilized by market forces or similar institutions

(a question addressed by macroeconomics) and how efficiently the resources (fully employed or not) are allocated (which is an important concern of microeconomics). When vast amounts of resources are idle, the question of optimal allocation may not be as urgent as when resources are fully or near fully employed. In the latter case, the question of optimal allocation looms large because of the scarcity of unutilized resources. Therefore, both microeconomic and macroeconomic analyses are important, in their own unique ways, to the economic well-being of a country. The two approaches are indeed complementary to each other, and the dichotomy is in fact a matter of analytical convenience in respect of the type of issues addressed.

Three Key Concerns of Macroeconomics

All market economies tend to experience fluctuations in output and employment. Sometimes output and employment expand, while at other times they contract. This pattern of contraction following expansion is known as business cycles. During the cyclical downturn (contraction) millions of people lose jobs and thrown into untold suffering. In other cases, even rapidly growing economies have been found to suffer from sustained high unemployment. Thus an important question that a macroeconomist has to answer is: What determines the levels of aggregate output and why do they fluctuate? On the ability to find correct answer to these questions depends the formulation of appropriate policy response to keep unemployment at a low level.

*Keeping output
fluctuations and
unemployment at
low level.*

The general price level may be too high and may go on increasing for a long period. When this happens the economy is said to be experiencing inflation. A high inflation like high unemployment is socially undesirable. Prices measure economic values. Prices cannot play this role adequately during inflation. Rapidly rising prices may cause arbitrary redistribution of purchasing power between social groups. For example, the fixed income earners and debtors lose (for no fault of their own), while flexible earners and debtors gain (for no demonstrable virtues). Real rates of interest change rapidly during inflation. Long-term economic contracts become difficult by undermining rational economic calculations. Therefore, another important macroeconomic question is: How is the general price level determined and why does it change? An

accurate answer to this question depends on the attainment of much desired price stability.

Achieving long-term growth

3. Finally, a country may like to increase its rate of economic growth on which depends its long-term prosperity. Without long-term income growth it cannot hope to enjoy increasing real wages and living standards. Thus, to understand the factors that determine the long-term growth potential of a country is a major goal of macroeconomics analysis.

Keeping unemployment at a low level and attaining price stability are known as stabilization of the macroeconomy. Stabilization is the concern of shortrun macroeconomic analysis and policy. While long-term growth of the economy is quite important, much of macroeconomics is concerned with shortrun stabilization problems.

The problem of conflicting Objectives

Optimal trade off among macroeconomic goals have to be struck.

Each of the three goals- low unemployment, price stability and long-term growth- is important in itself; and ideally each should be pursued as earnestly as possible. Unfortunately, often conflicts may arise in the pursuance of all three goals simultaneously; there are undesirable trade-offs among the goals which policy-makers have to contend with. For example, if the budget deficit is lowered, output and employment may fall in the shortrun. To stimulate long-term growth, investment is required in physical and human capital; but doing this requires the sacrifice of present consumption for the benefit of increased consumption by future generations. Besides, stimulating high levels of output and employment may cause price inflation. In fact, the choice between low inflation and low unemployment is a matter of agonizing policy decisions in the context of short run stabilization.

These conflicts give rise to differences of opinion and approach among professional economists, politicians and policymakers. What can the government do about each of the macroeconomic ills? What should it do? What is the best way of tackling each problem? These questions have been at the centre of macroeconomics policy making for a long time, and, not surprisingly, they have divided the profession as it tries to develop alternative models and interprets experiences in various parts of the world.

Questions for Review

MCQ's (Tick the correct, or the most nearly correct, answer)

1. Which of the following problems is likely to be studied by a macro economist:
 - A. the allocation of the open University's limited budget;
 - B. why the Great Depression led to huge job losses in the early 1930's
 - C. why the price of butter has gone up relatively to that of ice-cream.
 - D. how wages are determined in a particular industry.

2. Macroeconomics is concerned with
 - A. how the total output is determined
 - B. what determines the extent of unemployment
 - C. what determines a country's rate of growth
 - D. what causes fluctuations in the general price level
 - E. all of the above.

3. The reason why the relative price changes is the concern of
 - A. macroeconomics alone
 - B. microeconomics alone
 - C. both micro- and macroeconomics
 - D. none of the above

4. The general price level goes on increasing during
 - A. deflation
 - B. inflation
 - C. both deflation and inflation
 - D. neither deflation, nor inflation

5. When the total output of the economy falls, it is plausible to assume that unemployment will
 - A. fall
 - B. rise
 - C. remain unchanged
 - D. go away automatically

6. During a period of inflation,

- A. debtors gain at the expense of creditors
- B. creditors gain at the expense of debtors
- C. both groups gain
- D. both groups lose

Short Questions

1. "Macroeconomic variables are based on abstraction from reality". Is the statement true? If so, explain why abstractions are necessary.
2. "The variables of microeconomics are 'givens' in macroeconomics". What does this statement mean? Is this methodological stance meaningful?
3. What is meant by stabilization of the macroeconomy? When is it necessary?
4. "The micro vs. macro distinction in economics is not based *solely* on size." Do you agree? Give examples.

Broad Questions

1. Briefly explain the subject matter of macroeconomics. How does it differ from that of microeconomics?
2. Do you think that the distinction between micro- and macroeconomics is unreal and unnecessary? Give reasons.
3. What are the key concerns of macroeconomic policy? Explain briefly.

Answers (MCQ's)

1. B 2. E 3. B 4. B 5.B 6. A

Lesson 2: Macroeconomic Thought: Contending Schools and a Unifying Framework

Lesson Objectives:

After studying this lesson, you will be able to

- w gain historical insight into how a disastrous experience forced economists to take a fresh look at the analysis of major macroeconomic problems;
- w understand why the same macroeconomic issues have led economist to take different policy positions;
- w appreciate why differences of opinion do not necessarily imply a weakness of the discipline of macroeconomics;
- w how a unifying framework of aggregate demand and aggregate supply can accommodate the differing viewpoints.

Evolution of Macroeconomic Thinking

The year 1936 is a watershed in the evolution of thinking about macroeconomics problems. This is the year in which appeared J. M. Keynes' revolutionary book: *The General Theory of Employment, Interest and Money*. The publication of this book marks the beginning of modern macroeconomics. What prompted the writing of this revolutionary book? It was the Great Depression of the 1930s. The Depression was so severe that, in many western market economies including that of the United States, production of goods and services declined by about one-third between 1929 and 1933. About a quarter of the resources became idle. Business investments came to a standstill and stock market values slumped. In fact, the Great Depression was a worldwide event with few market economies escaping its ravages.

The economists of the time had no good explanation of what had been happening and no workable remedies. Not that the economists of this period (whom Keynes dubbed classical economists) were unaware of the periodic departures of output from its full employment level. But they thought that such departures were temporary and that forces inherent in the market economy (flexible wages and prices) could quickly lead the economy back to full employment. Before the Great Depression, there were few severe and long-lasting depressions, particularly in the first half of the 19th century. Some economists of this period, notably Robert

The Great Depression and the birth of modern

Classical economists had no convincing explanation of the Depression.

Malthus, raised dissenting voices against the possibility of the claimed automaticity. They pointed out that aggregate demand may not always be high enough to absorb full employment output, forcing the economy towards depression. But they failed to provide any convincing theoretical explanation of why any such deficiency of aggregate demand might arise.

It was Keynes and his revolutionary work referred to earlier provided this explanation. He demonstrated that departures from full employment could be large and persistent. He used convincing theoretical arguments in support of his contention. He argued that market forces cannot be relied upon for the quick restoration of full employment, making public action necessary. Keynes theory and his policy prescriptions were successfully applied in the western market economies in the post-depression period. Roughly speaking, up to the early 1970's Keynesian remedies of demand management through discretionary fiscal policy had enabled policymakers to keep depressions within tolerable limits.

Macroeconomic thinking has evolved in diverse ways since the days of J. M. Keynes. Partly this has been due to new approaches to old problems and partly to new challenges faced in the form of previously unknown problems afflicting the macroeconomy. Keynes' emphasis was on fiscal policy through which any deficiency in aggregate demand could be met by appropriate government spending. Soon the primacy of fiscal policy as a tool of demand management came to be challenged. Milton Friedman of the University of Chicago (later a Nobel Laureate) claimed that the pride of place should be given to monetary (rather than fiscal) policy. In fact, he provided an impressive explanation of the Great Depression in terms of gross failures in monetary management. Friedman and his followers came to be known as monetarists. Over the decades the differences between the monetarists and the fiscalists (Keynesians) have narrowed down considerably. At present the dispute is more about emphasis rather than about fundamentals.

But the influence of the monetarists has gradually declined with the rise of what has come to be known as new classical macroeconomics led by Robert Lucas, Thomas Sergent, and Robert Barro. In this approach, the emphasis is (as in pre-Keynesian economics) on flexible wages and prices in the context of a new feature called the rational expectation hypothesis. Emphasizing this new approach to expectation formation, the votaries of this school have argued that when wages and prices are flexible any government policy designed to influence real output and

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employment is foredoomed to failure. Not all have agreed. For the drastic conclusions of the New Classical School to hold, it has been pointed by its critics, one has to assume that people can and do behave like super computers in processing all available information to alter their behaviour in such way as to make any anticipated government policy totally ineffective. Yet the critics have been forced to take serious note of the rational expectations based forward-looking behaviour by economic agents especially in the financial sector. Another group known as the Supply-Sides became famous in the U.S during the presidency of Ronald Reagan. This group likes to put emphasis on policies that influence the supply side of the market, particularly in the fight against stagflation (rising inflation as well as unemployment).

Where does it all leave us? Are we to conclude that macroeconomics is an ill-assorted body of thoughts with contending schools offering contradictory policy advice? Nothing is further from truth. Despite the controversies and cross-currents, macroeconomics has been successful in developing general analytical models in which different approaches and emphases can be accommodated and their implications examined, as we shall soon see. But, being first and foremost a policy science, controversies will rise, melt away and newer ones will crop up; this is a sign of vigour rather than of weakness.

Aggregate Demand & Aggregate Supply Framework:

A Highly General Model of Macroeconomics

In the previous section, we have seen how different groups of economists have developed different responses to macroeconomic ills of a country. We have also emphasized that all these views can be accommodated within a very general model. Such a model is capable of handling the different approaches to analysis of how macroeconomic problems arise and how they should be remedied. Such a general model is provided by the Aggregate Demand and Aggregate Supply model of the macroeconomy. Let us examine the basis for this claim.

The demand-supply model of particular goods and services must be familiar to students who have taken a basic course in microeconomics. In such a model, we want to explain how the price of a commodity or service is determined and why it changes. Here both the demand and the supply side factors play their role in equilibrium price formation. The equilibrium price changes when the demand or

the supply curve shifts as a result of changes in factors (other than own price) which affect demand (such as income) and supply (such as the input prices). A very similar apparatus is useful in analyzing the basic questions asked in macroeconomics. They relate to the determination of aggregate output, the general price level and the long term growth of the economy.

In Fig 1-1 each of the aggregate demand curves (AD) has been drawn as a negatively sloped function of the general price level (P), while the aggregate supply function (AS) has a positive slope only for a given price range for reasons to be explained soon. At this stage, let us not be too fussy about why these curves have the shapes they have. (In fact, much of macroeconomics is about understanding this very thing). A heuristic explanation will, however, be offered.

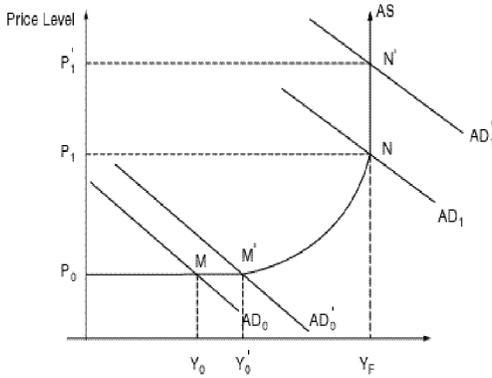
The aggregate demand is the total demand for goods and services. Or better still, we call it the total demand for "output" of the economy by consumers, firms, government and the foreigners. As you might have suspected, the term output, represents a wide variety of goods and services produced and hence it must be an abstraction (After all, no one has seen or consumed a unit of output, though you must have seen or consumed a loaf of bread, which is a special case of output!) Unreal though it may sound, the entire edifice of macroeconomic theory is built upon such abstractions (You can assure yourself that these abstractions are quite useful not just theoretically but empirically also because their operational counterparts have been devised to make their measurements possible). It has been assumed that at higher prices less of output will be demanded by consumers, firms, government and the foreign buyers. The aggregate demand curve can be shifted upward or downward by monetary and fiscal policy.

The aggregate supply curve (AS) shows the total quantity of goods and services (output) that producers will be willing to supply at various price levels in a given period. How much will be supplied at a given price level depends on the productive capacity of the economy and business decisions with respect to profitability. The productive capacity itself is determined by such factors as the stocks of factors of production, their prices and the state of technology. How much price increase (if at all) the producers will demand to supply more output depends crucially on how far the actual output is below the potential output (which is the maximum output that could be produced by full utilization of the economy's

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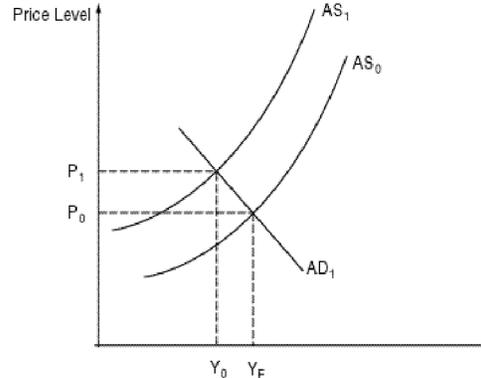
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Aggregate output

Figure 1.1



Aggregate output

Figure 1.2

resources). When a vast amount of resources is unutilized, output could probably be expanded without price increases (because input price increases are unlikely). On the other hand, if the economy is already producing at the potential level, any attempt to increase output by increasing demand will only lead to price increases (inflation). In between these two extremes, stimulation of aggregate demand will lead to some mixture of output increase and price rise; output will rise less, and price more as the output approaches the potential capacity. It is to incorporate these possibilities that the AS curve in Fig 1-1 has been drawn with three distinct segments - a horizontal segment (P_0M'), a vertical segment (NN'), and a positively sloped intermediate segment ($M'N$).

We are now in a position to find the equilibrium level of output and the price level (A warning: the demand supply framework of microeconomics has a superficial visual resemblance with the aggregate demand and aggregate supply framework of macroeconomics, despite the fact that some of the mechanism of price formation apply to both frameworks. It must be noted that the AD and AS schedules of macroeconomics are determined by vastly different forces from those of their microeconomic counterparts. For instance, the demand curve of the micro theory shows how much more will be demanded of a commodity if its price falls, assuming that all other prices and income of the consumers are unchanged. In contrast, in the case of aggregate demand of macro theory, demand for output changes when the general price level changes (where all prices are in principle variable). To continue with the determination of price-output combination, let us suppose that initially the relevant aggregate demand curve is AD_0 (Fig. 1-1), which intersects the flat segment of the aggregate supply curve (AS). The equilibrium output is Y_0 and price level P_0 . Assume that Y_F is the potential output. This implies that the actual equilibrium output (Y_0) is far below the

Aggregate curve may differ price responsiveness at different price ranges

Similarity between demand and supply framework in micro and macro theory should not be pushed too far.

potential output, indicating a great deal of unemployment. A part of this unemployment can be reduced by stimulating aggregate demand, say, by shifting the AD_0 to AD_0' through fiscal or monetary policy. At this juncture, we can ask: Does the economy need a Keynesian (fiscal) or monetary remedy? In terms of the model presented here, the answer is that either will do; it cannot be one, but not the other. We see then that in this particular situation both the Keynesians and the monetarists will agree on the same general remedy - the expansion of aggregate demand.

As a different scenario, assume that the aggregate demand schedule is AD_1 , which intersects that the vertical segment of AS at N which corresponds to the potential output, Y_F . If for some reason (e.g. an increase in foreign demand) AD_1 , shifts to AD_1' , the extra demand will not bring forth any additional output; it will only raise the price level from P_1 to P_1' . In the intermediate range of AS (M'N), as can be seen by looking at Fig. 1-1, any stimulation of aggregate demand will cause *both* output and price level to rise. The steeper the AS, the larger will be the price rise and the lower the output expansion.

The AD-AS framework then shows, in very general terms, how the problem of stabilization of the macroeconomy can be approached. Given the AS curve, inflation can be cured by suppressing aggregate demand (expenditure cut) while to fight unemployment what is needed is demand stimulation (increased expenditure). This framework also shows why the agonizing trade-off between inflation and unemployment arises, at least in the short run. Consider what happens as AD moves back and forth along the intermediate range of the aggregate supply curve (AS). It is easy to see that lowering unemployment increases inflation, while lowering inflation raises unemployment. Not surprisingly, there is no such trade-off in the horizontal and vertical range of the aggregate supply curve. From this discussion, it should also be clear that the shape and position of the aggregate supply curve is crucial for the success or otherwise of the demand management policy.

The AD-AS model can also be used to explain why the supply side economists insist on policies which provide incentives to work (increased labour supply) and to invest (increased productive capacity), when the economy is facing stagflation (stagnation with inflation). To appreciate this point, let us turn our attention to Fig. 1-2. The economy is initially at full employment output, Y_F , which corresponds to the intersection of AD and AS_0 . Now suppose that because of an

For an economy operating at full capacity, demand stimulation will bring on inflation

For the steeply sloping part of the AS curve, the trade-off between unemployment and inflation is more pronounced

adverse supply shock (such as the oil price increase in 1973), the AS curve shifts to AS_1 , causing output to fall (from Y_F to Y_1), and the price level to rise (from P_0 to P_1). In this case of stagflation, the supply siders argue that demand management policy will be of little help. Raising aggregate demand will reduce unemployment, but will worsen inflation; reducing aggregate demand will cause inflation, but would worsen unemployment. Therefore, the appropriate policy, they argue, would be to shift AS_1 back to AS_0 by supply side measures. Finally, the ideas of the New Classical School can also be reflected in the AD-AS framework. The essential argument here is that the AS curve is vertical even in the short run, so that it is impossible to affect real output and employment through government policies. What about the long run growth? Can the AD-AS framework explain why a country's growth rate of output changes over a long period? Yes, it can. Over a very long period, the supply of labour, capital, and other inputs increase, and better technology is invented. As a result, the AS curve shifts continuously to the right, the speed of which determines how rapidly potential output will grow in the long run.

In short, the AD-AS model is a framework, which is versatile enough to enable us to analyze all the basic concerns of macroeconomic policy. It is also flexible enough to accommodate the ideas of different Schools of thought. It is true that the views of different Schools are much richer in detail than can be captured in the AD-AS model. Nevertheless, it remains true that their ideas impinge, in one way or the other, on the aggregate demand or the supply side of the model.

the AD-AS model can throw what the sides and classical school economists have to say.

the AD-AS model can address all major questions of macroeconomic policy.

Questions for Review

MCQ's (Tick the correct/nearly correct answers)

1. Keynes' *General Theory of Employment, Interest and Money* was published
 - A. before the Great Depression
 - B. after the Great Depression
 - C. during the Great Depression
 - D. in order to predict election results in U.K.
2. Keynes' *General Theory* is regarded as a revolutionary work because it
 - A. offered a completely different and convincing explanation of long and persistent unemployment such as in Great Depression
 - B. offered a slightly modified version of the earlier explanation
 - C. appeared in a period of great despair and despondency about economic fate of nations
 - D. was written by a brilliant university professor
3. The notion that market forces can quickly and automatically restore full employment is associated with the name of
 - A. J. M. Keynes
 - B. all classical economists
 - C. most classical economists
 - D. none of the above.
4. Monetarism appeared under the leadership of
 - A. Milton Friedman
 - B. J. M. Keynes
 - C. Karl Marx
 - D. Paul Samuelson
5. To fight supply-shock induced stagflation, the supply-side economists emphasize work incentives and supply side tax cuts because they believe that
 - A. demand side measures are totally useless
 - B. demand-side measures can attain one goal at the cost of the other
 - C. these measures keep the government budget large
 - D. these measures can reduce both inflation and unemployment simultaneously.
6. When there is a lot of unemployment and excess capacity, stimulation of aggregate demand can be expected to
 - A. raise output more than prices
 - B. raise prices more than output
 - C. lower prices and expand output
 - D. lower prices as well as output

7. Long-term economic growth takes place when potential output grows over time because of
 - A. factor accumulation
 - B. better knowledge of organization and management
 - C. better technology
 - D. all of the above

Short Questions

1. "A great economic disaster in the early 1930s brought about a fundamental change in the ways in which economist used to think about macroeconomic issues" Explain.
2. Aggregate demand can be stimulated both by monetary and fiscal policy. Do you agree? If so, try to guess why the fiscalist and the monetarists should differ as to the instrument to be used.
3. What is the main conclusion of the New Classical School of macro economists? Why do they have to depend on the rational expectations hypothesis about expectation formation for the validity of their conclusion?
4. Briefly explain why the supply-side economists put a lot of emphasis on productivity increase and supply-side tax cuts to fight stagflation.
5. "The similarity between demand-supply framework of analysis in micro- and macroeconomics can be misleading beyond a certain point." Why?
6. Briefly explain the reasons why there are sometimes a trade-off between inflation and unemployment.

Questions

1. Give a brief account of how macroeconomic thinking has evolved over the years since the Keynesian revolution.
2. Explain why the AD-AS framework may be called a unifying framework for varying approaches to macroeconomic analysis and policy.
3. Briefly explain why the shape and position of the aggregate supply curve is crucial for fighting unemployment with demand management tools.

Answers (MCQ'S)

1. B 2. A 3. C 4. A 5. D 6. A 7. D