

History of Economic Thought II

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Chapter One

1 The Neoclassical School

Dear students! Hope you have grasped basic knowledge about the classical school in preceding chapter and their main contributions. In this chapter our focus will be on the neo-classical thought. We can say that the main difference between the two thoughts is the tools of analysis. In this chapter, we will learn the main points of the neoclassical school via the works of the greatest figure in the neoclassical school. Since Alfred Marshall was the father of this school more focus will be given to his contributions.

Chapter objective:

After completing this chapter you will be expected to:

Elaborate the Marshallian Economics.

Distinguish the main point of departure from the pure competition. Discuss on Wicksell on Product Exhaustion.

Discuss on Irving Fischer contribution to the Classical School.

Dear student! How do you think did Neoclassicism emerge? And who do you think is the founder? What are the point of departure from pure competition by others? Please try your answer.

1.1 The Neoclassical School- Pure competition

Alfred Marshall (1842-1924) was the descendant of a family of non-conformist businessmen, and his father had been Cashier at the Bank of England. Marshall's heritage was one of commitment to individualism: economic, religious and political. His belief in efficiency was closely linked to his moral belief in the value of discipline, loyalty and self-denial.

Marshall never shrank from massive moral judgments, but he combines them with a sophistication and delicacy in historical detail and mathematical theory. To these moral and theoretical insights he added a typically Victorian empiricism: his family background furnished him with knowledge

of the business and industrial life of his time. It is this empiricism which links Marshall to Adam Smith.

Although Marshall did so much to make marginal utility theory respectable in British academic life, his predominant respect and affection were probably for his earlier classical predecessors. In fact, there is not much acknowledgement of the work of Jevons and the Austrian school. It may be argued that the triumph of Marshall's economics lay precisely in this approach. He quietly took over and modified classical theory, and blended it with the ideas of the new utility school.

Marshall inherited the Benthamite view that institutions and social relationships should be judged by their utility, rather than by custom and tradition. Men should be free to determine the nature of the world in which they live: freedom involved choice and the need to choose placed an obligation on individuals to act rationally rather than blindly, whether it were choice in the market place or choice in the ballot box. 'Freedom' and 'choice' are words which beg many questions.

Marshall does not see freedom as anarchy: the freer mankind becomes, the more it will arrange its affairs in a rational and orderly manner, developing its institutions, its political system and its educational opportunities in a manner which cements the alliance of freedom and responsibility. He is not afraid of competition, provided it takes place within the context of stable government (which Marshall equates with British parliamentary democracy). He sees the dangers of ruthless competition, but he is enough the product of the age of Charles Darwin to see that life is something of a struggle, and if this struggle can be harnessed to social ends it can be productive of economic welfare. But competition, in Marshallian thought, does not merely maximize output: it is the arena in which the individual develops his moral, physical and intellectual qualities.

Marshall's preference for a world of small businesses competing with each other had some objective validity in the Britain of his time, although he perhaps underestimated the tendencies towards large-scale organizations which were occurring towards the end of his life. He did not, however, postulate the 'pure' competition of later theorists (i.e., a situation in which individual firms were assumed to be so numerous and small, that each one's decisions and actions would be strictly determined by external market conditions).

The 'pure' competition of later economists assumed away any elements of monopoly power or market power on the part of individual firms. Marshall anticipated these characteristics in his

'partial-equilibrium' analysis, but he never built them into his total system. He was prepared to start with highly simplified assumptions, but was always anxious to move as quickly as possible towards conditions of the real world. His method of 'partial analysis' (a situation in which he considered two variables, holding everything else under *ceteris paribus*) is a pedagogic starting point. He subsequently introduced into his analysis the difficulties, complexities and ambiguities of reality, and his aim throughout is progressive approximation towards the world in which we live.

Unlike his contemporary theorists, particularly in the sphere of utility doctrine, Marshall tried to avoid an extensive use of mathematics in his presentation. He himself was an accomplished mathematician and used mathematics in working towards his conclusions. In communicating his thoughts to the world, however, Marshall played down the mathematical inputs in his work. He once stated "I had a growing feeling in later years of my work at the subject that a good mathematical theorem dealing with economic hypotheses was very unlikely to be good economics." He once described his use of mathematical methods as following certain informal rules of his own. These were to use mathematics as a shorthand language rather than as an engine of inquiry, to translate into English, and to illustrate by examples that are important in real life.

Marshall's main work is his *Principles of Economics*, first published in 1890 and frequently re-issued. His work is divided into six sections or 'books'. The first two deal with the scope of economics; he gives a definition which is wider than his immediate predecessors of the utility school. To Marshall, economics is not merely the study of wealth, but of 'the study of mankind in the ordinary business of life.'

In chapter II, he expands his definition by stating that 'economics is a study of men as they live, and move and think in the ordinary business of life,' This definition sets the tone of Marshall's thought. He sees human life in general-and economic activities in particular-as providing evidence of man's continual progress. Further, he sees economic betterment leading to physical, social and moral development. As men are freed from the degradation of poverty, they become better people. They assume greater responsibilities for their own welfare and actions, and they become fitted for the energetic and responsible pursuit of success.

After the grand design outlined in the first two books, Book III gets down to a more theoretical exposition of wants, consumption, and demands. The utility school had believed that their switch of emphasis to consumption and demand was a great improvement on the doctrines of Adam Smith, and of Ricardo. Marshall shares their view of the need to bring consumption much more into the picture, and his own analysis is painstaking and mathematically neat. But, rather than claim that these new ideas have displaced, or at least over-shadowed, the pre-utility doctrines, Marshall tries to blend them into a larger pattern which takes account of Ricardian economic analysis. This analysis, he argues, must undergo some revision to the light of new ideas on consumption and demand, but it is by no means superseded.

Marshall achieves a high degree of logical order in his presentation. Book III deals with the starting point of our need for goods- i.e., utility and demand; Book IV deals with how these goods are produced; Book V deals with how goods are exchanged; and Book VI examine the distribution of national income. It is true that this sometimes involves an arbitrary separation of theories which are inter-connected, but as an orderly expository treatment it is difficult to fault.

Marshall gives a useful precision to the concept of 'demand' - a word which has been (and still is) frequently used loosely. To the layman 'demand' often means a vague need or want felt by individuals or by social groups. The classical school had seen demand as largely the demand for subsistence goods (which, in the light of their own time, was not an unreasonable assumption) and they had not ventured very far into psychological or motivational speculation about consumer tastes, or about the way in which consumer preferences affected prices in particular markets.

To Marshall 'demand' refers to the relationship between quantities demanded, and prices. Consumers are usually more willing to buy at lower prices than at higher, and for each commodity a range of price and quantity combinations can be formulated. Marshall's diagram - the curve which represents price on a vertical axis and quantity on a horizontal axis - has, of course, been one of the basic diagrams for economics students ever since. He shows clearly and elegantly how such a curve is derived. First consumers enter the market to secure satisfaction from their purchases. They are subject to the 'law of diminishing marginal utility' - i.e., after a certain point has been reached in the consumption of a good, the utility derived from successive increments continuously diminishes. The consumer, therefore, is prepared to pay less for the last unit than for the preceding ones, and price must fall if he is to be persuaded to go on buying. This is obviously

related to Marshall's general law of demand: 'the greater amount to sold, the smaller must be the price at which it is offered in order that it may find purchasers; or, in other words, the amount demanded increases with a fall in price and diminishes with a rise in price.'

The marginal utility basis for demand suggests a consumer buying successive amounts until marginal utility and price intersects (which is the basis for Marshall's concept of consumer surplus - the difference between what we do pay and what we would be prepared to pay). We must remember, however, that for some consumers the price would have to fall before they buy any units of a commodity, because price would be higher than the marginal utility of the first unit. (Consumer surplus is defined as the difference between the total amount that consumers are willing and able to pay for a good or service (indicated by the demand curve) and the total amount that they actually do pay (i.e. the market price))

The second step in Marshall's exposition is to consolidate the demand curves of individual consumers, and the price relationships which will probably obtain in the whole of the market can thus be set forth. For this to be possible, however, *ceteris paribus* must prevail. Money incomes, the tastes of consumers, and the prices of other goods must be demanded to be constant. If they do change, we have to construct a new demand curve. Marshall distinguishes between movement along the same demand curve (an extension or contraction of demand), and an entirely different curves (a rise or fall in demand).

Thirdly, Marshall demonstrates that in order to maximize utility from a given income, consumers adjust their expenditure until no gain in satisfaction can be achieved by any other allocation of expenditure (i.e., the last penny spent on any of the goods involved yields the same amount of satisfaction). It is difficult to over-emphasize the importance of this proposition, and it was to become crucial to the development of Neo-classical Economics (with its emphasis on 'economizing' as distinct from some of the older preoccupations of political economy). By setting out the functional relationship between the price of a good and the demand for it, Marshall removes ambiguities which sometimes exist over the difference between movements along the same demand curve and shifts in demand curve (e.g., changes in consumer preferences or changes in income).

Turning to supply, Marshall examines the terms on which sellers are willing to put goods and services into the market (i.e., the cost and sacrifices involved). These costs and sacrifices tend to rise as the quantity offered increases; here, the supply curve moves in the opposite direction from the demand curve, rising from left to right. Allied to this is the concept of 'opportunity costs'. These are costs in the form of income which the supplier is compelled to forgo when committing him to one activity (in this manner, precluding other options). We are now able to go on to construct a supply curve analogous to our demand curve. Firms normally operate under conditions in which marginal costs (the addition to total costs arising from the production of additional units of output) are rising. This is because increased output involves them in purchasing further inputs of the factors of production at increased cost. Hence higher prices are required to elicit increased supplies. Re-enforcing to the total output obtainable from adding a unit of one productive input, while the quantity of the other remained unchanged, is likely decline. This is, of course, the famous law of diminishing returns.

The shape of the supply curve thus depends on the behavior of marginal costs. If there is a change in conditions of supply, then we have a movement of the whole curve, instead of extension or construction along it.

Marshall then proceeds to aggregate the supply curves of individual firms to arrive at consolidated supply curves of firms (industry) producing identical outputs.

Having set forth his analysis of demand and supply, Marshall brings them together to show how the market (or equilibrium) price is determined. This is at the point of intersection of the two curves. A price above the equilibrium would mean that the seller would be prepared to offer more than buyers would be prepared to offer more than buyers would take, and competition among sellers would force the price down to the level at which the market would be a price below equilibrium, and would lead to competition among buyers which would push price upwards again. To Marshall, these two curves are like a pair of scissors. In a famous phrase, he states:

'We might as reasonably dispute whether it is the upper or the under blade of a pair of scissors that cuts a piece of paper, as whether value is governed by utility or cost of production.'

Briefly, Marshall believes that demand conditions and their changes play the dominant role in the short run in determining the relative prices of different products. But in the long run, the Ricardian emphasis on supply conditions comes into its own again. Having started by looking at the behaviour of consumers, we have to move on to consider what adjustments the suppliers are making to meet changing demand. We have to examine what sort of supply conditions are in operation of the physical variables (ratios of required inputs of labour, time and other resources to resulting outputs of products) involved in the cost or supply functions. In the long run, equilibrium will have taken account of both demand and supply conditions. We should pause here to examine more clearly what Marshall means by different time scales in economics.

Marshall's identified three time periods in relation to demand and supply.

Dear student! Here let us briefly discuss on the Marshallian time scales in economics. Before you proceed would please attempt to mention his time period in the lines below?

The first is a '*market period*', i.e., a period too short for the producer to make any adjustment in his output in response to changes in prices. The second is the '*short run*', in which output can be adjusted within the context of a given plant. The labour force may be induced to work longer hours, or more workers may be engaged, and additional raw material may be purchased by the measures described above. They would, however, probably involve a situation of rising marginal costs.

In Marshall's third time period, the '*long run*', there is an opportunity to expand the plant or for new firms to enter the industry. These various consequences, in face of increased demand, operate in the opposite direction if demand is falling.

The length of the adjustments will vary in the real world from industry to industry. It can be argued that Marshall pays too much attention to the concept of 'industry' (a collection of independent firms all contributing to the aggregate supply of one kind of product) and too little to the individual firm's behaviour. This bias has been corrected in the work of later writers (e.g., in the theory of monopolistic competition) who emphasize the role of the individual firm and its freedom to make, within certain limits, its own price and output decisions.

The pricing of productive services determines income shares, and the marginal productivities of the suppliers of the productive factors are important here. Marshall also brings in the idea (based on Ricardo) of long-run adjustments of aggregate supplies of productive factors. Unlike Marx, Marshall sees the three factors, labour, capital and land, as in some way entitled to their appropriate share. Wages are the reward for effort, and interest is the reward accruing to owners of capital for 'waiting' (i.e., the sacrifice involved in forgoing present consumption in favour of prospective future gains). Rent is the reward for the use of the factor land.

Not only is capital linked to the concept of 'waiting' but it makes possible the additional output that can be produced by a longer gestation period (the productivity of capital). Marshall's capitalist is far removed from the parasitic role assigned to him by Marx. Not only does the capitalist make a sacrifice by 'waiting' but the 'productivity' of capital (in which Marx in no way believed) gives the capitalist something on which to stake a legitimate claim.

Marshall's theory of wages is a combination of two themes: the marginal-productivity doctrine, and a modified Malthusian doctrine of the level of average aggregate wages. Wages tend to equal the net product of labour: its marginal productivity rules the demand price for its use; and, on the other side, wages tend to retain a close, though indirect, and intimate, relation with the cost of rearing, training, and sustaining the energy of efficient labour.

Another significant contributions of Marshall was in the sphere of monetary theory. The classical economists, dealing with the quantity theory of money, had thought of the velocity of circulation of money as constant. Marshall did not believe that this was true and switched the emphasis into studying the reasons for the variability of this velocity. He pointed out the importance of people's decisions about the amount of cash-balance they decided to hold. If all members of the community decide to increase their cash balances. By dealing with the velocity of circulations as very significant variable rather than as a constant.

Marshall's main conclusions tend to support the self-correcting and optimistic implication of Say's Law. He treats money largely in its uses for spending and its impact on the general price level. He sees the role of the rate of interest as determining the equilibrium between decisions to save and invest. He accepts the evidence of the world around him that there are booms and slumps in economic activity, but does not consider that these arise from any fundamental weaknesses (or, as

Marxists would call them, 'contradictions') in the Capitalist system. He finds that the cause of these upward and downward swings lies in the psychological attitudes of businessmen, who are liable to moods of pessimism and optimism. Nevertheless, over time (and left free from too much government intervention) the system would adjust itself to a high level of employment.

On the subject of state intervention in the economy and on nationalization, he is prepared to give cautious (but only very cautious!) examination as to the possibility.

Marshall recognized that supply conditions could affect the criteria for choosing between public and private enterprise. He considered that 'natural monopolies' were proper subject for public regulation, and he admitted the possibility of re-allocating resources (by the use of taxes and subsidies) from decreasing to increasing-return industries. Since the time of Marshall's cautious observations on the boundaries of public and private enterprise, economists have come to be supplied by governments rather than entrepreneurs. The case for government intervention as later developed came to depend (in the view of some economists) on one or another of three considerations: the public character of the good, the existence of major economies of scale, or the existence of significant external effects. But although Marshall laid the foundations for future analysis of public-sector economics, he himself remained highly cautious and especial.

His final verdict on the merits of State intervention is not very enthusiastic. He admits that government and local government carry out important tasks, but they are mainly concerned with activities that lend themselves to standard, repetitive and routine administration rather than entrepreneurial activity. They are concerned with such things as transport, water, light and power and the meeting of 'elementary needs... they make use of plant, the central ideas of which have been worked out by private enterprise and gradually become private property.'

Marshall's caution on State control, does not, however, in his own words 'imply acquiescence in the present inequalities of wealth'. Marshall sees these inequalities as a serious flaw in our economic organization. He would not, however, approve of redistribute measures which would 'sap the springs of free initiative and strength of character'. He favours attempts to raise the living stand of character'. He favours attempts to raise the living standard of the lowest paid worker, even at the expense of especially well-to-do families.

Marshall's emphasis on price theory was characteristic of his generation of economists. It was helpful, insofar as it provided signposts for later economists (and equally valuably, stimulated them into challenging some of his conclusions) by formulating a more refined theory of prices than the earlier Class School had devised.

After Marshall, however, there was a switch of emphasis, (particularly in more recent years) away from considering price-determination as the central economic problem. Keynes was to focus attention on the more visible human and social problems of unemployment and the need for practical policy solutions rather than the theoretical niceties of price analysis. The view that economic activity exists to serve human wants was the starting point of Marshall's 'principles' and although its implications must be studied afresh in every generation, economists should not shrink from continuing to assert its fundamental validity.

Marginal Utility

To an economist, "utility" refers to the benefit or satisfaction a consumer gets from using a good or service. Prices and utility are intertwined. If you sell hot dogs for, say, \$2, customers will buy one only if they think they'll get \$2 worth of utility from it. And that depends on how hungry they are at the moment, how much they like hot dogs, their alternatives and any number of other factors. "Marginal utility" is the additional benefit one gets from consuming one additional unit of that good or service. Whether customers will pay \$2 for a second hot dog depends on whether the additional benefit they'll realize is worth \$2 to them.

Diminishing Utility

The law of diminishing marginal utility says that as a consumer uses more and more of something, each additional unit provides less benefit. In other words, the marginal utility gets smaller. In some cases, it may be only a bit smaller: If someone's really hungry, he might gladly pay \$2 for a second hot dog. In others, the marginal utility might drop sharply: Think about how much use you'd have for a second or third vacuum cleaner. As consumers' marginal utility declines, the price they're willing to pay declines, too.

Marshall on Demand

Marshall's suggestion that the influence of demand on price determination is relatively easy to analyze may well be correct. He seemed to recognize these difficulties and avoided them by assumption. His most important contribution to demand theory was his clear formulation of the concept of price elasticity of demand. Price and quantity demanded are inversely related to each other; demand curves slope down and to the right. The degree of relationship between change in price and change in quantity demanded is disclosed by the coefficient of price elasticity. The coefficient of price elasticity is, because price and quantity demanded are inversely related; the computed price elasticity of demand coefficient would be negative. By convention, to express the coefficient as a positive number, a negative sign is added to the right side of the equation. The price of a product times the quantity demanded will equal the total expenditure of the buyers or, alternatively, the total revenues of the seller ($p \times q = TE = TR$).

According to Marshall, individuals desire commodities because of the utility received through their consumption. The form of the utility function used by Marshall was additive; that is, he derived total utility by adding the utilities received from consuming each good.

The utility received from consuming good A depends solely on the quantity of A consumed, not on the quantities of other goods consumed. Thus, substitution and complementary relationships are ignored. An additive utility function is given as,

$$U = f_1q_A + f_2q_B + f_3q_C + \dots + f_nq_N$$

In Marshall's framework, the most important task of the theory of demand is to explain the shape of the demand curve. If a commodity's marginal utility decrease as more of the commodity is consumed, does it follow that individuals will pay lower prices for larger quantities? Are demand curves, then, negatively sloped? Marshall accepted diminishing marginal utility (Gossen's First Law) and formulated the equilibrium condition that would give maximum utility for an individual consuming many commodities (Gossen's Second Law):

In equilibrium, the consumer will spend in such a way that the last dollar spent for any final good will have the same marginal utility as that spent for any other good. The ratios of these marginal utilities to prices will be equal to, and thus disclose, the marginal utility of money. The marginal

utility of money is the marginal utility received from the last dollar of expenditure. If saving is considered as a good, then the marginal utility of money is the utility received from the last dollar of income. The marginal utility of a single good is equal to its price times the marginal utility of

money: $MU_A = P_A \cdot MU_M$

Marshall on Supply

Marshall laid the foundation for the currently accepted analysis of cost and supply that is taught in undergraduate courses. His most important contribution to the theory of supply was his concept of the time period, particularly the short run and the long run. He correctly perceived the shapes of industry supply curves in the market period, the short run, and the long run, even though his explanation of the economic reasons for these shapes was often deficient and confused and sometimes incorrect.

The market period causes no difficulties; here supply is perfectly inelastic. In the short run, modern microeconomic theory explains the shape of supply curves for the firm and for the industry as depending upon the principle of diminishing returns. Marshall pointed out that for analytical purposes; it is useful to divide the firm's costs in the short run into fixed costs and variable costs.

Marshall did not, however, establish a precise relationship between his distinction between fixed costs and variable costs and the derivation of the short-run cost curves of the firm based on the principle of diminishing returns. His main application of the principle of diminishing returns was to land (one fixed input).

He did use his distinction between fixed and variable costs in the short run to show that a firm would continue to operate in the short run even if it was incurring a loss, as long as it was covering its total variable costs.

The supply curve of the firm in the short run in a perfectly competitive industry, therefore, is equivalent to that portion of its marginal cost curve that is above its average variable cost curve. With characteristic realism, Marshall went on to conclude that the real supply curve for the firm in the short run is not likely to be its marginal cost curve when prices have fallen below average costs and losses are incurred.

In his discussion, Marshall dropped the assumption of perfectly competitive markets, because under a strict definition of perfect competition, no firm would be concerned about glutting the market or about the consequences of its actions for other firms in the industry.

The inspiration for Joan Robinson's *Imperfect Competition* and E. H. Chamberlin's *Theory of Monopolistic Competition* can be found in part in Marshall's discussion of the operation of markets when the assumption of perfect competition is discarded.

Although Marshall's discussion of long-run firm cost curves and supply curves and industry supply curves is clearly deficient by modern standards, his early attempts in these areas provoked an interesting series of articles in the 1920s and 1930s, the most important being by Clapham, Knight, Sraffa, and Viner.

Marshall indicated the long-run forces that determine the shape and position of the firm's cost and supply curves.

First are the forces internal to the firm. As the size of the firm is increased, internal economy of scale lead to decreasing costs and internal diseconomies result in increasing costs. Marshall's discussion of the economic reasons for internal economies of scale is reasonably satisfactory, but his discussion of internal diseconomies is minimal, and he did not really confront the issue of the relationship between economies and diseconomies and its influence on the optimum size of the firm.

Marshall's examination of costs and supply raised a number of important theoretical issues that were examined between 1900 and 1940. What are the economic reasons for the shape of cost and supply curves? Why do supply curves rise in the short run while costs and prices fall in the long run for some industries? Are internal and external economies compatible with competitive markets?

To conclude, although over a century has passed since Marshall began his study of economics, his contributions to microeconomics still provide the basis of orthodox undergraduate theory. Like most writers of economics, he built upon the work of great theorists of the past; unlike many other great thinkers and innovators, however, Marshall did not stress his differences with past writers but acknowledged that he had borrowed from their ideas. He regarded his work as a continuation

of the work of Smith, Ricardo, and J. S. Mill and was always generous in his interpretation of theirs. His writing is characterized by modesty, a quality rare in the writings of seminal thinkers.

Cost

Turning to the supply side, Marshall begins by defining the *real cost* of a commodity; it is the exertions of the labour and the sacrifice in the abstinence (waiting) necessary for capital formation. Thus the real cost is a subjective psychological cost, a matter of disutility, either because labour is painful or because waiting involves a sacrifice of current consumption, and this disutility has to be paid for or else the supply of the factor of production is not forthcoming. These real costs are not of concern for the employing firm: it is interested in the money costs. Marshall warns that the correspondence between the two is not to be assumed lightly; the real costs, which are what counts when measuring the social costs of production, are not always accurately measured by money costs. In fact the firms are not only interested in money costs but also interested in the least money cost for a given output. It achieves this by following the principle of substitution, a principle whose applications extends over almost every field of economic inquiry. Marshall gave many illustrations of substitution at the margin, where the marginal cost of hiring a resource is equal to the value of its marginal product.

On the question of increasing and decreasing returns Marshall was not clear. One area of confusion being that diminishing returns sometimes was framed as diminishing marginal returns to successive doses of capital and/or labour applied to fixed land, and sometimes as a fall in the average product. It was Francis Y. Edgeworth who systematically and patiently sorted out the difference, pointing out that the average returns can be rising while marginal returns are falling.

Also, Marshall was not clear about the distinction between returns to scale, when all factors are increased and simultaneously, and the marginal returns to one factor when it alone is increased, holding others constant. Another important contribution of Marshall is his distinction between important economic terms such as prime costs (labour, power, raw materials etc.); *supplementary costs* (rent, depreciation, interest, etc.); fixed (land, machinery, building, etc.) and variable costs (fuel, raw materials, etc.).

Irving Fischer

Fisher was a man of diverse interests, and has been considered the greatest economist of America. His PhD dissertation was *Mathematical Investigations in the Theory of Value and Price*. It was a study of general equilibrium involving utility theory – independent cardinal utilities, and ordinal indifference curve analysis. This work, which Paul Samuelson described as the greatest PhD dissertation ever written, has some innovations, which stuck, such as indifference curves and the use of vectors, and one, which did not.

He used mathematics extensively in economics and independently he had presented a rudimentary exposition of general equilibrium. He has also contributed to the study of utility. It is to be remembered that Jevons had assumed that the utility derived by an individual from a good depended only upon that good, and that Edgeworth had extended it to include other goods also which were in possession of the consumer. Fisher extended it further by which utility of a good to an individual was also a function of the quantities of the goods consumed by all the other individuals in the market.

In his day he was better known for his work on money and index numbers. His 1911 book *The Purchasing Power of Money*, contains his version of the quantity theory of money: $MP=pQ$, where (M is money, V is velocity (the number of times money turns over in a year), p is the average price, and Q the total quantity of goods purchased. Much of the book is made up of a study of the short-run effects of changing the supply of money. The long run effect is simple: Double M and in the long-run p is doubled. But in Fisher's hands the quantity theory is not mechanical but involves an analysis of the whole macroeconomic process. In working on this theory, Fisher got deeply involved in index numbers, as the statistical verification of the quantity theory required both price and quantity indices. Fisher attempted to develop what he regarded as an ideal index number, but no index could meet all of his criteria.

Fisher's central contribution was his theory of interest. Originally published in 1930 as *The Theory of Interest*. This theory is a general equilibrium supply and demand model. By sacrificing some this year's income and investing it rather, than consuming it, some return will result. At point where a budget line [whose slope is $-(1+r)$, where r is the rate of interest] touches the curve

tangentially, the consumer will arrange his investments. This combination where this year's and next year's income meet is the highest budget line that the consumer can obtain.

The second factor in determining interest rates is the consumer's preference between incomes today and tomorrow. This preference is shown by a set of indifference curves. The one tangent to the budget line at point F shows that in equilibrium this consumer will lend some of his today's income to someone in return for a payment, which adds to next year's income. In the market this is a supply of loans. For equilibrium to exist in the market, another consumer would have to wish to borrow that much. Otherwise the rate of interest would change.

1.2 The Neoclassical School – Departure from pure Competition

1.2.1 Sraffa's criticism of the Marshallian theoretical system

The economics of Alfred Marshall had been profoundly shaken by the 1926 critique of Piero Sraffa. He, in 1926, wrote the article "The Laws of Returns under Competitive Conditions", considered the cornerstone of the post- Keynesian microeconomics.

Sraffa verified that firms operating under perfect competition must be subject to decreasing returns of scale and that increasing returns would only exist on the presence of monopoly.

With the partial-equilibrium method it has to be assumed that the market investigated has to be separate from all other markets so that what happens in it does not influence the prices of the other goods in any relevant way.

Now, in a sector characterized by increasing (decreasing) costs, an increase in production will cause the prices of the productive factors to increase (decrease).

Therefore, if one wishes to continue to reason in terms of partial equilibrium, it is necessary to postulate that the inputs, whose prices increase (or decrease) with production, are those that are utilized only by the industry in question. Otherwise, the variations in their prices would modify the prices of the goods produced in other sectors. But, obviously, this is a drastic hypothesis: 'It is only possible to use the impressive construction of decreasing productivity', writes Sraffa, 'for

studying a very small category of goods, those in whose production the totality of a productive factor is used up’.

But this is not all; in order to uphold the logical coherence of the Marshallian edifice, it is also necessary to postulate that the economies (or the diseconomies) of scale are external to the firms but internal to the industry.

In fact, if they were internal to the firm, the latter would be encouraged to expand (contract) its own level of activity, and would eventually become a monopolist in its industry (or pull out of the market). Both cases are incompatible with the hypothesis of competition.

If, on the other hand, the economies or diseconomies were external to the industry, a partial-equilibrium analysis would no longer make sense, and it would be necessary to move to a general-equilibrium approach.

Sraffa’s attack on the logical coherence of the Marshallian edifice was more devastating than criticism concerned with its scarce empirical relevance. The gist of Sraffa’s criticism is that the Marshallian theory of competitive equilibrium cannot escape from the following dilemma: either it is contradictory or it is irrelevant. The only case which is logically compatible with the partial-equilibrium analysis of a perfectly competitive sector is that of constant costs. But in this case the ‘classical and neoclassical synthesis’ of Marshall (and of Pantaleoni, whom Sraffa also had criticized) basically led to the same results as classical economics: prices are determined exclusively by the costs of production, while the conditions of demand only contribute to determine the quantities produced.

After a reformulation of his 1925 criticism, Sraffa noted that increasing returns are *de facto* important in industrial sectors, and consequently that the typical cost curve of these sectors is probably negatively sloped. Thus, rather than developing an analysis of competitive markets on the basis of the hypothesis of constant costs he started off along a completely different track: ‘to abandon the path of free competition and turn in the opposite direction, namely, towards monopoly’.

This is the origin of the line of research known as ‘the theory of market forms’ which was to surface, a few years later, in the work of Robinson and Chamberlin. Sraffa pointed out the

existence of market imperfections which are not simple frictions but are themselves active forces which produce permanent and even cumulative effects on prices and quantities; furthermore, he argued that these obstacles to competition are 'endowed with sufficient stability to enable them to be made the subject of analysis based on static assumptions'.

Among the obstacles to the regular operation of a perfectly competitive market, Sraffa indicated the possession of specific natural resources, legal privileges, and control of a given percentage of total production.

This state of affairs is reflected in Alfred Marshall's *Principles of Economics*, in which he presented the existence of a hybrid form in between perfect competition and monopoly. Marshall was not interested in imperfect market forms because he concluded that the large majority of cases that occurs in practice are nothing but mixtures and hybrids of these two. He advanced on the theory of perfect competition motivated Marshall was aware that other market forms were not basic mixtures of perfect competition and monopoly.

In the second half of the nineteenth century, the special nature of imperfect markets was available to him in the form of the duopoly models developed by Cournot, Bertrand and Edgeworth. The analysis of Cournot in 1838 was particularly vital for him, as it delivered him the tools to analyze market forms in the first place. The difficulty with these models was that outcomes relied heavily on special assumptions. Even though Marshall did not build up his own theory of imperfect competition, he was aware of the so-called 'special markets'.

Marshall tried to solve this by introducing diminishing returns for the individual firm and external economies for the whole industry. The introduction of external economies of scale at the industry level ensured that the competitive equilibrium could be rescued.

Sraffa concluded that if perfect competition exists then the commodity can be considered as a homogenous good and under that concept is possible to establish the role of diminishing returns. Here we have a cut-off point, mainstream economics assumes diminishing returns because they take for granted that the economy has uncountable small firms that face homogeneous products and without sufficient power over the industry supply. However, post-Keynesian economics considers commodities as containing properties much more complexes than just simple agricultural goods. They consider commodity as a collection of diverse articles, ranging from

foodstuff to ironware. Consequently, they developed the idea of product differentiation to understand the control of the industry supply by a single firm and there might be the case for increasing returns of scale and, as a result, imperfect competition.

According to Sraffa mainstream economics does not make clear the role of increasing returns as it does explain the role of diminishing returns. The framework relates increasing returns to the division of labor. It did not develop the role of increasing returns as being a mechanism that happens when the size of the firm rises. Differently, mainstream economics accepts as true that the modification is promoted by internal division of labor, so it occurs only in the local structure of the firms. The importance of external economies was increasingly emphasized as the advantage derived by individual producers from the growth, not of their own individual undertaking, but of the industry in its aggregate.

The time adjustment is not considered by mainstream economics as a mechanism to explain how diminishing returns operate. In opposition, post-Keynesian economics points out that in the short-run the constraint of the firm is the size of plant, so the capital is holding constant and the use of more factors of production tends to present diminishing returns.

However, in the long run the time adjustment is long enough to promote a reconfiguration of the size of the plant, so firms tend to have increasing returns of scale because of the reduction in the long-run average cost, envelope curve.

Reductions in cost connected with an increase in a firm's scale of production, arising from internal economies or from the possibility of disturbing the overhead charges over a larger number of product units, must be put aside as being incompatible with competitive conditions.

Post-Keynesian authors began deciphering the code of the mainstream microeconomics through a meticulous analysis of the theory of perfect competition because they were unsatisfied with Marshall's resistance to run off that theory. The first contribution was given by Sraffa (1926). He observed that perfect competition is characterized by organized exchange and homogeneity of the products. In addition, in perfect competition the demand is infinitely elastic because always the marginal cost of production is, in equilibrium, identical to the price.

1.2.2 Chamberlin's Theory of Monopolistic Competition-departure from Marshall

In 1933 Edward Chamberlin published *The Theory of Monopolistic Competition*. In this work he acknowledged that real-world markets do not operate in perfect competition, and rejected the idea of the firm as a passive price-taker.

On the contrary, he maintained that the firm is able to influence the demand decisions for its own products by means of product differentiation, promotional activity, and advertising. This was the origin of a new theory, a theory of markets which are neither in perfect competition nor under monopoly.

The theory of monopolistic competition rests on two basic assumptions:

1. The majority of firms set their sale prices; i.e. they are price-setters: this means that single firms retain some monopoly power and, if they increase prices, they do not lose all their customers, as happens in perfect competition.
2. There is no natural monopoly in the majority of the productive sectors; if extra profits are made in a given sector, this encourages new firms to enter; in other words, the firms operate within a context which is, to a certain degree, competitive.

There is agreement among the various authors on these points. The differences arise in regard to the conclusions that can be drawn. This is due to the fact that the entry of new firms on the market produces two different effects.

On the one hand, competition encourages the entry of new firms, which contribute to eliminate the extra profits. This process leads to the creation of 'too many' firms—too much respect to the number of consumers.

On the other hand, the entry of new firms increases the variety of products and thus raises the customers' welfare, at least to the extent to which the latter are able to choose from a wider range of products there are several difficulties with Chamberlin's model. First, the hypotheses of product differentiation and atomistic behaviour do not seem compatible, for the simple reason that firms are always aware of the actions and behaviour of competitors who offer close substitutes.

The second difficulty is that product differentiation, in that it leads to an entry barrier, is not compatible with the assumption of free entry into the sector. Finally, product differentiation tends to make the notion of an industrial sector meaningless.

The Theory of Monopolistic Competition aroused considerable interest in the 1940s. Among those who have attempted to deepen and extend Chamberlin's work we must recall Robert Triffin, who tried to introduce imperfect competition into the general-equilibrium model. However, he ran up against the problem of the determination of the number of firms operating in equilibrium.

1.2.3 Joan Robinson's theory of imperfect competition-departure from Marshall

The Economics of Imperfect Competition by Joan Robinson was also published in 1933.

The core of Pigou's social philosophy consisted of the idea that scientific research should aim at identifying those deficiencies of the economic system which could be remedied by government intervention.

Robinson's intellectual debt to Pigou is notable, both in general (e.g. on the subject of market failures) and at more specific levels (e.g. in the explanation of the equilibrium of the industrial sector by means of specifying the equilibrium conditions for single firms).

She also followed Pigou in regard to method. She herself presented her book as 'a box of tools [that] can make only an indirect contribution to our knowledge of the actual world'. The book was directed at the analytical economist; there was nothing in it for the businessman.

Robinson's austere view of economic theory may seem strange in the light of her declaration that the principal aim of economics is to contribute to the welfare of mankind. It is certain that her book gave a powerful thrust to the development of formalism in economics, a development that Robinson was to view with dismay after her 'conversion' to Keynesianism in the 1940s.

One achievement of Robinson was to rescue from oblivion Cournot's notion of marginal revenue. Marshall and his students, in the graphic exposition of the problem of profit maximization, had made use of the total cost and revenue curves, thus generating more than a few cases of ambiguity. The utilization of the apparatus of average and marginal curves is one of the results of Robinson's

work, in which is also to be found, for the first time, the general relationship between average and marginal curves.

Joan Robinson made decisive contributions in two directions in the hope of recasting and thereby "saving" Neoclassical economics: imperfect competition & general equilibrium.

Inspired by Piero Sraffa's "pregnant suggestion" that monopoly, rather than competition, was the "general" case; Joan Robinson's wrote her 1933 treatise introducing the theory of imperfect competition to economics.

Her 1934 follow-up articles emphasized the interrelationship between the "special case" of perfect competition and the marginal productivity theory of distribution.

Harvard's Edward Chamberlin independently discovered the similar theory of "monopolistic" competition, where the emphasis was on product differentiation.

In the period of the publication of *The Economics of Imperfect Competition*, most economists did not perceive the deliberate sense of irony in the use of the adjective 'imperfect'. Chamberlin himself, in an article of 1950, wrote: ...The very terminology of 'imperfect competition' is heavy with implications that the objective is to move towards perfection.

The veiled accusation here is that the Cambridge economist, far from achieving a breakthrough in the theory of competitive value, gave shape to an elegant continuation of the Marshallian tradition. And yet, in the introduction to the final edition of 1969, Robinson explicitly stated that it had been her precise intention to show that, if one attempts to construct a logically coherent marginalist theory of the firm, a conclusion will be reached which is in contrast to the neoclassical view of the world: that the free operation of market forces leads to an economic structure in which unsatisfied consumers' needs and excess capacity of firms can coexist.

The argument is, in short, the following. A firm in perfect competition can sell all that it wishes without influencing the price, for the simple reason that its increasing cost curves prevent it from producing more than a small percentage of the total output. By contrast, the firm with decreasing cost curves is unable to expand its sales without lowering the price of its output.

On the other hand, if the demand curve of the firm is decreasing, so will the marginal revenue curve, so that, beyond a certain point, sales will bring forth negative marginal revenues. But before this point is reached the marginal revenues will begin to be lower than the marginal costs. An attempt to expand sales reduces the profits of the firm, so that it has no interest in pushing other firms out of the market. This is the type of limited competition Robinson tried to formalize in her book.

Towards the end of the 1930s, Robinson changed her research interests and focused on Keynesian theory. Not only she abandoned the debate which her book had opened, but even underrated the theoretical value of her own contribution. Robinson published an article in 1934 in the *Economic Journal*, 'Euler's Theorem and the Problem of Distribution'. The problem was that of the exhaustion of the product in the marginalist theory of distribution. It is an important paper, and received a great deal of attention during the 1960s.

Joan Violet Maurice Robinson, without doubt the most prominent woman economist, burst on the scene as a mainstream economist with her impressive *Economics of Imperfect Competition*, published in the same year (1933) as E. H. Chamberlin's *Theory of Monopolistic Competition*. In that work, she exhibited great skill as a microeconomic theorist in using marginal analysis to clarify and extend Marshall's hints concerning markets situated somewhere between pure competition and pure monopoly. For several years before the publication of Keynes's *General Theory*, there was considerable interest in a Chamberlin-Robinson analysis of imperfectly competitive markets. As an important member of the small group of economists from Cambridge and Oxford who helped J. M. Keynes develop the ideas that became the *General Theory*, she gained further prestige. In 1937, she published *Introduction to the Theory of Employment*, an outstanding introduction to Keynes's ideas.

In the 1950s she offered a new analysis of capital theory that rejected much of mainstream neoclassical capital and marginal productivity theory. Moving further from orthodoxy, she authored an introductory economics text intended to convey her ideas to a broader audience, but it was not commercially successful.

As Joan Robinson grew older, there was considerable speculation each year that she might win a Nobel Prize in economics. Many in the profession, from the most orthodox to the very heterodox,

were puzzled when each year went by without this honor's being given to so outstanding an economist. We too have pondered this question. We speculate that the reason was not that others were more deserving or that she was a woman, but that her movement out of neoclassical and Keynesian theory had brought her into the muddy waters of heterodoxy. Nevertheless, Joan Robinson was an important precursor of the post Keynesians and may have had the most significant non-Marxian influence on modern radical economics.

Robinson stated that perfect competition, in mainstream economics, involves rational behavior on the part of buyers and sellers, full knowledge, nonexistence of frictions, static conditions, perfect mobility and perfect divisibility of factors of production. Nevertheless, she defines perfect competition in a way that embraces all the assumptions previously exposed, so perfect competition means a situation in which the demand for the output of an individual seller is perfectly elastic.

1.2.4 Henry Sidgwick, Joseph S. Nicholson & the Cambridge School

Joseph Shield Nicholson (1850-1927) in 1876 graduated with first class honours in the Moral Sciences at Cambridge, where he was taught economics by Sidgwick and Marshall. He was appointed Professor of Political Economy at Edinburgh University in 1880, a position he continued to hold until 1925. During his life time as an academic he wrote over a dozen books and a substantial number of articles in the emerging economic journals. This paper examines a sample of Nicholson's work: his essay on machinery and labour (1878, 1892), his Treatise of Money and Essays on Monetary Problems (1888, 1895) and his Principles of Political Economy in three volumes (1893, 1897, 1901), for their Marshallian characteristics as indicated by references to Marshall's work.

1.2.5 Wick sell and the Stockholm School

Wicksell in many ways is the Scandinavian Marshall. He was honest in acknowledging the contributions of others, humble in recognizing the limits of his own analysis, intelligent in avoiding illicit generalizations, and had an extraordinary ability to anticipate successive developments. Unlike Marshall, however, Wicksell did not receive great acclaim during his life, not even in his own country. It was only during the 1930s, when, on the initiative of Kahn and Keynes, Geldzins und Gueterpreise (1898) and the two volumes of Vorlesungen u"ber die National oekonomie (1901 and 1906) were translated into English, that Wicksell's name, and especially his thought, began to

circulate among a wider circle of economists, so much so that in the period between Keynes's *Treatise on Money* (1930) and the *General Theory* (1936) many economists declared themselves to be neo-Wicksellian.

With *Ueber Wert, Kapital und Rente* (1893), the great Swedish economist produced a notable work of synthesis. Beginning from the theories of value and marginal utility of Jevons and Menger, he tried to blend Bohm-Bawerk's analysis of capital and interest with the Walrasian general-equilibrium theory. He formulated a model in which the product increases with the time interval between the introduction of inputs and the production of output.

His explanation of the positivity of the rate of interest, based on the argument of the marginal productivity of waiting, is almost as important as Fisher's reformulation. He was heavily indebted, intellectually speaking, to Austrian thought and was well aware of this. In 1921 he even wrote: 'Since Ricardo's *Principles* there has been no other book—not even excepting Jevons' brilliant but somewhat aphoristic and Walras' unfortunately difficult work—which has had such a great influence on the development of economics as Menger's *Grundsätze*.

In the first volume of the *Lectures*, Wicksell completed the reformulation of Bohm-Bawerk's theory of capital and interest, abandoning the measurement of capital in terms of 'average period of production' and substituting a theory in which capital is reduced to the time-structure of the inputs employed at different periods. Then he argued that this structure can undergo variations in at least two dimensions: width and height. Finally, he tried, with partial success, to develop a theory of the ways in which the time structure of the production process changes with variations in wage-level and rate of interest. As Wicksell himself recognized with reference to the process of ageing wine, only for very special technologies is the value of the capital.

Another important aspect of Wicksell's thought concerns the *theory of public finance and optimal taxation*. Wicksell applied marginal-utility theory to the public sector of the economy, reaching, on the one hand, the formulation of the well-known principle of benefit and contributive ability as the fundamental criterion of taxation, and, on the other, the proposal to set the prices of the services of public firms according to the criterion of marginal cost. Wicksell was decidedly reformist. He fought for programmes of redistribution of wealth from the rich to the poor, and this brought him quite a few problems in his academic career.

He rejected Marxism both as an instrument to understand the laws of movement of capitalism and as a guide to the action aimed at improving the conditions of the working class.

In a rather more sophisticated manner than Marshall, Wicksell realized that a competitive equilibrium does not necessarily lead to a state of maximum social welfare, nor to a fair state. However, he anticipated the neoclassical argument that makes perfect competition a condition for Pareto optimality; and he understood that, by operating on the initial endowments of individuals, it is possible to lead the system towards a state which, besides being efficient, is also ethically acceptable. In any case, Wicksell forcefully emphasized the argument that the attainment of efficiency in no way constitutes a morally incontrovertible objective, so that there is no space in economic theory for a defence of the capitalist system.

Wicksell on Product Exhaustion

Knut Wicksell, a Swedish economist who made a number of important contributions to both macro- and microeconomic theory, was an early independent discoverer of the marginal productivity theory. He became interested in questions relating to Euler's theorem and product exhaustion and contributed more to solving them than any other economist of his time. In his earlier writing on the subject he had thought, like most other economists, that a given firm or industry would display either increasing, constant, or decreasing returns to scale. These categories seemed to be mutually exclusive.

In 1902, however, Wicksell reached a quite different conclusion, namely, that a given firm could pass through all three phases of returns to scale. A firm that was expanding output would first experience increasing returns to scale but would sooner or later encounter decreasing returns to scale. At the level of output at which returns change from increasing to decreasing, constant returns to scale must occur. Wicksell was explicitly developing the concept of the long-run, U-shaped average cost curve for a firm, showing average costs decreasing, then reaching a minimum point, and finally increasing.

Wicksell argued that it was not necessary for a firm's production function to be homogeneous to the degree one for product exhaustion to occur. If firms are producing at the level of output that occurs at the minimum point of the long-run average cost curve and profits are zero, product exhaustion takes place. Wicksell reasoned that perfectly competitive markets will produce these

results, because competition will result in each firm's producing at minimum cost and making zero profits. Thus, even though the production function of a firm would yield increasing, constant, and diminishing returns, competition will guarantee that in long-run equilibrium the firm is operating at the point on its production function at which constant returns exist, at which the function is homogeneous to the degree one, and at which average costs are a minimum. Wicksell's solution to the problem of product exhaustion raised new and interesting theoretical issues, which economists pursued well into the twentieth century. Wicksell suggested some explanations for the shape of the long-run average cost curve, but these issues were not fully understood until the 1930s.

Self-Test Exercise:

Dear student! Now it is your turn to discuss on important issues presented above. Please, attempt all of the following question. They are meant to evaluate the extent to which you understood the essence of the Neoclassical School.

1. Briefly identify and state the significance of each of the following to the history of economic thought: neoclassical thought, pure competition, law of demand, and law of supply, consumer's surplus, and rules of derived demand.
2. Discuss on the Marshallian time scale of economics.
3. Discuss on Piero Sraffa's, Edward Hastings Chamberlin's, Jean Robinson's departure from pure Competition?
4. Discuss on the Wicksell's on Product Exhaustion?
5. Is the standard neoclassical assumption of rational economic behavior valid?
6. What is Marshall's law of demand? How does it relate to (a) the law of diminishing marginal utility, and (c) consumer surplus?
7. Discuss on Fisher's theory of interest?

Chapter Two

2 Heterodox Economic Thought

2.1 Early Critics of Neoclassical Economics

Chapter Objectives:

Dear student! Up on successful completion of this chapter you will be able to:

Define the word heterodox and its economic thought.

Distinguish the main points of Historical school critic against classical school.

Analyse the Stage Theory of Economic Development.

Distinguish the main points of Institutional school critic against classical school.

Compare the old, the new and quasi institutionalists development thought.

2.1.1 The Historical School

Dear student! In history of economic thought I we have discuss this part in the immediate critics that challenged the classical school. Here we need not go into deep in discussing how the historical school criticized the neo classical school. Before you go through the chapter would you please attempt to mention the origin of this school? Good! It might give you some insights about the base it their critics. Try your attempt!

The important writers of the older historical school are Friedrich List (1789- 1846), Wilhelm Roscher (1817-1894), Bruno Hildebrand (1812-1878), and Karl Knies (1821-1898).

They contended that classical economic theory did not apply to all times and cultures and that the conclusions of Smith, Ricardo, and J. S. Mill, though valid for an industrializing economy such as England's, did not apply to agricultural Germany. There was a great deal of nationalistic feeling in the economic analysis of these writers. Furthermore, they assert that economics and the social sciences

must use a historically based methodology and that classical theory, particularly in the hands of Ricardo and his followers, was mistaken in attempting to ape the methodology of the physical sciences. Some of the more moderate members of the school acknowledged that theoretical-deductive methods and historical inductive methods were compatible; but others, particularly Knies, objected to any use of abstract theory.

Friedrich List expressed particularly strong nationalist views and refused to admit that the conclusions of classical theory regarding laissez faire were applicable to countries less developed than England. While classical theory held that national well-being would result from the pursuit of individual self-interest in an environment of laissez faire, List argued that state guidance was necessary, particularly for Germany and the United States. He contended that whereas free trade would be beneficial to England, given the advanced state of its industry, tariffs and protection were necessary for Germany and the United States. He spent five years in the United States, from 1825 to 1830, and some ten years later published *The National System of Political Economy* (1841), which drew on his experience here. His protectionist views were so warmly received in the United States that he is often called the father of American protectionism.

Dear student! What was the historical method advocated by these writers?

Their works reflect a belief that the chief task of economics is to discover the laws governing the stages of economic growth and development. For example, List stated that economies in the temperate zone will go through five stages: nomadic life; pastoral life; agriculture; agriculture and manufacturing; and manufacturing, agriculture, and commerce.

However, the writers did collect large quantities of historical and statistical information to support their analyses of economic development. In more recent times, W W Rostow (1916-) has advanced a theory of economic development by stages that are in the tradition of the older historical school.

Dear student! Why do you think that Germany was not in line with British neo classical thinking during the time? Please critically analyze your own idea before you proceed to the content. Good!

The Historical school applied an evolutionary approach to its study of society. It concentrated on cumulative development and growth. An analogy was sometimes drawn to Darwin's evolutionism in biology: The social organism is born, develops and grows, and finally decays and dies. Society is constantly changing. Therefore what is relevant economic doctrine for one country at a particular time may be inappropriate for another country or another age. This relativist approach was essentially useful in attacking classical economics as being suitable for England but not for Germany. The historical school was nationalistic, whereas classical economics was individualistic and cosmopolitan. In the historical school, social organism is the center of study and it is the force for dynamic movement; society and the state rather than the individual occupy the center of the stage.

In Germany it was the state that fostered industry, transportation, and economic growth. In the process of defending a unified economy it was easy to develop as ardent nationalistic glorification of the state. The historical school gave great prominence to the need for state intervention in economic affairs and emphasized that the community has interests of its own that are quite distinct from those of the individual.

The economists of the historical school emphasized the importance of studying the economic historically, as part of an integrated whole. Because economic and other social phenomena are interdependent, political economy cannot be treated adequately except in combination with other branches of social science.

The historical school criticized the abstract, deductive, static, unhistorical qualities of classical (and marginalist) methodology. They conducted massive inductive studies, using primary source material and studying changing social institutions. The school claimed that its historical method allowed it to study all the forces of an economic phenomenon, all the facts of economic behavior, not merely their economic logic.

Some of the historical economists became opposed to theorizing altogether, denying that there are any valid economic laws, with one exception: They believed that patterns of development are discernible in history and can be generalized into 'Laws of development'.

2.1.2 The old Institutional School

Dear student! Before you proceed to this interesting topic, what do you think is about institutionalist ideology of economics?

Institutionalists from the turn of the century to the 1930s played a more significant role in economics than do contemporary institutionalists because the former were involved in implementing significant policy changes in the U.S. economy. Except for Marxists, the institutionalists have the longest history as a nonmainstream heterodox American school of economic thinking. The three central figures among the institutionalists of the early twentieth century: Thorstein Veblen, Wesley C. Mitchell, and John R. Commons. They spawned a school of thought, persisting until the present day that has influenced a wide variety of heterodox economists. Consequently, the label “institutionalist” often extends far beyond describing the followers of these three. For this reason, we have divided our description of institutionalists into three sections: (1) traditional institutionalist economists in the tradition of Veblen, Mitchell, and Commons; (2) what we call the quasi-institutionalists— writers whose ideas resemble those of the institutionalists but who are too iconoclastic to fit the traditional institutionalist mold; and (3) neo institutionalists—economists who write in a neoclassical choice-theoretic tradition but who believe that institutions must be far better integrated into current practice than is currently done, both in theory and in practical applications of theory.

Dear student! Do you ever heard about Thorstein Bunde Veblen? If so please mention what comes in to your mind about him? Good! This sub topic provides you interesting notes on the issue.

American institutionalism reached its peak in the late 1920s and early 1930s, but by the late 1930s, it had already begun to wane. In his *Theory of Economic Progress* (1944), Clarence Ayres described the victory of the neoclassical over the institutionalist approach as complete. Since that time institutionalists have been outside the discipline: they are merely given credit for having called attention to important matters that economists should not overlook but that lie outside the scope of economic analysis.

It is important to recognize that being outside the scope of modern economic analysis does not necessarily make the institutionalists wrong. Institutionalists forcefully argue that interactions between economic, cultural, and sociological issues are too great to warrant the isolated focus on economic forces that constitutes the thrust of much modern economic thought. In assessing mainstream economics, they would agree with Kenneth Boulding, who called neoclassical economics the celestial mechanics of a nonexistent world, and they would argue that much of the work in modern economics is elaborate game-playing.

The University of Wisconsin, once the haven of thoroughgoing institutionalism, now offers an otherwise mainstream curriculum whose prime vestige of institutionalism is its strong focus on empirical research and on the complexity approach to problems. Most modern institutionalists continue to draw chiefly on Veblen, Mitchell, and Commons and express their ideas in the *Journal of Economic Issues*. Although they persist in opposing mainstream economics, for the most part they have been little heeded by the mainstream. Of the leaders of institutionalist thought in post-World War II America (e.g., Allan Gruchy, Wallace Peterson, and Clarence Ayres), none has achieved the preeminence of these earlier figures, no doubt partially because their views are chiefly elaborations of those of the earlier institutionalists. We will briefly examine the views of Clarence E. Ayres (1891-1972) as an example of post-Veblen-Commons- Mitchell institutionalists.

Ayres has been the most visible of the institutionalists in post-World War II America. He spent most of his academic life at the University of Texas at Austin, which became the main source of institutionally trained economists after the University of Wisconsin moved into the mainstream. In his most important book, *The Theory of Economic Progress* (1944), Ayres accepted and elaborated the basic dichotomy between technological employments and ceremonial activities that permeates much of Veblen's work. Providing examples from cultural anthropology to illustrate that much of business activity was comparable to the totem and taboo behavior of technologically ignorant societies, he was able to distinguish between those matter-of-fact technological activities that furthered what he termed the "life process" and those that hindered achievement of "full production." Ayres also strongly stressed the Veblenian view that economics, with its fixation on equilibrium, was a non-evolutionary science and that the static neoclassical framework needed to be replaced by an evolutionary dynamic one. Borrowing from various fields in the social sciences, he valiantly struggled to incorporate the concept of "instrumental value," expounded by the American philosopher John Dewey, into

economics. Marc Tool (1921-), a modern institutionalist, has continued to follow this avenue of Ayresian theory.

To account for the huge differences observed in the effectiveness of machine use, one must clearly look beyond the growth factors traditionally considered in economic theory, and inquire about the characteristics of the environment in which capital goods are being put to use. Policy, institutional, and geographic variables suggest themselves as the missing explanatory factors.

The idea is that indeed an important cause of economic backwardness lies in the persistence of inefficient institutions and, therefore, the pertinence of the economic analysis of institutions should be judged in the light of its ability to explain the persistence of this institutional inefficiency.

Institutional economics emerged at the end of the 19th and the beginning of the 20th century in the United States, and gained the greatest influence in the mid-thirties of that century. The founder of this doctrine, also known as "old institutional economics", is Thorstein Veblen. His famous critic of capitalism is based on sarcastic view of American business circles he called "leisure class". Influenced by some British historians, Veblen emphasized the need for wider historical approach and usage of inductive empirical generalizations in economic theory. This methodological shift was to contribute to transforming economics into modern science.

Contrary to the hedonistic conception of the Austrian and Losanna Schools appeared the Institutional School, led by Thorstein Veblen and his followers, John Rogers Commons, W.C. Mitchell, G.C. Means, N.W. Stewart, S.H. Slichter, W.F. Ogburn, A.B. Wolfe, W.E. Atkins, J. Dorfman, W.H. Hamilton, C. Tugwel.

The Institutional School through the institutional economics formulated by it revised the economic tradition in America, which was an extension of the European Schools, and attempted to combine theoretical concepts with reality. New techniques and organizational spirit created this purely American School.

The institutionalists use mainly the sociological and statistical method, opposition to the proceeding individualistic Schools, which adopted the abstract method supplanting the facts and turned their

endeavors toward the conceptual and a priori construction of an ideal and perfect world instead of the real and imperfect one. The institutionalists accepted induction and through statistics examined quantitative changes of economic phenomena in place and time, but they avoided the simple recording of those to follow their chronological and economical structure as the historiographies working groups of the Historical School had done. The institutionalists based themselves on human psychology, which changes according to the era and the various countries. Thus these writers overthrew the universal laws of the classicists, since, according to them, the economic phenomena are included within the social and legal institutions, which are always changing and which always reflect the time and the place within which they are formed.

The institutionalists also examined the lack of economic equilibrium since reality cannot be reconciled with the existence of economic equilibrium, and distinguished, as for example, the Frenchman Francois Simiand, fluctuations of long, middle or short cyclical duration. In general if the classicists and the following individualistic schools (Austrian School, Mathematical School, and Neo-classical School) were based on rational and individualistic factors, the institutionalists examined economic phenomena from the viewpoint of group and non-rational factors.

In brief, the basic conceptions of the Institutional School are as follows:

- a) all economic research must be based on the behavior of the groups and not the price mechanism, and human behavior is continually changing,
- b) economic generalizations are relative to place and time, while the morals, customs and laws are ways of organization of economic life,
- c) motives of great importance which influence man cannot be measured and
- d) the adaptations in economic life must not be examined as setting off from a static equilibrium ; these are only stable under existing institutions.

Thorstein Bunde Veblen (1857-1929) is the intellectual father of the branch of American heterodoxy that is often called institutionalism. His scientific and ethical dissent from orthodox theory greatly influenced the development of heterodox thinking in the United States. The leader of the School, Thorstein Veblen, son of a Norwegian immigrant, was born in 1857 in Wisconsin and grows up in Minnesota. At Carleton College (1880), where he studied, he had John Bates Clark as instructor. Veblen wrote his basic work at Johns Hopkins University and Yale where he received

his doctorate (1884). He also worked at the Universities of Cornell and Chicago. At the age of 39-43 he was an assistant while his former classmates had already become full professors, heads of departments and Presidents of Universities. This delay in his academic career was contributed to by the character of Veblen and the manner in which he confronted his instructing role and his position as a professor. Despite the fact that he published eleven books, he never became a full professor and many of these books were published at his own expense. Besides Chicago, Veblen also taught at Stanford, Missouri and the New School for Social Research moving from university to university because of his poor instruction and his indifference to his students.

Veblen published the following main works:

The Theory of the Leisure Class (1899),

The Instinct of Workmanship and the-State of the Industrial Arts (1914),

The Vested Interest and the State of the Industrial Arts (1919).

The Engineers and Price System (1921),

Absentee Ownership and Business Enterprise in Recent Times (1923).

According to the above ideas, expressed by Veblen and his school, a system of reforms was proposed based upon a social control in order to be limited the individualism which cause the social conflicts and social differentiation. For this reason Veblen was accused by Marxists as fascist and by conservatives as very radical but Veblen, as Sismondi, is Veblen. He opened a new road, his own road, which impacted also the economic policy of the USA and especially the New Deal (1933 - 1935) of Franklin Roosevelt.

Veblen's Criticism of Neoclassical Theory

Dear student! Here you need to read the critics thoroughly and compare and contrast the points very well. He felt that both the classical and the neoclassical approaches were unscientific. His criticisms of neoclassical theory are contained throughout his works, although a collection of his essays. His training in philosophy partly explains the nature of his attack on the accepted economics of his time. Veblen was not interested in making small changes in the theoretical structure—for example, in correcting minor logical flaws in the system. He struck at the heart of neoclassical theory, asserting that the basic assumptions of its doctrine were unscientific.

Veblen was clearly no Ricardo, Marshall, or Keynes trying to improve the theoretical structure of classical economics while accepting its premises as laid down by Smith; he wanted to tear down the entire structure and rebuild a unified social science from economics, anthropology, sociology, psychology, and history. Veblen said that all of orthodox economic theory from Smith through Marshall was based on the same assumption: that there is harmony in the system, or what Veblen called a “ameliorative trend.”

This appears in Smith’s concept of natural price and in the workings of the invisible hand that turns private vices into public benefits.

Marshallian theory reflects this belief in its notions of normal price and equilibrium and in its expectation of beneficial results from perfectly competitive markets in long-run equilibrium.

J. B. Clark’s conclusion that long-run competitive equilibrium produces an equitable distribution of income is a particularly striking example of the presumption of harmony in the economy.

To Veblen, the concept of equilibrium as used by orthodox theorists was normative: they implied, without proof, that equilibrium is good and that the results produced by markets in equilibrium are socially beneficial.

To understand the development and present functioning of the industrial society, we must understand the complex set of interrelationships that exist between traits of human nature and the culture. Not only is the individual’s conduct hedged about and directed by his habitual relations to his fellows in the group, but these relations, being of an institutional character, vary as the institutional scheme varies. The wants and desires, the end and aim, the ways and means, the amplitude and drift of the individual’s conduct are functions of an institutional variable that is of a highly complex and wholly unstable character.

As individuals emerge within the culture, they find themselves acting in accordance with established patterns of behavior that are a legacy of past interaction between individuals and culture, and that have taken on an institutional character and force. These relatively fixed underlying traits of human behavior Veblen called instincts. He was much influenced by the contemporary development in psychology that emphasized the role of instincts in guiding activities

are the parental instinct, workmanship, idle curiosity, and acquisitiveness. The parental instinct is originally a concern for family, tribe, class, nation, and humankind. The instinct of workmanship makes us desire to produce goods of high quality, to be proud of and to admire workmanship, and to be concerned with efficiency and economy in our work. Idle curiosity leads us to ask questions and seek explanations for the world around us. It is an important element in accounting for the development of scientific knowledge. The acquisitive instinct is the opposite of the parental human behavior.

2.2 The development of Modern Heterodox School

2.2.1 The New Institutional School

Dear student! Would try to mention some of the influential new institutionalists?

Well! The term ‘new institutional economics’ was originated by Oliver Williamson. NIE, which began to develop as a self-conscious movement in the 1970s, traces its origins to Coase’s analysis of the firm, Hayek’s writings on knowledge and Chandler’s history of industrial enterprise, along with contributions by Simon, Arrow, Davis and, Alchian and Demsetz, Macneil, Holmström and others. Its best-known representatives are Coase, Williamson and North.

Like its older counterpart, the new institutional economics is interested in the social, economic and political institutions that govern everyday life. However, the new institutional economics eschews the holism of the older school. NIE follows strict methodological individualism, always couching its explanations in terms of the goals, plans and actions of individuals. Of course, NIE appreciates social phenomena like corporate culture, organizational memory, and so on. NIE differs from mainstream neoclassical economics, however, in insisting that policy analysis be guided by what Coase (1964) calls comparative institutional analyses. Orthodox welfare analysis typically compares real-world outcomes with the hypothetical benchmark of perfectly competitive general equilibrium. It is unsurprising, then, that actual market outcomes will come up short.

Neoclassical economics left out institutions or, to be more precise, posited the institutions it needed in order to make the available mathematical techniques work. Initially this led to the use of static analysis, then to the use of comparative static analysis, then to differentiable calculus,

and later, to Page 39 of 150

set theory, measure theory, and optimal control theory. An interesting aspect of neoclassical economics was that, in part, technique had driven the questions it had addressed and the answers it found.

The science of economics is far less likely to explicitly include institutions, for the simple reason that the analysis of institutions is messy and the search in science is for elegant underlying relationships that fit into existing techniques. Avoiding the explicit analysis of institutions, however, does not free the science of economics from them: neoclassical economics included a variety of implicit assumptions about institutions in its underlying structural model. For example, consider “the firm” the production unit of neoclassical economics. It was composed of many individuals and was enormously complicated, but neoclassical theory reduced its goals to a single goal profit maximization without explaining how that goal can be consistent with the utility maximization of individuals within the firm. For example, will managers and other employees engage in activities that benefit them at the expense of profits? The same applies to markets: neoclassical economics assumed the existence of particular types of markets with specific mathematical characteristics; it did not explain how such markets came about, how they might change, whether their existence might influence individuals’ behaviors and preferences, or whether those markets are close.

Within a few years the neoclassical approach, after assimilating the Keynesian revolution, took on a dominant role and the institutionalists were isolated. While the neoclassic won over all most prestigious universities and were awarded one Nobel Prize after another, the institutionalists were relegated to a few universities in the provinces; they appeared destined to die a slow and inexorable death or to spend a wretched existence in the underworld of heretics.

But the institutionalist approach survived and a significant number of unconventional intellectuals continued their work waiting for better times to come. Heretics like J. Fagg Foster, Dudley Dillard, and Allan Gruchy set up small but valorous schools; John Galbraith, Warren Samuels, Marc Tools, Kenneth Boulding, and several others persisted in their criticism of neoclassical metaphysics and elaborated an alternative theoretical system.

For many years, their words fell on deaf ears, sometimes they even found it difficult to publish their works, but still they continued to build. Until, at the end of the 1970s, the neo-institutionalist

revolution broke out. Many economists, including some of neoclassical formation, in their endeavour to escape from the deadlock in which the official economic science of those years was floundering, uncovered the institutions. Thus good old American institutionalism was ‘rediscovered’; and many of the research studies, achievements and lectures of the heirs of Veblen and Commons, who had gone unheeded in the 1950s and 1960s, found new audiences not only among the public at large but also in the universities. Institutionalism has not died out in the long run and Hamilton may well win his wager after all.

J. K. Galbraith was undoubtedly the most important exponent of contemporary institutionalist thought, a stream of thought which has in the *Journal of Economic Issues* its most prestigious critical platform.

Economic and Public Purpose (1973), Galbraith raised the argument that the ‘invisible hand’ is a long way from having the beneficial effects the laissez-faire theorists had attributed to it. On the contrary, it leads to a sharpening of inequality in the distribution of income, to the predominance of private over public interests, to the ‘squalor’ of the public economy, and finally to a low level of research and development activities. This last point plays a fundamental role in the process of economic growth; and it is a fact, according to Galbraith, that a large part of research and development is undertaken by the large-scale companies. It is also for this reason that Galbraith has been rather skeptical about the effectiveness and utility of antitrust policies. He believes that strategic planning is a more useful kind of public intervention in the economic sphere, and that it should not aim at coercing private activity, but at co-coordinating it and turning it to the service of the public interest. In his most recent essays, *The Nature of Mass Poverty* (1979) and *The Anatomy of Power* (1983), Galbraith has moved so far along this road as to reach the point of calling for State intervention systematically directed to redistributing income in favour of the poorest strata of society.

As to J. Fagg Foster, who taught at Denver University from 1946 to 1976, although he published only a few works he contributed to keeping alive an oral tradition which helped to form several generations of heterodox economists. He was deeply committed to his endeavour to assimilate Keynes’s thought to the institutionalist approach, by emphasizing, for example, the endogenous nature of structural and institutional change. Keynesian theories and policy methods are not valid in the short run alone, as the neoclassical economists asserted, but especially in the long run. Public

policies are necessary to cope with the problem of unemployment and inefficient use of resources, which is not a short-run disequilibrium phenomenon, but rather a chronic problem of capitalist economies. For this reason, political and institutional adjustments, as, for example, the socialization of investments must assume the form of structural reforms. These reforms must satisfy a valuation criterion which Foster called the principle of ‘instrumental efficiency’.

The criterion refers to the distinction between instrumental and ceremonial judgments. It was developed by Marc R. Tool when he elaborated the institutionalist theory of instrumental value. The evolution of an economy is seen as an endless series of problems, whose solutions call for continuous social restructuring through institutional adjustment. In this process, the principle of instrumental efficiency calls for regressive ceremonial institutions to be abandoned in favour of progressive and socially advantageous instrumental change.

Foster was an active member of the Wardman Group of institutionalist economists who met at the American Economic Association at the end of the 1950s. They later set up the Association for Evolutionary Economics (AFEE), an academic association that united institutionalist-oriented American economists. One of the most influential founder members of AFEE was Allan Garfield Gruchy, a leader of contemporary American institutionalism. Gruchy, like Foster, was largely influenced by the Keynesian revolution. He held that, far from being an efficient resource allocator, the market is the source of widespread failure and inefficiency. Unemployment, income inequality, inflation, inadequacy of social services, the excessive power of big companies and the alienation and oppression of workers and consumers, are all problems which, instead of being automatically adjusted by the market, are caused by it.

Gruchy preferred to think of himself as an ‘evolutionary’ rather than an ‘institutionalist’. Yet he spent much of his career in the company of institutionalists, at Maryland University, where the Department of Economics became a den of heretical economists in the 1950s.

Dudley Dillard was the undisputed leader and ingenious moving spirit of the ‘institutionalist school of Maryland’. He developed what he called the ‘Trinitarian’ approach to economics, that is, an approach founded on three disciplines: microeconomics, macroeconomics and the theory of economic systems. The latter was to become the most important of the three. The economic categories are in fact historically and institutionally determined.

Warren J. Samuels is an economist who broke away from the approach of other institutionalists of this generation. He went back to a current of thought followed by Commons and Hale (rather than that of Veblen and Ayres) and chose law and economics as his field of study. He made an in-depth study of the State's role in social construction. By reversing the classic liberal approach whereby the State is set up by mandate of social subjects, Samuels brought to light the constitutive role played by the State in respect of the economy and civil society. In fact the State defines rights and liberties, attributes power and enforces law. The State intervenes in the economy because it is legitimated to issue and change laws. At the same time, however, the economy intervenes in the State, by turning it into a territory of conflict and bargaining for the distribution of power. Thus, politics and economics influence each other; in reality they interact by building, modifying and rebuilding each other in a continual process of change. Samuels in fact rejected the neo-institutionalist approaches of neoclassical origin because of their tendency to juxtapose State and market as though they were two separate and independent things.

Samuels distanced himself from the other institutionalists of his generation also in that his studies of the history of economic thought and methodology developed the pragmatist tradition of American institutionalism, which he reinforced with contributions from hermeneutics and post-modern thought. By so doing, he formulated a philosophical approach that got rid of the positivist base of economic science and brought to light its discursive, rhetorical, ideological, but above all, constructive nature. Economic reality is socially constructed whereas economic thought is socially conditioned.

Social interests determine the ideological positions of the fighting groups. These, through the game of economic discourse, create political positions which, in turn, determine State action and construct economic reality.

The constructive nature of theories and ideas was also developed by Kenneth Ewart Boulding, an English economist who emigrated to America. Although he cannot be classed as a member of any particular school, he was very close to institutionalist and evolutionary thought. Among the various contributions he made, it is worth recalling the 'image' concept he proposed in 1956 to describe the mental constructs on which people base their choices, take decisions, undertake actions and, in so doing, construct social reality.

These ‘images’ are particularly strong when shared socially; in this case they contribute to forming groups and determining collective action. Lastly, we should like to recall Boulding’s contribution to constructing the post-Keynesian theory of distribution.

2.2.2 Quasi- Institutionalists

Modern institutionalists remain a relatively tightly knit group intent on sustaining an ongoing dialogue among themselves and dispensing the insights of Veblen, Commons, Mitchell, and their followers. There exists another group of writers who accept many of the insights of the institutionalists and who were strongly influenced by them, but who are too individualistic and iconoclastic to fit the institutionalist mold. These include Joseph Schumpeter, Gunnar Myrdal, and John Kenneth Galbraith.

Joseph Schumpeter

We need only briefly examine his contributions in the context of their relationship to heterodox economic ideas. Schumpeter came to the United States in the early 1930s and taught at Harvard, hardly a hotbed of heterodoxy. Yet he befriended the young Paul Sweezy; and although Schumpeter was clearly a conservative and not a Marxian, he acknowledged the power of Marx’s vision of historical change. One element in Schumpeter’s heterodoxy was a lack of interest in the equilibrium focus of neoclassical theory. He concerned himself instead with the dynamic aspects of theory, as manifested in *The Theory of Economic Development* (1912) and *Business Cycles* (1939), and especially in the delineation of the entrepreneur, a key figure in all of his analysis. Schumpeter, who like many heterodox economists painted with a broad brush, found the very abstract model of orthodox theorists too limiting. He continuously demonstrated the heterodox proclivity of drifting outside the intellectual boundaries of neoclassical theory, as he poached on the preserves of sociology, history, and political science.

Although he unflinchingly declared his interest in and support of the orthodox paradigm, in his work he ignored the practices he advocated. For example, he avidly supported greater use of mathematics and econometrics in economics, but his own work was almost completely devoid of these orthodox tools. Another example of this curious tendency to say one thing and do another can be seen in his encyclopedic *History of Economic Analysis* (1954). In the introduction, Schumpeter promises to present a history of economic analysis and to hold to the absolutist’s

interpretation of the development of economic theory— namely, that modern theory contains an analytical positive core free of value judgments and that past contributions to theory are interpreted through the use of modern standards and are valued because of their role in providing a better understanding of the modern economy. His plan was to show how there has been a steady progression from error to greater and greater truth. However, the book is not a history of economic *analysis* but a history of economic *thought*. Nevertheless, Schumpeter is complex, multifaceted, and in his own way mainstream; this is reflected in the fact that he reserved his highest honors for those economists who created modern, abstract general equilibrium theory.

Schumpeter formed no school to carry on his economics, but his dynamic approach to economic institutions and development is reflected in the work of Richard Nelson and Sidney Winter, and also in the work of Nathan Rosenberg and L. E. Birdzell, Jr. His focus on entrepreneurial activity also lives on in the works of I. M. Kirzner, Harvey Leibenstein, and Mark Casson.

Gunnar Myrdal

Our second quasi-institutionalist is Gunnar Myrdal (1898-1987), one of many Swedes who have made important contributions to economics. In this tradition Knut Wicksell is the most eminent, but after Wicksell there are many of nearly equal stature in the development of economic theory. We have chosen Nobel Prize-winning economist Gunnar Myrdal not because he is typical of the Swedish economists but because he represents distinctly heterodox views. Myrdal came to be an international figure whose interests led him to study economic policy issues around the world, though early in his career he was more interested in technical questions of pure theory. His classic study of the relationship between ideology and theory, *The Political Element in the Development of Economic Theory* (1930), displays interests ranging throughout the social sciences and humanities. In the early 1940s, he ventured into sociology with a book on the population problem and a major study of blacks in America. In the Southern states, Myrdal's reputation was established with the publication of *An American Dilemma: The Negro Problem and Modern Democracy* (1944), which figured significantly in the legal battles for greater civil rights for blacks in the post-World War II period. When later in his career he came to focus his attention on planning in developed and underdeveloped countries, he brought to this task a rich experience as professor of economics, member of parliament, cabinet minister, sociologist, and international civil servant.

Myrdal is critical of what he regards as the bias of orthodox theory, which assumes that there is harmony in the system and that laissez faire is therefore the best policy for all nations to follow, regardless of their stage of economic development. Myrdal views the long-run development of the Western industrialized nations as passing from a period of mercantilist governmental controls to a period of liberalism and laissez faire, to a period of welfare politics in which governments intervene on a more or less pragmatic basis to ease pressing social problems, to a final period of planned economy, which has not yet been reached by some industrial countries, particularly the United States. The end of laissez faire is marked by increasing government involvement and intervention on a piecemeal basis, with no overall coordination. Present experience, according to Myrdal, reveals the necessity most part, private enterprise allocate resources within this plan. Without the overall planning to take us beyond the welfare state, he says, we will have an economy characterized by inflation, unemployment, and balance of payments difficulties.

Myrdal's model of planning is not that of Soviet economics, nor is it as complete as indicative planning. It supposes national planning of the macroeconomic variables with a minimum of bureaucracy and maximum decentralization of economic decision-making. Looking into the future, Myrdal sees the need to extend planning to the international level so that the fruits of the Industrial Revolution can be extended to everyone as we achieve a global welfare society.

Myrdal took an interest in underdeveloped countries and the world economy as well as in the special problems of affluent economies. Many of his books have been read in the United States by people other than economists; these books include *An International Economy* (1956), *Rich Lands and Poor* (1957), *Beyond the Welfare State* (1960), *Challenge to Affluence* (1962), *Asian Drama* (1968), and *The Challenge of World Poverty* (1970). In his study of the underdeveloped nations, Myrdal found that orthodox economic theory was not very helpful. There are two major areas in which it fails. On the one hand, orthodox international trade theory gives incorrect answers when applied to the foreign trade problems of developing nations. On the other hand, orthodox theory seems incapable of formulating internal policies that will lead to economic growth and development.

John Kenneth Galbraith

John Kenneth Galbraith (1908-) represents the first American economist since Veblen to be widely read by intellectuals among the general public. Born in Canada, he did graduate work at Berkeley and majored in agricultural economics. His experiences have been varied: he has been a government official during World War II, an editor of *Fortune* magazine, an adviser to Democratic politicians on the state and national levels, ambassador to India, professor of economics at Harvard, and president of the American Economic Association. An unusually gifted writer, he has published a number of books on subjects outside the scope of economics as well as many in that field. His writings in economics have been addressed to a large audience; several, in fact, have been bestsellers on the nonfiction lists. Annoyed by his criticism of orthodox economic theory and by his popularity, some of his academic colleagues have tended to regard him as a fuzzy-thinking social critic rather than an economist. But with his usual wit and charm, he has replied to these charges by admitting his guilt in writing in clear English so that he can be understood rather than following the lead of fellow economists and being incomprehensible.

Like many other heterodox writers, Galbraith has offered a criticism of accepted economic theory without providing a well-defined and logically consistent alternative. He long ago gave up trying to change the profession; he does not seem to care whether or not any new theoretical structure emerges to conform to his vague, tentative formulations. Similarly, his analysis of the American economy is more concerned with explaining its present telling operation than speculating about its future course: “On the whole, I am less interested in telling where the industrial system is going than in providing materials for consideration of where it has arrived.

To give an idea of Galbraith’s approach, let us briefly consider three of Galbraith’s major economics books, *American Capitalism* (1952), *The Affluent Society* (1958), and *The New Industrial State* (1967), and then attempt to discover unifying themes within them.

2.2.3 Post-Keynesians Institutionalism

In contrast, for the Post Keynesians, the rise of corruption and illegal activities was a natural outcome of the orthodox policies. Orthodox economists underestimated the role of institutions for a well-functioning economy and a civilized society. This is because, for the orthodox economists the institutional structure, as for any good, as long as, there is effective demand the good would be

produced by the market; the market in due time would deliver the most efficient institutional structure.

Post Keynesians reject the three assumptions of orthodox economic theory: that the economic environment is ergodic (that the future can be estimated from past statistical information), the neutrality of money (changes in money cannot influence real economic variables) and gross substitution (everything is substitutable for everything else). The non-ergodic economy argument erases automatically the remaining two assumptions of the orthodox model.

Post Keynesianism is a more general theory because it is based on fewer. The transition process was a non-ergodic process because neither the result nor the probability distributions could be deduced from the past. The transition was an unfamiliar idiosyncratic process. Keynes (1936) declared that 'we simply do not know', which clearly was relevant for transition economies. Thus, given the non-ergodic nature of economic processes, it was a priori unlikely that the market can deliver efficient institutions. Essentially, all long-term economic problems, especially the transition process, are structural and institutional. Institutions affect not only economic growth but also the ideology and culture which prevail in society, consequently the purposes and goals to which people aspire. However, even if it was possible for the market to produce an efficient institutional structure it would have been an extremely time consuming process; allowing, in this way, the opportunity for criminal activity to surface.

Most importantly, the market was incapable of satisfying effective demand, so it was also unable to respond to the immediate demand for a complicated institutional structure. For the Post Keynesians the immediate establishment of the appropriate institutional structure by state action was indispensable, in view of the fact that the goal of Post Keynesians in transition economies was the development of a civilized society. Post Keynesians are essentially institution builders: institutions attempt to provide some stability in an uncertain world, full employment and a civilized society. The immediate establishment of civilized institutions may have prohibited the rise of corruption and illegal activities in transition economies.

Post Keynesians have been criticised by institutionalists that their study of institutions is pretty thin. Hodgson argued that there exists a foundation for the extension of Post Keynesian analysis along the institutional paradigm; 'it was with institutionalism as a midwife that Keynesian

macroeconomics was born'. Actually, Post Keynesians are now realising that the institutional framework can assist their understanding of economic behavior.

Most of the institutional literature on transition, which is based on orthodox principles, perceived that the creation of guaranteed property rights was the ultimate goal of institutional development. This is a very limited view of the institutional development required in transition economies. Consequently, the orthodox transition model recommended economic policies independent of the institutional structure because the same economic principles were supposed to be present in all societies.

Non-market institutions and rigid 'imperfections' play a necessary role in enabling the market to operate. For the orthodox transition models there was no concern with the efficient design of institutions, the political and cultural consequences, or how the existing institutions influenced the transition to a market economy. Orthodox economists ignored the importance of implanted social institutions and the role of the state in the market.

In pursuing a highly abstract analysis based on supposedly universal propositions, orthodox economics neglected institutional specificities and cultural variations in transition economies. The focus on equilibrium outcomes, neglected structural transformation and ongoing dynamic change. For the Post Keynesians, economic policy cannot ignore institutions since the institutional framework of an economic system is a basic element of its economic dynamics. Economic processes, which are the subject of Post Keynesianism, are dynamic while economic equilibria, the subject of neoclassicism, are static. Post Keynesians emphasised path-dependence, the presence of which results in past states influencing later ones. Economic action in times of uncertainty is part of the economy in real time. The economy cannot be separated from history; 'institutions matter and history matters'.

It should be recognised that the orthodox approach to institutions can be distinguished between 'old' Institutional Economics and New Institutional Economics. While both approaches are embedded in neoclassical economics the policy implications for transition economies are quite distinct. New institutional economics was used to rationalize the gradual approach.

Post Keynesians argued that the institution of private property and property laws must set clear rules of ownership and control. Private ownership could not be effective without establishing property rights. This would provide a stable framework for doing business. The success of institutions is the result of their capability in enforcing claims and not simply in achieving

allocative efficiency. Private property rights in the transition economies of Russia and Eastern Europe were ambiguous and insecure, so that privatization did not really have a meaning. The privatization of state enterprises should have taken place at a much later stage, once an appropriate institutional structure had been established by state action.

Without a social commitment to the rule of law, legislation remained unenforceable and was ignored. If the members of society lose their confidence in state institutions to enforce contracts, the monetary system breaks down and the society returns to barter. The transition economies experience reveals exactly this outcome.

The institutional structure not only facilitates the smooth functioning of the market process, but also provides solutions to market failure. There needs to be a regulatory framework, which internalizes any externalities. In terms of monopoly power particularly, the aim of the institutional structure should be to restrain market power and ensure that there is adequate competition. Consequently, 'the solution then is for countries in transition to 'get the institutions right' (not prices, as neoclassical theorists have maintained)'.

Self-Test Exercise

1. Why the German Historical School criticised the neo-classical school thought?
2. What are the main points of institutionalist criticism against neo-classical school?
3. Compare the development philosophy of new institutional school and quasi-institutional school? Do you see any deviation? Discuss it.
4. Discuss on Veblen's Criticism of Neoclassical Theory?
5. Explain and critically evaluate Gunnar Myrdal's argument concerning the impossibility of developing economic theory that is free of value judgments.
6. Mention on the economic philosophy of Post-Keynesian institutionalism?
7. Do you think that Institutionalists economic thought is more relevant than neoclassical is to less developed economy?

Chapter Three

3 General Equilibrium and Welfare Economics

Chapter Objectives:

After completing this chapter you will be expected to:

Trace back the historical evolution of equilibrium concept.

Define clearly the Walrasian general equilibrium analysis.

Compare and contrast various different equilibrium considerations.

Define welfare economics and compare how different scholars in the field analysed it. Compare and contrast the old and new welfare economics.

3.1 Walrasian General Equilibrium

Dear student! At this level hope that you have the basic concept of equilibrium in economics.

Please take some lines to mention what comes into your mind about the concept of equilibrium.

What Is General Equilibrium Theory?

Walras's use of marginal analysis was only a part of his contribution to modern economics. His work on marginalism was in many ways more sophisticated than that of Jevons and Menger, but because it was in French it did not have the same impact.

General equilibrium theory is an analysis of the economy in which all sectors are considered simultaneously. Thus, one considers both the direct and the indirect effects of any shock to the system, and one considers the cross-market effects simultaneously with the direct effects. This interrelationship of the sectors of the economy is relatively simple to conceptualize, but it is an enormously complicated idea to put down formally. Walras's contribution was to model the general equilibrium system in a formal manner.

Early Precursors of General Equilibrium Theory

Because general equilibrium is relatively easy to conceptualize, it shouldn't be surprising that it was not a new idea in 1874 when Walras published *Elements of Pure Economics*. Earlier writers

had had a clear vision of an economy consisting of many interconnected parts. For example, Quesnay had given this vision form in his economic table, which traced the flow of annual production among the various sectors of the economy. Similarly, in vivid descriptions of market processes, Adam Smith showed deep insight into the relationships among the various parts of the economy. But although these writers explained the interconnection, they did not formally model it.

Dear student! Who is Cournot? Hope you are familiar with this name in your Microeconomics II course. Would you mention some points about him?

Great! In 1838, A. Cournot (1801-1877) made an enormous advance in formalizing the interrelatedness of the economy while analyzing certain microeconomic problems. He was able to express some of the problems of the theory of the firm in mathematical form, and he used calculus to prove that profits are maximized when marginal cost is equal to marginal revenue. Cournot's abstract mathematical orientation assisted him considerably in comprehending relationships within the economy and helped him to anticipate Walras. Cournot correctly concluded that "for a complete and rigorous solution of the problems relative to some parts of the economic system, it [is] indispensable to take the entire system into consideration."

Cournot felt, however, that mathematical analysis was not sufficiently developed to permit the formulation of a general equilibrium model. J. H. von Thünen (1783-1850) also applied calculus to the solution of problems in economic theory; and as with Cournot, this mathematical orientation led him to see the possibility of presenting a general equilibrium model as a system of simultaneous equations. Perhaps because they were better mathematicians than Walras (Walras had not been accepted into the prestigious Ecole Polytechnique in France because he failed the mathematics section of the entrance exam, whereas Cournot was considered a brilliant mathematician), Cournot and von Thünen did not attempt to address the complicated interrelationships of general equilibrium theory because of the many assumptions that were required to make the problem tractable and the inability to measure the concepts.

For whatever reason, Walras forged ahead where others feared to tread; so it was Leon Walras who was first able to give the general equilibrium vision clarity and precision by formulating a

model of an economy through the use of mathematical notation. For this accomplishment he is justly praised as an important predecessor of modern economic theory, with its heavy emphasis on abstract model building and the use of mathematics. We will describe a Walrasian model in words and discuss some of the theoretical issues it raises. Before we do that, however, it is helpful to consider the difference between a general and a partial equilibrium model.

Partial and General Equilibrium Analysis

Dear student! Know what is partial equilibrium? What is then general equilibrium?
Please compare and contrast them.

By their very essence, models and theories assume that certain elements are held constant. Economists distinguish between partial and general equilibrium models in terms of the degree of abstraction in the model. More factors are assumed to be held constant in partial equilibrium analysis than in general equilibrium analysis. Partial equilibrium analysis allows only a small number of variables to vary; all others are assumed constant. General equilibrium analysis allows many more variables to change. It does not allow all variables to vary, and thus to influence the model, however, but only those regarded as being within the scope of economics. General equilibrium models, for example, assume as given the tastes or preferences of individuals, the technology available for producing goods, and the institutional structure of the economy and society. Because the scope of economics as a social science has historically been limited by orthodox theory to variables that appear to be quantifiable, a mathematical general equilibrium model appears feasible.

Partial equilibrium analysis is an attempt to reduce a complex problem to a more manageable form by isolating one sector of the economy, for example one industry, and ignoring the interaction between that sector and the rest of the economy. It is useful for contextual argumentation. The gains in clarity and analytical neatness, however, are achieved at the expense of theoretical rigor and completeness.

If we were to move toward a more general equilibrium model by adding a third and fourth industry to our example, the analysis would become so complex that diagrammatic representation would

produce more confusion than clarity. Walras's great contribution was his recognition that the complex interdependence of industries could best be understood and communicated mathematically. His general equilibrium analysis is useful for non-contextual argumentation.

The basic problem to be solved within the hypothetical regime of pure competition concerned the manner in which the prices of the various inputs and outputs were established. Marshall had addressed the same issue by invoking supply and demand curves in various types of markets as the basis for the determination of equilibrium prices. His procedure, however, contained an awkward ambiguity. It will be recalled, for example, that his analysis of demand required the assumption that incomes were constant. Whether this condition was intended to refer to money income or real income was not entirely clear. In either case it could be objected - as Walras pointed out - that a reduction in any price (even when it could be represented as a movement from a higher to a lower point on the same demand curve) was unlikely to be accomplished without a change in someone's income. Barring the case in which the quantity sold increased by the same percentage as the price had been reduced, the income of sellers would necessarily alter. This, in turn, would imply a shift in the position of the original demand curve.

Marshall's formulation was thus too loose to meet Walras's standards of analytical rigour. And it was also too 'partial'. Marshallian procedure called for the investigations of conditions in individual markets on terms which largely isolated them from wider influences. Walras, on the other hand, sought to trace out the manner in which an equilibrium solution could be reached in all markets simultaneously. His target was a statement of the process by means of which a 'general' equilibrium - one which took into account the inter-dependence of all economic activities - was established.

Walras in Retrospect

Walras's high place in the history of economic theory rests partly on his independent discovery of marginal utility theory, but more on his conceptualization of the interdependence of the sectors of a market economy. Although others before him had perceived the interrelatedness of households, firms, prices of final goods, prices of factors of production, and quantities supplied and quantities demanded of all final and intermediate goods, no one had been able to express this perception as

precisely as Walras did by stating it as a system of simultaneous equations. Now it was possible to see that equilibrium for the household and equilibrium in the markets for final goods were consistent with equilibrium for the firm and equilibrium in factor markets.

The attempts by Jevons and Menger to find a simple causal relationship between marginal utility, the prices of final goods, and the prices of factors of production seem unsophisticated compared with Walras's general equilibrium model. Walras clearly demonstrated the power of mathematics as a tool of economic analysis, although full acceptance of his message did not come until well into the twentieth century. The appropriate use of mathematics is still being debated by some today. Walras's marginal analysis was more sophisticated than either Jevons's or Menger's. He did not see a simple direction of causation from subjective utility to value; instead, he saw a complexly interrelated system. Because Walras was focusing on the interdependence of sectors, and in a sense only working backward to demand, he did not fall into some of the traps that Jevons and Menger did. Whereas Jevons and Menger were content to search for a one-way, cause-and-effect relationship among utility, prices of final goods, and prices of factors of production, Walras's general equilibrium model showed that they were all interconnected. In the Walrasian system, all prices are mutually determined, and it is not possible to assign value causation in either direction. The prices of final goods influence and are influenced by the prices of factors of production. In a general equilibrium model, everything depends upon everything else.

3.2 Approaches to Welfare Economics

3.2.1 Early neoclassical approach to welfare economics

Vilfredo Pareto

Dear student! Please define welfare economics? Mention important the personalities in the field?

Vilfredo Pareto (1848-1923) was a disciple of Walras and an early supporter of general equilibrium theory. He carried through the reasoning Walras used in general equilibrium theory and extended the analysis to consider the welfare implications of various policies.

Pareto tried to extend Walrasian economics into policy. Pareto lays claim to being one of the fathers of modern welfare economics, the other being A. C. Pigou, who extended the welfare implications of Marshallian economics.

Pareto addressed the issue of how to evaluate the efficiency of resource allocation for an economy or for a particular market structure within an economy. Adam Smith had concluded that perfectly competitive markets resulted in desirable consequences, particularly higher long-term rates of growth for an economy. Increased interest in microeconomics, which began in the 1870s, led to questions concerning the efficiency of resource allocation and to the development of criteria for evaluating the merits of different economic policies that affect an economy.

Adam Smith's advocacy of laissez faire was not based on a theoretically rigorous model. It focused more on the macroeconomic consequences of markets coupled with a minimum of government intervention. In the 1890s, Pareto began evaluating microeconomic performance using the new marginal tools and became the father of the branch of welfare economics that works largely in a general equilibrium framework.

Pareto also represents a continental (particularly French and Italian) approach, as opposed to the British framework based on the partial equilibrium structure laid down by Alfred Marshall. This British line of welfare economics began with Henry Sidgwick (1838-1900), a political philosopher who contributed to economics. Sidgwick published his *Principles of Political Economy* in 1883.

It was Marshall's successor at Cambridge; A. C. Pigou, who became the father of the partial equilibrium branch of welfare economics by extending and refining Sidgwick's and Marshall's insights into market failures and externalities.

Pareto's answer to the question of evaluating the efficiency of resource allocation was straightforward: a change in resource allocation will improve welfare if one person can be made better off with no other person is being made worse off. An ideal or optimum distribution of scarce resources, a Pareto optimum, is defined as one in which it is impossible to make someone better

off without making someone else worse off. Pareto recognized that his concept of optimality was not of particular relevance for real-world problems, and in his book *Mind and Society* (1916), he explained the necessity of making interpersonal comparisons in real-world welfare analysis. However, he regarded his Pareto optimal criteria as a useful analytic extension of Walras's general equilibrium theory.

Pareto optimal policies acquired a special significance when it was determined that competitive markets will lead to a Pareto optimal position—a position from which no one can be made better off without making someone else worse off. This is one of the important conclusions that flowed from general equilibrium analysis, and it has deepened our understanding of markets.

Dear student! Did hear the word ophelimity? If so please mention some points on it. _____

_____.

At the turn of the century, Vilfredo Pareto introduced the concept of ophelimity in economics and, on the basis of scientific criteria, encouraged to narrow the amount of information we could derive from it: it should be an ordinal concept, and interpersonal comparisons of ophelimity ought to be ruled out. Would the term 'ophelimity' not be retained afterwards, this watershed has yet been confirmed by the publication in 1932 of Lionel Robbins' famous book, *An essay on the nature and significance of Economic Science*, in which he disputed the meaning of interpersonal comparisons of utility and the material definition of economics. As far as a subjective account of utility holds, there exist no way, whichever by introspection or by observation, to compare the intensity of satisfactions of two different persons. If assertions implying the meaning of cardinal utility or of comparisons, such as the rule of decreasing marginal utility are formulated, they necessarily derive from a value judgment. Notwithstanding, if economics claims to remain a science, hence to be value neutral, such comparisons should be absolutely avoided.

Paul Anthony Samuelson draws the consequences of the ban of interpersonal comparisons of utility, as well as of the restrictions of utility to the scientific theory of demand, by distinguishing the old from the new welfare economics: "While in a real sense there is only one all-inclusive welfare economics, which reaches its most complete formulation in the writings of

Bergson, it is possible to distinguish between the New Welfare Economics, which makes no assumptions concerning interpersonal comparability of utility, and the Old Welfare Economics which starts out with such assumptions."

The Pareto Criterion

Dear student! What the Pareto Criterion is about? Try from your memory.

The only uncontroversial normative criterion at the collective level for the New Welfare Economics relies on individual utilities, as far as comparing utilities among individuals is not required nor even allowed. According to Pareto "the members of a collectivity enjoy maximum ophelimity in a certain position when it is impossible to find a way of moving from that position very slightly in such a manner that the ophelimity enjoyed by each of the individuals of that collectivity increases or decreases. That is to say, any small displacement in departing from that position necessarily has the effect of increasing the ophelimity which certain individuals enjoy, and decreasing that which others enjoy, of being agreeable to some, and disagreeable to others." A social state is hence said Pareto optimal if it is not possible to improve the situation of certain individuals without making the situation of at least one other individual worse off.

Arthur Cecil Pigou (1877 – 1959)

Dear Student! Be careful in studying about Pigouvian analysis of modern welfare concept!

Great! A.C. Pigou is considered to have done a pioneering work in the field of welfare economics; he is credited for establishing a scientific welfare economics. Others who preceded him had provided what may be called 'case-to-case' studies and the areas where there was a need for state intervention for improving the welfare of the society.

But Pigou was the first to put the whole thing into a system. Those who had tried to concern themselves with the overall performance of the economy had primarily concentrated upon changes in wealth of the society; Pigou shifted on to the consideration of national welfare. He provided a

general rule where by the social welfare was to be judged with reference to social marginal cost and social marginal benefit.

Pigou was Marshall's student and teacher of J.M. Keynes. He succeeded Marshall in 1908 on the latter's retirement and held the chair of political economy till 1943. During his long career he wrote about a number of problems and exhibited his masterly touch everywhere. He was by training a mathematician and like Marshall came to economics with an intense desire to contribute to the uplifting of humanity. He wrote many books some of the major ones are:

- i. Wealth and Welfare (1912) which was later published as Economics of Welfare (1920)
- ii. The Theory of Unemployment (1933)
- iii. Socialism Versus Capitalism (1937)

Pigou starts with the assertion that the primary task of economics is to be a fruit-bearing discipline and for that reason it has to shun abstraction wherever it can though maintaining its analytical character. He said "The goal sought is to make more easy practical measures to promote welfare practical measures which statesmen may build upon the work of the economist..."

Pigou emphasizes that welfare is a very wide-range phenomenon and for practical purposes it is essential to delimit the scope of economic welfare. He stressed the need to choose that portion of welfare which can be put into quantitative terms. "The one obvious instrument of measurement available in social life is money. Hence the range of our inquiry becomes restricted to that part of social welfare that can be brought directly or indirectly into relation with the measuring-rod of money. This part of welfare may be called economic welfare."

He further said that, "Nevertheless, though no precise boundary between economic and non-economic welfare exists, yet the test of accessibility to a money measure serves well enough to set up a rough distinction. Economic welfare, as loosely defined by this test, is the subject matter of economic science. The purpose of this volume is to study certain important causes that affect welfare in actual modern societies."

He studied the factors which affect economic welfare with reference to three things. These are:

- i. the size of the national dividend

- ii. the distribution of national dividend; and
- iii. the variability of it.

Part I of his *Economics of Welfare* associates economic welfare of the society with the size of national dividend and the share of the dividend which is received by the poor. Part II covers the general influences on the size of the national dividend while part III examines the problems of labour and the share of national dividend going to it. Part IV of the study covers the difficult problem of transfers from the rich to the poor.

Pigou recognizes that economic welfare and non-economic welfare may move in opposite directions and he gives many instances in which this happens. But he thinks it a plausible assumption that total welfare of the society would move in the same direction as the economic welfare.

As far as the effect of variations in national dividend on economic welfare is concerned, Pigou would rather run the argument in terms of per capita income. Here also he maintains that though in general an increase in per capita national dividend goes with increased economic welfare, it need not necessarily be so. It is essential that we should keep in mind two things: Firstly, welfare being a subjective thing, it does not follow that any increase in per capita income will necessarily add to economic welfare. At the income levels which are sufficiently low, of course, it can be safely said that an addition to per capita national dividend would lead to a corresponding increase in economic welfare also. But once per capita income exceeds a certain level, this need not be true. We may say that a principle of diminishing utility applies to income in general also.

Secondly, the increase in per capita national dividend may be obtained at the cost of too high disutility of work. The rule should be that additional national dividend should not be produced when marginal disutility from work is equated with marginal utility from income.

Coming to the division of national dividend between members of the society, Pigou makes a qualified statement that a shift towards equality should enhance economic welfare. In this connection he first proceeds on the assumption that income enjoying capacity of all the members of the society is the same. In this situation, obviously a reduction in inequalities would increase economic welfare.

But he then refers to the typical objection that some races have low income enjoying capacity; even within a society, the poorer sections may not know what to do with increased income and may rather spend the same wastefully and to their disadvantage. Pigou, however, believes that the solution of this problem is to redistribute income in those manners which would not be quickly perceived by the poorer sections such as through price reductions; or the process may be completed rather slowly which would allow the poorer sections also to acquire more of income-enjoying capacity. Similarly, the government may provide more of public goods and 'merit goods' which would naturally enhance their total enjoyment.

Marshall's analysis of economic welfare runs in terms of partial equilibrium and partial chunks of welfare in the form of consumer's surplus and producer's surplus. In Marshall when consumer's or producer's surplus in one industry is augmented through fiscal action, the other industries in the economy are left untouched.

In Pigou, however, it is not partial but total welfare which is considered. And for this, his rule is that the allocation of resources and their utilization in different employments should be such as to lead to equality between social marginal benefit and social marginal cost.

The difference between social and private concepts of these costs and benefits is the following: The money expenses or their equivalent which a private producer has to bear at the margin would be the marginal private cost of production. Similarly, the net addition to his total revenue in money terms would be the marginal private revenue, or benefit. On the other hand, there are many costs and benefits which a particular productive activity brings to the society in addition to the private ones. The private producer cannot appropriate the value of those additional benefits nor is he called upon to pay for the additional disadvantages (or costs) which the society suffers due to his productive activities. The total money value of all the benefits including private ones would be the social benefits and the marginal social benefit of that activity is to be viewed with reference to that total.

Similarly, marginal social cost would include, in addition to the marginal private cost, additional marginal costs being incurred by the society. In most cases, the marginal private and social costs and benefits differ. We may say that there are spill-over effects which account for the divergence between the two entities.

The crucial thing in Pigou's analysis here is that left to itself the economy is likely to allocate its resources in a manner different from what the social optimum would dictate and that is in a manner different from the one where the marginal social benefit and the marginal social cost would be equated in each line of employment. These divergences ought to be remedied through fiscal and other policies.

Pigou extends his general principle of equality between social marginal cost and benefit even to the field of public finance. His principle of optimum budget or optimum state activity stresses that the public budget should ensure equality between marginal benefit to public expenditure with the marginal sacrifice which taxation imposes. This is his famous principle of maximum social advantage. Similarly, within the field of taxation, he provides the principle of least aggregate sacrifice which is ensured by imposing the tax liability upon different members of the society such that the marginal disutility of taxation is the same for every taxpayer. Ordinarily, this would entail progressive tax structure.

It can be pointed out that Pigou's welfare economics is based upon a utilitarian moral philosophy from which hedonistic elements have been removed and where the criterion used is to the "measuring rod of money." In Pigou, the analysis of welfare economics is based upon the cardinal measurement of utility, equal income-enjoying capacity of the members of community, and the assumption that it is possible to have interpersonal comparisons of utility and that the society's welfare is the sum total of individual welfare. It may also be noted that while Marshall's welfare economics is based upon partial equilibrium approach, Pigou's is that of total welfare; and while Marshallian theory runs in 'chunks' of welfare, Pigou's is set in marginal increments. On these two accounts, Marshall's theory is far more suitable for practical policy purposes than Pigou's.

3.2.2 The new welfare economics

Dear student! Let you turn to the new welfare economic considerations?

Two types of approaches of the new welfare economics have been developed in the 1930s and the 1940s, which we may call the British approach on the one hand and the American approach on the other hand.

3.2.2.1 The British approach to the New Welfare Economics

As far as the only uncontroversial normative criterion is the Pareto criterion, welfare economics establishes a clear test: a situation is economically efficient if it could not be better for the individuals without decreasing some people's satisfaction, which implies unanimity to justify any change. If it were nonetheless confined to such unanimous improvements, its object would be far too restrictive. The British approach, particularly represented by the works of Nicholas Kaldor (1939), John Hicks (1941) and Tibor Scitovsky (1941), essentially coming from the London School of Economics, developed a new concept of Pareto improvements in order to reach a decision and bypass the problem of comparisons.

They propose a 'Pareto efficiency criterion' which considers the possibility of hypothetical compensations, and then applies the test of unanimity. Because the compensations are just hypothetical, they claim their consideration does not imply any value judgments.

Imagine a single individual i loses x by a new public policy, while all others gain. The strict version of Pareto criterion cannot conclude that this policy should be implemented. Imagine now that others gain of an amount that is greater than x . would the winners compensate Mrs. i by transferring her the amount x , they would still gain from the new policy, while Mrs. i would now be at most indifferent. The change would be a Pareto-improvement, i.e. would be unanimously better, if such compensation were made. In all cases, this change passes the test of hypothetical compensations and is considered to be "Pareto-efficient", then could be recommended.

3.2.2.2 The American approach to the New Welfare Economics

What we shall call here 'the American approach' is associated with the position of Abram Bergson, from the MIT, and Paul Samuelson, from Harvard University, i.e. both coming from Cambridge (Mass.) in the United States. Bergson formalized the concept of social welfare in 1938. He defines it as a function of all the elements relevant for welfare: all products, consumer's goods, the amount of work of each type, non-labor factors, characteristics of

the environment, etc. Through the application of the Pareto criterion, the function may emphasize the “fundamental value of individual preference.” The social welfare function, as eventually formulated by Samuelson (1947), is defined as a function of the individual utility functions that each individual derive from the social state. The shape of these functions captures some value judgments that are explicitly formulated.

How can we legitimately decide which would be the right social welfare function? And what does a “social preference” even mean? The question was notably asked by the logician Olaf Helmer to Kenneth Arrow when both were working at the Rand Corporation in 1949.

Arrow provides a first answer in 1950. He shows that, under certain conditions, it is impossible to aggregate the preferences of at least three rational individuals in a single collective preference, which would itself be rational (i.e. represented by a complete and transitive relation over social states).

These conditions are the following: we must not exclude any combination of individual preferences (no restriction domain); we do not wish to resort to dictatorial decision (non-dictatorship); the collective decision should not contradict the unanimous preferences (Pareto Principle). Arrow also imposes an independence to non-relevant alternatives conditions, which he interpreted as a ban on interpersonal comparisons of utility

This impossibility is at the very least annoying: we cannot derive a collective judgment on the basis of individual preferences unless it is dictatorial. It is hence questionable whether the notion of collective welfare would at all make sense. For this reason, the New Welfare Economics seemed bound to a failure again. Fortunately, this prediction turns out not to materialize.

3.3 Forerunners of the school: A promising future for welfare economics

Dear student! In this sub section hope you will learn more interesting issues about welfare economics in the contemporary world? Would please try your own view.

Different challenges indeed need to be taken up to restore a future for Welfare economics. It should be possible to make recommendations of public policies; either interpersonal comparisons of utility are impossible and not required, or their meaning and their status should be clearly defended; a framework to explicit which value judgments are at stake is needed; it is necessary to go beyond the Arrovian impossibility to legitimate the use of social welfare function. While the economics of happiness has provided some positive evidences of the necessity to challenge the notion of welfare, the comparative approach and the theory of equity lead us to expect a promising future for a normative welfare economics.

Economics of Happiness

Back in the 1950s, Richard Easterlin has examined whether income promoted happiness in the population on the basis of opinion surveys. In his famous article published in 1974, he has observed that, in a given country, people with higher incomes are more likely to claim to be happy. However in international comparisons, at least for countries with income high enough to meet basic needs, the expressed level of happiness does not vary much with the national per capita income.

Finally, although the per Capita income has increased steadily in the United States between 1946 and 1970, expressed happiness recorded no upward trend in the long run, and even decreased between 1960 and 1970. Facing the *Easterlin paradox*, the standard public policies, which are based exclusively on economic growth, seem to be missing their target. If growth and wealth is not all what counts, the least would be to primarily identify the factors for happiness. 'Economics of happiness' is essentially a positive, interdisciplinary, and empirical literature. It describes what is, but does not study what ought to be. Happiness studies are interdisciplinary in the sense that they belong to economics, cognitive sciences, humanities and social sciences. Notice it constitutes an alternative to the standard economic model.

First, it moves away from the revealed preference model and from Since the Easterlin paradox, many studies have tried to explain why at the aggregate level, growth of national income did not necessarily enhance well-being. Among others, results of economics of happiness reveal that poverty reduce more happiness than wealth increases it; an increase of income for a poor person is more likely to increase her happiness that an increase in income for a rich person. Happiness

can be enhanced by reducing inequalities, improving working conditions, the reduction of working time and in some cases, neutralizing the negative effects of unemployment and some school reforms. Besides, we learn that the influence of purely economic factors in the happiness of people is generally overestimated in our representations as compared with factors.

However, unemployment and labor relations can have considerable influence in the lives of people. Unemployment kills happiness, even after individuals got their jobs back. Some think happiness may constitute a yardstick, and that it is possible to transcribe it in money measures, which allow cost-benefit analysis to be completed.

Lucie Davoine (2009: 905) concludes: “happiness is a necessary but not sufficient: even though the economics of happiness can prevent a form of paternalism and ethnocentrism, the surrounding methodological doubts and the objections in principle induce not to consider happiness as the barometer of public action.”

The comparative approach

Throughout his critical analysis of the welfarist approach, Amartya Sen suggested assessing social situations by considering quality of life rather than just utility or wealth. He developed the bases for the ‘comparative approach’ in general and the illustration of what it could be, the capability approach. It constitutes an intermediate response to the debate.

Good! On ‘equality of what? ’ which opposes welfarist approaches to resourcist theories. It provides rankings of situations based on explicit criteria of justice, and considers objective descriptions of life situations as relevant information to capture quality of life, i.e. an index of individual welfare as an ‘individual basis for justice’.

Quality of life may hence be better captured with functionings, which Sen defines as “what the person succeeds in doing with the commodities and characteristics at his or her command. It is an achievement of a person: what he or she manages to do or to be.

At any moment, according to his situation, his tastes, his life plans, a person may choose some particular functioning among the capability set. The wider this set is, the more the individual is free to choose between different lifestyles. The use of capabilities as an informational basis to assess quality of life therefore focuses not only on the role of commodities

in generating well-being, takes into account individual's specific ability to transform commodities into well-being, but also values for itself the freedom to choose their lifestyle.

Equity theory

The theory of fairness or equity theory, including fair allocations theory and even applications to public economics, borrowed the axiomatic methods from social choice theory and the theory of bargaining to study the implications of equity criteria in the framework of Arrow-Debreu general equilibrium model.

Different fairness criteria can be contemplated for division rules. The idea of 'no-envy' was independently introduced by Jan Tinbergen (1953), Duncan Foley (1967) and developed by Serge Christophe Kolm (1971), Allan Feldman and Alan Kirman (1974).

An allocation is 'envy-free' if no individual would like better anybody else's basket. (Envy-to desire something possessed by someone else.)

A fundamental result of equity theory is such that the competitive equilibrium with equal endowments, that is to say equal budgets, satisfies both the criteria of no-envy and Pareto. Refinements of such analyses were first conducted in the context of distribution of a consumption economy without production, then to study equal opportunities, incentives and optimal taxation, division of a single divisible good with single peaked or monotonic preferences, the allocation of several commodities, the properties of a production economy...

The no-envy criterion, however, may conflict with the criterion of efficiency. This was proved by Elisha Pazner and David Schmeidler in 1974: no allocation respects Pareto efficiency and fairness (as no-envy) in the context of production with unequal skills—in other words with production handicaps.

The non-envy test indeed requires that the allocation of individuals with identical preferences must be on the same indifference curve. According to the principle of reward, individuals with similar talents should not envy each other, since it should not be any different treatment for different preferences. And, according to the principle of compensation, individuals who have identical preferences should have the same benefit, eliminating the inequalities due to talents.

The same authors proposed in 1978 another test of fairness based on egalitarian equivalent allocations. An allocation is egalitarian-equivalent when each one is indifferent between the basket of goods in the allocation and the basket she would have in an egalitarian economy. In this perspective, Marc Fleurbaey and François Maniquet (2005) among other similar contributions considered the introduction of skills heterogeneity, and studied the consistency between compensation of skills inequalities and the condition of equal access to resources for all preferences.

The theory of equity took up the different challenges welfare economics was facing. First, it's worth noticing it eventually overcame the Arrowian impossibility. Second, it did reject interpersonal comparisons of utility. Unlike standard economics which relies on the model of subjective revealed preferences, welfare is here described as an index of resources; and unlike the comparative approach, they still keep some account of individual ordinal preferences, which avoids the risk of paternalism. Third, the theory of fairness accepts the challenge of value judgments transparency in making clear the criteria of justice.

Self-Test questions

1. Distinguish between Walras's general equilibrium approach and Marshall's partial equilibrium approach.
2. Which is preferable to policy making: general or partial equilibrium analysis? Why?
3. Are Quesnay and the physiocrats related more to Walras or to Marshall? Why?
4. "For Walras, utility was only something he needed to assume to obtain the demand results he wanted." Discuss this statement.
5. What difference would the existence of multiple equilibria make for general equilibrium?
6. Compare and contrast the British and American approaches of welfare economics?
7. Discuss on *Easterlin paradox*?
8. Discuss on the contemporary developments in the welfare economics?

Chapter Four

4 The Keynesian Economics

Chapter Objective:

Dear student! Upon successful completion of this chapter you will be able to:

- ☞ Understand the main tents of Keynesian Economics.
- ☞ Know the contribution of John Maynard Keynes to economic thought.
- ☞ Compare and contrast Keynesian economics with other schools of economic thought.

4.1 John Maynard Keynes (1883 -1946)

Dear student! Hope you are familiar with the famous name in economics. Good, let you mention some points about J. M. Keynes.

Nice! Before you go through the content let you capture some biographical information about him. John Maynard Keynes was the son of a Cambridge economist, John Neville Keynes, who was also a logician of some repute. He took his first degree in Mathematics from King's College, Cambridge (England). His University interests were wide, covering politics (he became president of the University Liberal Club), philosophy, drama, literature and art. After taking his degree in mathematics, he studied economics under Marshall and Pigou and entered the Civil Service, being assigned to the India Office.

Two years later, he returned to Cambridge, subsequently becoming a Fellow of King's College. His career, however, was by no means confined to the academic cloisters. As a result of his book Indian Currency and Finance (1913) he was appointed to a Royal Commission to examine Indian currency. In 1915 he joined the Treasury, and was given special responsibility for co-ordinating the foreign exchange expenditure of Britain and her allies on essential imports.

In 1932 he published a two-volume Treatise on Money, a widely acclaimed masterpiece, which was, in many respects, to develop the ideas which formed the basis of his magnum opus - The General Theory of Employment, Interest and Money - in 1936.

The Second World War (which Keynes had predicted so long before) brought him back into harness, and in 1940 he became an economic adviser to the Government, concerned with the mobilization of the national economy in support of the war effort. His proposals in How to Pay for the War published in 1940 - made new demands for restraint and for effective and equitable methods of financing the war (in sharp contrast to the practices of First World War). He developed new methods of national income analysis, which were to have a lasting effect on government accounting.

He played a significant role in the establishment of the International Monetary Fund, and the International Bank for Reconstruction and Development. He had been raised to the peerage in 1942 and made a number of major contributions to debates in the House of Lords. Married to the famous Ballerina, Lydia Lopokova, of the Diaghilev Ballet, Keynes took a lifelong interest in the arts. He played a leading part in the building of the Arts Theatre in Cambridge, and was responsible for the establishment of the Arts Council. These activities did not preclude him from a shrewd and highly productive involvement in financial affairs; he was Chairman of an insurance company, and he invested in a highly profitable manner, both for himself and for his College (of which he was Bursar).

In his earlier days, Keynes had been thought by many to be a dangerous, unpredictable, revolutionary character. His pro-German views in 1919 aroused intense irritation throughout the country - Noel Coward was later to write a satirical song called 'Don't let's be beastly to the Germans' which epitomized British impatience with those who were disposed to forgive Germany. But it was his General Theory which earned him accusations of undermining the capitalist system, ridiculing sacred economic institutions, and pouring scorn upon the traditional economic virtues of thrift, prudence and initiative. In fact, Keynes was no revolutionary. He stated:

I think that Capitalism wisely managed can probably be made more efficient for attaining economic ends than any ways extremely objectionable. Our problem is

to work out a social organization which shall be as efficient as possible without offending our notions of a satisfactory way of life.

This, then, was Keynes the man - a blend of radical and conservative inclinations; talented in both analysis and exposition, cultivated in all the arts, shrewd and practical in financial management, skilled in the arts of political debate and negotiation, and deeply committed to some of the major social issues of his time. All these diverse qualities, achievements, and experiences were brought together in his General Theory - a book which, like the Wealth of Nations, persuaded its own generation and governed the next. The full title of Keynes' masterpiece is The General Theory of Employment, Interest and Money, but it is usually known as his General Theory and it is accepted that its main concern is with the first of the trinity of topics in the title, i.e., employment.

4.2 The General Theory of Employment

Dear student! What do you know about Keynesian Economics? What is Keynesianism?

Please write your response on the space provided below.

Keynes, himself, says 'The ultimate objective of our analysis is to discover what determines the volume of employment' and all the concepts and relationships subsequently discussed must be assessed in the light of this objective. It was failure to understand this fact which misled some of his contemporary critics. Even the scholarly and humane Professor A. C. Pigou was too harsh in his criticism of Keynes (a fact he later graciously admitted) because he was viewing his work in the light of Marshallian economics, and had not sufficiently realized the extent to which Keynes had changed the rules of the game.

Why had Keynes made the determination of the level of employment his main concern? He was, it must be remembered, writing in the mid-1930s, when unemployment was running at an alarmingly high level, and causing wide spread distress and social tension. Whereas in the century before 1914, unemployment in Britain had averaged 3 or 4% between 1929 and 1939 it average 13%, and in 1932 it rose as far as 22%. The end of the 1920s and the start of the 1930s saw the world in the depths of a slump from which it seemed there was little prospect of emerging. The

Great Depression of the 1930s (1929-33), which devastated the major economies of the world, triggered the emergence new economic thinking.

Keynes did not believe that existing economic theory, with its strong laissez-faire bias, was capable of providing the remedy for this over-whelming economic and social malaise. The Marxists, he saw, were expressing confidence in their founder's prediction that capitalism was doomed by its inner contradictions, and were expecting its final collapse at any moment. Keynes did not accept this view (it could be urged that his General Theory is aimed as much at disproving Marxism, as disproving the theory of laissez-faire) but he recognized that unless a new economic theory could be formulated, which gave hope to thousands of disillusioned citizens, then Marxist ideology might well triumph.

4.3 Interest and Money

Say, and many of his Classical successors, had assigned a somewhat subordinate role to money, and had concentrated on the 'real' exchange (for goods, services, etc.) which goes on under the veil of money. They had seen money largely as a medium of exchange, and directed their analysis to the fundamental economic phenomena which was by no means misguided and the Classical heritage yielded many important new insights. Nevertheless, Keynes did much to restore the balance between 'real' and 'monetary' analysis.

Instead of concentrating on money as a medium of exchange, Keynes stressed its importance in the sphere of 'liquidity'. By this, he meant 'command over goods in general'.

Keynes describes 'liquidity preference' (the demand for money) as depending on their motives:

- i. the transactions motive (the need to pay for things - whether as consumer or businessman - at short notice);
- ii. the precautionary motive (as a guard against accidents, unemployment, ill-health and all the uncertainties of life); and
- iii. the speculative motive (a readiness for profitable opportunities).

It is important to emphasize the special nature of Keynes' synthesis of 'real' and 'monetary' phenomena. The Classical School, in its rejection of Mercantilist thought, had tended to

downgrade money and concentrate on 'real' wealth. Keynes helped to restore the Mercantilists view that money possessed an importance in itself. The utility school had bolstered the older classical viewpoint by arguing that money did not possess utility. Keynes widened the discussion of monetary theory by the use of his concept of liquidity (which, it might be argued) provides money with something analogous to a utility of its own in contrast to the 'medium of exchange' theory, which sees money largely as a lubricant assisting in the production and exchange of real wealth).

Marshall to some extent anticipated Keynes, but he never linked the monetary and the non-monetary economic variables as effectively as Keynes. Keynes demonstrated that the pursuit of liquidity (i.e., the desire for large cash holdings) could cause a reduction in spending and thereby in national income, production, and employment. He uses the idea of liquidity to drive a final nail in the coffin of Say's Law, and demonstrates that it was possible for people to save too much. He goes further, however, in his analysis and demonstrates that the contraction of income, production and employment continues to the point where realized saving is only equal to all profitable investment spending.

When the General Theory first appeared there was some confusion among readers as to what Keynes meant by the equality of saving and investment. It is obvious that on Keynesian assumptions, what entrepreneurs actually invest will be equal to what families actually save. Keynesian analysis reveals, however, that what entrepreneurs want to invest is not necessarily equal to what families want to save. If entrepreneurs attempt to invest more than families want to save through the multiplier, they will increase national income and thereby increase the total savings of families; if, on the other hand, they attempt to invest less than families want to save, through the multiplier they reduce national income and thereby reduce total savings. These are two categories of people taking decisions for different reasons. There is no reason why the investment decisions of some tens of thousands of entrepreneurs should match exactly the saving decisions of millions of individuals.

Investors are interested in acquiring wealth-creating assets. They choose among those that are available on the basis of the prospective yield to them from selling the output that the assets can produce. In this exercise they have to make a judgment. If they judge correctly, they make profits, and if they choose incorrectly, they make losses. The ratio between the prospective yield of an

asset's output and the acquisition cost of the asset is what Keynes called the marginal efficiency of capital.

The investor is able to compare his estimate of the present value of an asset's future earnings from selling its output against the rate of interest. If investors as a group have expectations regarding the earning capacity of assets which result in the marginal efficiency of capital, in their view, being greater than the rate of interest, they will tend to attempt to acquire assets and order new ones, with the result that employment in asset-producing industries will increase and, through the multiplier, employment in consumer-goods industries will increase. The reverse will be true where the rate of interest is greater than subjective estimates of the marginal efficiency of capital.

In describing the behavior of investors in this way, Keynes was highlighting the necessary condition for the functioning of a profit-stimulated economic system. What investors want to do depend on their subjective estimate of the profit opportunities available from acquiring assets and putting them to work, with labor, to produce output that has yet to be sold? Whether this coincides with what savers want to do will determine whether the economy as a whole is expanding or contracting or remaining in equilibrium. If the latter is the case, the intentions of both groups will be identical, but this state of equilibrium need not be one of full employment. In this manner, Keynes unlocked the door to understanding the workings of the capitalist economic system.

4.4 The Concept of the Multiplier

Dear student! Do you remember the Keynesian multiplies and its effect in income? If so please try to mention few words.

At this level hope you are familiar with this concept. Keynes directed his attack on the body of theory deriving from Say's law. Broadly speaking the Say's Law argued that, given time, unemployment would be cured by the normal operation of supply and demand. J. B. Say had argued that general over-production and unemployment could not persist because supply creates its own demand. People, who receive payments for supplying goods, are, in turn, buyers of goods. The supply of products in particular industries may temporarily outrun the demand for the products

of those industries, if entrepreneurs misjudge the demand for their goods. But in Say's view, general over-production is impossible. Say's Law, re-formulated in various minor ways, was adopted by Ricardo and became part of conventional economic theory. There was only one major dissenter T.R. Malthus. He argued that general unemployment could be caused by deficient demand.

Keynes rejected the idea that full employment is the normal state of affairs, achieved by some self-adjusting mechanism. He believed that the economy might come to rest at a position of unemployment equilibrium, i.e., an equilibrium where there were no natural forces operating (as Say had argued) to achieve full employment. Therefore, the tools of economic analysis should be directed to the fact that the level of employment is determined by certain causal factors. What are these factors? Do they operate in a way which achieves full employment, or do they lead to unemployment?

Keynes divides effective demand into two components consumption and investment. Employment depends on effective demand - i.e., the sum of expenditure on consumption, and the actual expenditure on investment. The volume of consumption in a country depends on the consumption decisions of individuals in that country. The amounts spent by the country as a whole is therefore the total of the sums spent by individuals. Keynes starts by looking at what determines the consumption of the individual. He assumes that consumption shows a definite and fairly stable functional dependence on income.

Thus, for any single consumer,

$$C = f(Y);$$

Where, C = Consumption, and

$$Y = \text{Income}$$

This functional relationship (f) between income and consumption is called by Keynes the 'propensity to consume'. The propensity to consume of the individual depends on two sets of forces - his subjective attitude to consumption, and certain objective conditions. Keynes' treatment of the subjective aspects is, it may be argued, more detailed and realistic than the treatment of

consumption by the Classical School. The Classical economists had tended to represent the main choice as between present and future consumption, and laid emphasis on the virtue of thrift.

Keynes said that decisions as to whether to consume or save are more complicated than this; an individual wishing to save money may be motivated by such feelings as pride and avarice(greed), by desire to bequeath a fortune to his heirs or by the need to provide for certain contingencies (e.g., illness or unemployment). These are motives which reduce consumption; on the other side are those which increase it (e.g., ostentation, extravagance and generosity). Similar motives may affect businesses. Some firms will be overcautious in putting funds into reserve, while others will err in the opposite direction. The businessman, motivated by what Keynes called 'animal spirits', operating in a world of uncertainty, governed by ever-changing expectations is no less affected by the constant ebb and flow of circumstance and opportunity than the consumer. All those motives, operating in their various ways, will affect the propensity to consume of the country as a whole. However, short-run changes in these subjective factors affecting the propensity to consume are unlikely.

Turning to the objective factors: apart from money income, the main objective factor will be prices. However, it is assumed, in order to construct a relatively simple theory, that prices are constant. Changes in consumers' tastes alter demand for goods, but it is thought that in the short run, these changes will not be important. Another objective factor is the rate of interest, but Keynes argued that the direct effect of the rate of interest on the propensity to consume was usually small.

With regard to their decisions to save, individuals were not, according to Keynes, as sensitive as the Classical School had imagined to interest-rate changes. Individuals first sought an acceptable level of consumption and undertook to save only when their income was more than sufficient to cover consumption requirements. In this sense, saving was a residual, varying in amounts with changes in the levels of income.

With regard to the propensity to consume, the conclusion which Keynes arrived at was that, with the exception of money income, no change in objective conditions would significantly affect an individual's propensity to consume. Keynes develops a further concept, the marginal propensity to consume. This is the proportion of any additional income which is spent on consumption. It is

reasonable to assume that rich people save a large proportion of their income than poor people (or put another way, their average propensity to save is higher).

Keynes placed great emphasis on the use of the marginal propensity to consume; he saw that it was the key to the size of the change in National Income that would be required to achieve equilibrium (i.e., to correct a situation in which businessmen wanted to invest more - or less - than people wanted to save). The greater the marginal propensity to consume, the greater will be the change in national income which results from a given change in investment or saving. This is brought about by the operation of a central Keynesian tool (developed from an earlier theory by R. F. Kahn), the multiplier.

The multiplier shows the ratio between an increase in income and the increase in investment which has given rise to it. If, in a situation of unemployment, the Government spends £1 million on public works, the workers employed on these projects spend their money on consumer goods. This increases the incomes of workers in consumer-goods industries, who in turn spend their money on more consumer goods. Thus, the country may end up with an increase in income several times the amount of the initial investment in public works. It is of crucial importance to note that the effect of the increase in investment, through the operation of the multiplier, is to increase both income and employment.

Keynes starts with a simple proposition: the size of the multiplier depends on the size of the marginal propensity to consume. If the latter is high (i.e., if people are spending a large proportion of additional income) they will generate further spending throughout the community. Therefore, the multiplier will be correspondingly high.

If their marginal propensity to consume is low (i.e., if they are saving instead of consuming extra income) then they will generate less far spending in the community. This seems a fairly obvious point, based upon common sense. Nevertheless, the great achievement of Keynes is the manner in which he integrates these two concepts - marginal propensity to consume, and the multiplier - into a theoretical model designed to combat unemployment.

Later developments in multiplier theory have added many refinements (and aroused fresh controversies), but it enters the history of economic thought as an important new concept, not only theoretically elegant, but of direct relevance to public policy.

4.5 Theory of Employment and Price

Keynesian enthusiasts favor government involvement and are more concerned about people having jobs than they are about inflation. They see the role of workers as using their abilities to contribute for the good of society. Keynesians do not worry about the cost of goods or the purchasing power of the currency.

Classical economists have some concerns about unemployment but are more worried about price inflation. They see inflation as the biggest threat to a strong long-term growth of the economy. Classicists believe the economy will always seek a level of full employment. They think unemployment results from government interference in the free market or the existence of a monopoly in an industry.

Classical supporters want a market that is free to find its own levels of supply and demand. They believe that prices should fluctuate based on the wants of consumers. The market will adjust itself to any shortages and surpluses of products. Keynesians believe prices should be more rigid and that government should try to maintain price stability. They would like to see the government influence people and corporations to keep prices within specified ranges.

4.6 Classical Economics Vs Keynesian Economics

Dear student! Before you read the material please take minutes to retrieve your own!

It is important to remember that an important point of departure by Keynes from Classical theory lies in Keynes' insistence that spending and saving are predominantly 'functions' of the level of income. He emphasized that the amount of saving done in the economy is not influenced as much as previously thought by the extent of opportunities for profitable investment, although of course, these opportunities do play some part. Saving is far more heavily dependent on people's incomes than upon the demand of the entrepreneurs for new capital. Whereas the Classical School had seen the amount of savings as responding to changes in the rate of interest, Keynes argued that it

depended mainly on the level of incomes, and that saving does not always respond easily and smoothly to changes in the demand for capital.

According to Keynes, a level of national income is finally established at a point where saving and investment are in equilibrium with each other. A levels of national income where saving and investment are not in equilibrium is unstable, and it will change until it is at a level at which the amount which families want to save is equal to what entrepreneurs want to invest. It should be noted, however, that this equilibrium level might involve large-scale unemployment. In other words, there is nothing particularly admirable about an equilibrium level of national income. If investment is low, the equilibrium level will involve unemployment and unused resources. The only level of national income which Keynes was prepared to regard as desirable was one near to full employment. We end up with a high level of employment only if investment opportunities match full employment saving. A deflationary gap arises if they fail to do so, and its size is measured by the deficiency of investment scheduled at full employment, compared with full-employment saving. There are no automatic forces argued Keynes - which achieve equilibrium at the level of full employment.

It may be necessary for the Government to intervene, either by raising consumption directly (e.g., through tax cuts, social-security payments, pensions, etc.), or by introducing public-investment programs. The resulting increase in effective demand assisted by the operation of the multiplier will help to achieve the only equilibrium level which Keynes thought was justifiable - the one which achieves full employment.

It would be unfair, however, in defending Keynes, to accuse the Classical School of complacency over a low level of employment and output. They believed, as we have seen, that there were forces working naturally and spontaneously within the economy which would increase the level of employment. These forces depended, however, on the flexibility of wage rates. Classical theory argued that a country could employ a larger labour force if the average real wage is allowed to fall. This theory, it will be remembered, was based upon the law of diminishing returns (which stated that the more men were employed, give a fixed amount of capital equipment, the less each additional man would produce) and the law of marginal productivity (which postulated that the wage of the men employed would be equal to the value of what they produced).

Keynes does not challenge these two basic laws, but he argues ingeniously that under his system of aiming at full employment, real wages can be reduced less painfully by rising prices. This would come about as follows - as employment increased, output would increase less than proportionately and costs per unit of output would rise. Rising costs would lead to rising prices and therefore, since money wages would not rise proportionately, to falling real wages. The Classical School had argued that we should cut real wages to secure full employment. Keynes stood this argument on its head, and argued that we should first go for full employment, and this would have the effect of reducing real wages. As Keynes stated - 'it can only be a foolish person who would prefer a flexible wage policy to a flexible money policy, unless he can point to advantages from the former, which are not obtainable from the latter. Moreover, other things being equal, a method which it is comparatively easy to apply should be deemed preferable to a method which is probably so difficult as to be impracticable.'

The Classical school would have queried the 'economic efficiency' argument. Their concern for micro-economic analysis implied that the goal of full employment could, in certain circumstances, leads to a mis-allocation of resources, and - it may be argued - contemporary experience leads weight to their doubts and suspicions (although nowadays we would describe this mis-allocation as over-full employment).

4.7 The policy implications of classical Vs the policy implications of Keynesians

Keynesian economics subsumed policy argumentation and developed a model that had built into it the need for activist government policies. In this model, aggregate demand controlled the level of income in the economy, and the government had to control aggregate demand through monetary and fiscal policies.

During the 1950s and 1960s, Keynesian policy came to mean fine-tuning through monetary and fiscal policy. Abba Lerner (1903-1982) was an influential force in directing Keynesian analysis toward such fine-tuning. In his *Economics of Control* (1944), Lerner advocated that government not follow a policy of *sound finance* (always balance the budget); it should instead follow a policy of *functional finance*, which considered only the results of policies, not the policies themselves.

4.8 Keynesian Economics and Underdeveloped Countries

Dear student! Do you think that Keynesian economics is appropriate to developing countries?

The Keynesian theory is not applicable to every socio-economic set-up. It only applies to advanced democratic capitalist economies. As Schumpeter wrote, “Practical Keynesianism is a seedling which cannot be transplanted into foreign soil; it dies there and becomes poisonous before it dies. But left in English soil this seedling is a healthy thing and promises both fruit and shade. All this applies to every bit of advice that Keynes ever offered.”

Before we study the applicability of Keynesian economics to underdeveloped countries, it is essential to analyze the assumptions of Keynesian economics vis-a-vis the conditions prevailing in underdeveloped economies.

Keynesian Assumptions and Underdeveloped Countries:

The Keynesian economics is based on the following assumptions which limit its applicability to underdeveloped countries:

(1) The Keynesian theory is based on the existence of cyclical un-employment which occurs during a depression. It is caused by deficiency in effective demand. Unemployment can be removed by an increase in the level of effective demand.

But the nature of unemployment in an underdeveloped country is quite different from that in a developed economy. In such economies unemployment is chronic rather than cyclical. It is not due to lack of effective demand but is the result of deficiency in capital resources.

Apart from chronic unemployment, underdeveloped countries suffer from disguised unemployment. Keynes was concerned with the removal of involuntary unemployment and the problem of economic instability.

So he did not refer to disguised unemployment and its solution. The remedy for the chronic and disguised unemployment is economic development to which Keynes paid no attention at all. Thus

the Keynesian assumptions of cyclical unemployment and economic instability are hardly tenable in an underdeveloped economy.

(2) The Keynesian economics is a short period analysis in which Keynes takes “as given the existing skill and quantity of available labour, the existing quantity and quality of available equipment, the existing technique, the degree of competition, the tastes and habits of the consumer, the disutility of different intensities of labour and of the activities of supervision and organisation, as well as social structure.” The development economics, however, is a long period analysis in which all the basic factors assumed by Keynes as given, change over time.

(3) The Keynesian theory is based on the assumption of closed economy. But underdeveloped countries are not closed economies. They are open economies in which foreign trade plays a dominant role in developing them.

Such economies primarily depend on the exports of agricultural and industrial raw materials and the imports of capital goods. Thus the Keynesian economics has little relevance to underdeveloped countries in this respect.

(4) The Keynesian Theory assumes an excess supply of labour and other complementary resources in the economy. This analysis refers to a depression economy where “the industries, machines, managers and workers, as well as consumption habits, are all there, only waiting to resume their temporarily suspended functions and roles.” But in underdeveloped economies, there is no temporary suspension of economic activity. Economic activity is static, capital, skills, factor supplies and economic infrastructure are woefully lacking.

(5) Moreover, it can be inferred from the above assumption that labour and capital are unemployed simultaneously, according to the Keynesian analysis. When labour is unemployed, capital and equipment are also not fully utilised or there is excess capacity in them. But this is not so in underdeveloped countries. When labour is unemployed, there is no question of capital being unutilized because there is acute shortage of capital and equipment.

The Keynesian Tools and Underdeveloped Countries:

Thus the assumption on which the Keynesian theory is based is not applicable to the conditions prevailing in underdeveloped countries. We now study the principal tools of the Keynesian theory to test their validity to underdeveloped countries.

1. Effective Demand:

Unemployment is caused by the deficiency of effective demand, and to get over it, Keynes suggested the stepping up of consumption and non-consumption expenditures. In an underdeveloped country, however, there is no involuntary unemployment but disguised unemployment.

Unemployment is caused not by lack of complementary resources. The concept of effective demand is applicable to those economies where unemployment is due to excess savings. In such a situation the remedy lies in stepping up the levels of consumption and investment through various monetary and fiscal measures.

But in an underdeveloped economy income levels are extremely low, the propensity to consume is very high and savings are almost nil. All efforts to increase money incomes through monetary and fiscal measures will, in the absence of complementary resources, lead to price inflation.

Here the problem is not one of raising the effective demand but one of raising the levels of employment and per capita income in the context of economic development. “The economic progress consists of two distinct categories: one, where at the given level of economic development, you move from low employment to full employment, and the other, where you move from full employment at a given level of economic development to full employment at the next higher level of economic development. The Keynesian thesis applies only to the first category.”

2. Propensity to Consume:

One of the important tools of Keynesian economics is the propensity to consume which highlights the relationship between consumption and income. When income increases, consumption also increases but by less than the increment in income.

This behaviour of consumption further explains the rise in saving as income increases. In underdeveloped countries, these relationships between income, consumption and saving do not hold. People are very poor and when their income increases, they spend more on consumption goods because their tendency is to meet their unfulfilled wants.

The marginal propensity to consume is very high in such countries, whereas the marginal propensity to save is very low. The Keynesian economics tells us that when the MPC is high, the consumer demand, output and employment increase at a faster rate with the increase in income.

But in an underdeveloped country, it is not possible to increase the production of consumer goods due to the scarcity of co-operant factors, when consumption increases with the rise in income. As a result, prices rise instead of a rise in the level of employment.

3. Saving:

On the saving side, Keynes regarded saving as a social vice for it is excess of saving that leads to a decline in aggregate demand. Again, this idea is not applicable to underdeveloped countries because saving is the panacea for their economic backwardness.

Capital formation is the key to economic development and capital formation is possible through increased saving on the part of people. Underdeveloped countries can progress by curtailing consumption and increasing saving, as opposed to the Keynesian view of raising consumption and reducing saving. To underdeveloped countries, saving is a virtue and not a vice.

4. Marginal Efficiency of Capital:

According to Keynes, one of the important determinants of investment is the marginal efficiency of capital. There is an inverse relationship between investment and MEC. When investment increases, the MEC falls, and when investment declines, the MEC rises.

This relationship is, however, not applicable to underdeveloped countries. In such economies, investment is at a low level and the MEC is also low. This paradox is due to the lack of capital and other resources, small size of the market, low demand, high costs, underdeveloped capital and money markets, uncertainties, etc. All these factors keep the MEC (profit expectations) and investment at a low level.

5. Rate of Interest:

The rate of interest is the second determinant of investment in the Keynesian system. It is, in turn, determined by liquidity preference and the supply of money. Of the motives for liquidity preference, the transactions and precautionary motives are income elastic and they do not influence the rate of interest.

It is only the demand for money for the speculative motive that affects the rate of interest. In underdeveloped countries, the liquidity preference for transactions and precautionary motives is high and for the speculative motive low.

Therefore, liquidity preference fails to influence the rate of interest. The other determinant of the interest rate is the supply of money. According to Keynes, increase in the supply of money lowers the interest rate and encourages investment, income and the level of employment.

But in underdeveloped countries, an increase in the supply of money leads to the rise in prices rather than to the fall in interest rate.

6. The Multiplier:

Dr. V. K. R.V. Rao has analyzed the feasibility of applying the Keynesian multiplier theory and policy implications to an underdeveloped country. According to Dr. Rao, Keynes never formulated the economic problems of underdeveloped countries nor did he discuss the relevance to these countries for either the objective or the policy that he proposed for the more developed countries.

The result has been a rather unintelligent application of Keynesian economics to the problems of underdeveloped countries.

7. Policy Measures:

Not only this, even the Keynesian policy prescriptions are hardly tenable under the conditions prevailing in underdeveloped countries. Dr. Rao maintains that an attempt to increase investment through deficit financing leads to an inflationary rise in prices rather than to an increase in output and employment.

He is, therefore, of the view that “the economic policy of deficit financing and disregard for thrift advocated by Keynes for securing full employment does not apply in the case of an underdeveloped country.”

But in another essay, he contends that deficit financing, for capital formation does not lead to inflation since it is used for increasing the capacity and thereby imparting elasticity to the supply curve of output. However, a certain measure of price rise is inevitable but it is of a “self-liquidating character:”

He points out that the history of war finance shows that forced savings obtained through a rise in prices, when used for capital formation, are nothing but deficit financing for economic development. “The only question is the extent in which it is wise to resort to deficit financing; and the obvious answer is that deficit financing should not be restarted to beyond the point at which it becomes inflationary.”

Das Gupta advocates the use of Keynesian policy of public investment to achieve a higher standard of living and to provide increasing employment opportunities in underdeveloped countries.

But in the absence of adequate public savings and the flow of foreign capital, he advocates deficit financing which if not accompanied by a system of price and capital issue controls, in the transitional period, will lead to inflationary rise in prices. He, however, emphasizes that “we would be deceiving ourselves if we thought that the process could function within the framework of a liberal economy, such as Keynes sought so anxiously to preserve.

During recessions, government should satisfy peoples demand for more cash preventing the downward spiral of shrinking income and shrinking spending via monetary expansion. But Keynes worried that even this might sometimes not be enough, particularly if a recession had been allowed to get out of hand and become a true depression. Once the economy is deeply depressed, households and especially firms may be unwilling to increase spending no matter how much cash they have; they may simply add any monetary expansion to their hoarding. Such a situation, in which monetary policy has become ineffective, has come to be known as a “liquidity trap”. In such a case, the government has to do what the private sector will not: spend. When monetary expansion is ineffective, fiscal expansion must take its place. Such a fiscal expansion can break the vicious circle of low spending and low incomes and getting the economy moving again.

To sum up, the achievements of Keynes lie in both theoretical analysis and in recommendations to Governments in the sphere of public policy. In the former, his claim to fame lies in his bringing together of 'monetary' and real 'phenomena'; his emphasis on macro-economic - or state of the economy as a whole - (in opposition to what he regarded as the classical obsession with micro-economics - individual markets, and individual firms, worker and consumers), and the carefully formulated reasons for the possibility of continuing under-employment equilibrium which the Classical School had not fully acknowledged.

In the sphere of public policy, Keynes came to rival (and perhaps even out-strip) Adam Smith in his influence on statement and administrator. Although it could be argued that his basic ideas on economic management were more systematically enforced by Nazi Germany, president Roosevelt's (of the USA) New Deal Program in the 1930s in some aspects followed Keynesian theory rather than remedies of the Classical School by aiming at a high level of public spending (in excess of what it received in tax revenues) on land reclamation, irrigation, roads, harbors, leisure and recreational projects, public buildings, and a host of other schemes. This was one of the first practical applications of public spending generating successive waves of employment, through the operation of the multiplier. There is still some controversy among economists about the effectiveness of the Roosevelt programmes, and it is true that unemployment rose again towards the late 1930s. Some economists attribute this to a lack of business confidence due to Roosevelt's apparent acceptance of the principle of budget deficits; other believe that the considerable size of idle productive capacity which Roosevelt had inherited made it extremely difficult to achieve a high level of employment.

Nevertheless, American experience did much at the time to secure public acceptance to Keynesian ideas. Rightly or wrongly, it seemed as if, at last, here was a body of abstract economic theory which provided explicit and immediate guidance to those involved in practical policy-making and administration.

Keynes was criticized - both during his lifetime, and since - for taking too short-term dynamic factors which cause change and innovation. A contemporary of Keynes, Professor Joseph Schumpeter, for example, emphasized those elements which he thought that Keynes had taken too much for granted - the role of creative entrepreneurship and innovation in explaining business investment and economic growth (a theoretical development of certain aspects of Marshallian

analysis). Keynes' famous reply to those of his critics who thought him obsessed with immediate problems - 'in the long run we are all dead' - was perhaps unfair to those of his fellow - practitioners whose patient scholarship was throwing new light on longer-term problems of economic change.

Finally, it must be repeated that Keynes was not a collectivist; he was essentially an exponent of the mixed economy and he argued that the relative agenda for public and private economic activity was not inflexible fixed for all time, but could vary from decade to decade, and must take account of people's fears and aspirations, as well as objective economic data.

His attack on the Classical School was admittedly sharply polemic, at times unfair, and occasionally cruel. We must remember, however that there is a good deal of polemic in most of the great economists (Adam Smith's denunciations of the mercantilists and Marx's repudiation of his classical predecessors often went further than the neutral standards gentlemanly scholarship permitted). Keynes admitted his propensity to rush into battle against the Classical economists

I must ask forgiveness if, in the pursuit of sharp distinctions, my controversy is itself too keen. I myself held with conviction for many years the theories which I now attack, and I am not, I think, ignorant of their strong points.

Keynes believes, however, that if he had written a rather more gentlemanly and bland book, paying generous tribute to Classical wisdom, and nothing to his disagreement in a muted manner, the critics would have missed the radical implications of his central theme, and quoted heavily those sections which supported the views of his predecessors and contemporaries.

Self-Test Exercises

1. Identify and briefly state the significance of each of the following to the history of economic thought: John Maynard Keynes; *The General Theory of Employment, Interest and Money*; consumption function; marginal propensity to consume; marginal propensity to save; marginal efficiency of capital; liquidity preference; equilibrium income and employment.
2. What caused the emergency of Keynesian school? Why? How do you distinguish from the classical thoughts?
3. According to Keynes, an economy can be at equilibrium only if it is at full employment level. Explain.
4. Distinguish between Keynes' voluntary and involuntary unemployment.
5. What is the mathematical relationship between marginal propensity to consume and marginal propensity to save? Prove it.
6. Compare and contrast Classical's and Keynes's view on wage, price, and interest.
7. What is marginal efficiency of capital?
8. Discuss on the applicability of Keynesian economics to underdeveloped countries.

Chapter Five

5 The Post Keynesian Development in Economic Thought

Chapter Objectives:

Dear student! Up on successful completion of this chapter you will be able to:

- ☞ Understand how the 1940s, 1950s and 1960s economists have improved on the ideas of Keynesian economics.
- ☞ Distinguish the most important contributors of the time.
- ☞ Discuss how econometrics emergence as the sister discipline of economics.
- ☞ Elaborate the Neo Keynesians, neo-Walrasians, and monetarists.
- ☞ Compare and contrast Capitalism and the radical view.

5.1 Emergence of Modern Macroeconomics

Dear student! Whom do think are the important contributors of post- Keynesian economics?

Do you think that they agree with Keynesian ideas or disagree? Please try your own.

Good! The most important influence of the Keynesian economics was its synthesis, or integration, into the general body of accepted economic principles. The greatest influence in this was Professor Paul Samuelson's *Principle of Economics*. The book explained the ideas and principles of Keynesian economics, not to the exclusion of, but together with the orthodox principles of evolving neo-classical economics. Samuelson's book was widely used, and soon widely imitated. Others were also expounding their anti-Keynesian stand. Their leader was Professor Milton Friedman of the University of Chicago. These two giants in the area of economics have had profound effects on the growth of the field of economics. Both of them have won the Nobel Prize for Economic Sciences. For a better appreciation of their influence, a brief background of these two economic is given below.

Professor Paul Anthony Samuelson (1915-2009) was born in Indiana and educated at the universities of Chicago and Harvard. He was appointed professor of economics at the

Massachusetts Institute of Technology in 1940 [emeritus professor since 1985]. He worked for the US Treasury for seven years after World War II and has acted as a consultant to many government bodies. Much of his work has appeared in Journals. His publications include *Foundations of Economic Analysis* (1947), *Economics* (1948) and *Linear Programming and Economic Analysis* [with R. Dorfman and R.M. Solow] (1958).

Professor Samuelson developed the Heckscher-Ohlin principle by showing how an increase in the price of a commodity can raise the income of the factor of production, which is used most intensively in producing it. This led to his formulating the Factor Price Equalisation Theorem, which states the conditions under which, as free trade in commodities narrows differences in commodity prices between countries, in so doing the prices (incomes) of factors of production are also brought into line. In other words, free trade is a substitute for the free mobility for the factors of production. Professor Samuelson has made important contributions to the development of mathematical economics, general equilibrium theory and the theory of consumer behaviour. To free the last from what he considered to be the constraint of the traditional concept of utility, he invented revealed preference. In macroeconomic theory he was the first to formulate the interaction between the accelerator and the multiplier in the article he wrote in 1939. Moreover, he was a leading figure on the side of neo-classical economics in the debate with the Cambridge School regarding the integration of classical microeconomics and modern macroeconomics in growth theory.

Professor Milton Friedman (1912 -) was born in New York and educated at the universities of Chicago and Columbia. Professor Friedman is a leading member of the Chicago School. He worked for the Natural Resources Commission in Washington, followed by research at the National Bureau of Economic Research. During World War II he served in the Tax Research Division of the US Treasury and then the Statistical Research Group of the Division of War Research, Columbia University. He was appointed Professor of economics at the University of Chicago in 1948 and he served there until his retirement in 1979. In 1976 he was awarded the Nobel Prize in Economics by the Royal Swedish Academy of Sciences.

Friedman is known for his studies on the influence of the quantity of money [bank deposits and currency] in an economy on the level of production. He is strong believer in the efficiency of the

market and minimal government interference. In his view, changes in the money supply cause changes in the level of production, not the other way round, and controlling the money supply is the most effective way to tackle inflation. These ideas were a major influence on the government economic policy in Britain under Margaret Thatcher and the USA under Ronald Reagan during the 1980s. He also proposed a theory of permanent income, in which an individual's spending decisions depend not on his or her wealth at the time but on expected lifetime wealth.

Friedman has made contributions to the theory of distribution, arguing for an approach in which high incomes are regarded as a reward for taking risks. He has also been a leading defender of the Marshallian tradition of microeconomics and made a methodological defense of classical economics that stimulated controversy for a decade. His permanent – income-hypothesis was also an important contribution to the theory of the consumption function. His main work, however, has been on the development of the quantity theory of money and its empirical testing. He has extended the Fischer equation to include other variables such as wealth and rates of interest, and has made statistical tests to attempt to measure the factors determining the demand for money hold. Friedman has advocated strict control of the money supply- preferably in accordance with a simple rule as to how much growth will be allowed year by year – as a means of controlling inflation. His view that it is not desirable to fine-tune the economy using stabilization policy has to a large extent been accepted, but in the world of economic theory Friedman's findings have been overshadowed by the more elegant route to similar conclusions based on rational expectations, and associated with new classical economics.

Rational Expectations and Supply-Side Economics

During the 1970s and 1980s two new theories were gaining increasing acceptance: the theories of rational expectations and supply-side economics. Both of these theories work within the basic assumptions of neo-classical economics and both challenge the theoretical propositions of Keynesian economics.

In 1995 Robert Lucas won the Nobel Prize for his seminal work on the rational expectations hypothesis. Described by the Economist as the most influential macroeconomist of his generation, Lucas's theories have doubtless undermined traditional Keynesian economics and paved the way

for new classical economics. This highly mathematical theory dominated all economic thought in the 1970s and early 1980s and it appeared that it would replace all Keynesian thinking. The citation from the Royal Swedish Academy of Sciences states: the Academy has decided to award the Nobel Prize in Economics to Professor Robert E. Lucas, of the University of Chicago, for having developed and applied the hypothesis of rational expectations, thereby having transformed macroeconomic analysis and deepened our understanding of economic policy.

Prize Press Release further documented that Robert Lucas is the economist who has had the greatest influence on macroeconomic research since 1970. His work has brought about a rapid and revolutionary development: application of the rational expectations hypothesis emergence of an equilibrium theory of business cycles, insights into the difficulties of using economic policy to control the economy, and possibilities of reliably evaluating economic policy using statistical methods. In addition to his work in macroeconomics, Lucas's contributions have a very significant impact on research in several other fields.

The central concept of supply side economics is that tax cuts cause economic growth. Tax cuts allow entrepreneurs to invest their tax savings, which creates higher productivity, jobs and profits. This, ironically, allows the entrepreneur and his new workers to pay even more taxes, even at lower rates.

The supply-side is a simple one, and makes a popular political message. However, it is interesting that mainstream economists, even the conservative ones, almost universally reject supply-side theory. In the early 1980s, the influential and multi-partisan American Economic Association had 18,000 members. Only 12 called themselves supply-side economists. During the 1980 presidential campaign George Bush called supply-side economics voodoo economics! And yet he was doing so with a full backing of the America's economic community. Thus, it is obvious that conservative does not necessarily equate to supply-side economics, as mainstream conservative economists generally believe that tax cuts should be accompanied by spending cuts – that is, fiscal responsibility. Supply side economists believe that taxes should be cut – period. Spending cut and deficits, they believe, are not important considerations. However, it may be pointed out that an unusually high percentage of supply-siders of the 1980s were not economists at all but rather journalists without any formal training in the discipline.

Where does "supply-side economics" fit in the Keynesian – monetarist controversy? It does not, really. But it makes the Keynesian prescription look somewhat irrelevant. The Keynesian economics focuses on "demand side" economics.

In our consideration of macroeconomics, we saw that mainstream macroeconomics has followed only one of the many threads found in Keynes's writings. This situation arose partly from the general inability of economists to reach a consensus on what exactly Keynes was saying about the working of the macro- economy. In the 1970s, therefore, a group led initially by Sidney Weintraub and Paul Davidson on this side of the Atlantic and by Joan Robinson and John Eatwell in England joined forces in articulating a criticism of the mainstream neo-Keynesian model that was specific enough to allow its authors to view themselves and be viewed as an economic school. Calling themselves post-Keynesians, they held an organizational meeting in 1974, at which they founded their publication, the *Journal of Post-Keynesian Economics* (JPKE). In the inaugural issue of that journal, the various founders and supporters attempted to state what post- Keynesian economics meant to them. Joan Robinson called it a "method of analysis which takes account of the difference between the future and the past"; J. K. Galbraith said it considers that "an industrial society is in a process of continuous and organic change, that public policy must accommodate to such change, and that by such public action performance can, in fact, be improved." Other writers focused on different issues, but all agreed that neoclassical and neo-Keynesian economics are inappropriate. They came to view themselves, therefore, as the true keepers of the Keynesian faith, calling mainstream macroeconomics "bastard Keynesianism."

British Post-Keynesians

The general statements that embody the concepts underlying most post-Keynesian analysis have not proved particularly problematical, but the specifics drawn from them have. The British post-Keynesians (sometimes called neo-Ricardians) believe that the correct approach is to go back to the Ricardian theory of production and supplement it with a Kalecki class theory of business cycles. Following the work of Piero Sraffa in *Production of Commodities by Means of Commodities: Prelude to a Critique of Economic Theory* (1960), they argue that the division of income between wages and profits is indeterminate and independent of total output. Hence, the distribution of income is determined not by marginal productivity but by other forces, which are macroeconomic in nature. In this view, they follow a model similar to one presented by Michal

Kalecki in 1933, which he summed up in the statement that workers spend what they get and capitalists get what they spend.

American Post-Keynesians

The American branch of post-Keynesian theory is more diffuse than the British, but all its elements are variations on the theme that the economy is “in time.” Alfred Eichner has extended the microeconomic analysis of the firm, which he calls the megacorp, arguing that it determines investment internally from retained profits. Hence, to understand investment—and thereby total output—one must understand the modern corporation.

In *Money and the Real World*, Paul Davidson (1930-) contends that understanding the role of money is central to understanding how the macroeconomy works and that neoclassical economics has not adequately addressed its role. In developing the post-Keynesian role of money, he emphasizes the existence of irreversible time and true uncertainty, which cannot be reduced to a probability distribution and hence cannot be changed to risk and then to certainty equivalents. These two interrelated characteristics of the economy have “led man to develop certain institutions and rules of the game, such as (i) money, (ii) money contracts and a legal system of enforcement, (iii) sticky money-wage rates, and (iv) spot and forward markets.” Thus, institutions change the way in which the macroeconomy operates. Davidson’s view resembles somewhat that of Hyman Minsky (1919-1997), another well-known post-Keynesian, who argues that the financial system is like a house of cards in imminent danger of collapse.

Post-Keynesian growth theory emphasizes methodological issues and, therefore, is a matter of perspective. It emphasizes growth as an important aspect of the economic process, whereas until recently mainstream economists emphasized static issues. For example, Roy Harrod and Evsey Domar’s analysis of growth, which in the 1950s was a fundamental part of mainstream macroeconomics, now rarely appears in mainstream intermediate macroeconomics textbooks. Instead new books discuss stable, endogenous growth. This partially accounts for the post-Keynesian focus on instability, because the Harrod-Domar model suggested that equilibrium in the economy is always on a knife-edge bordering boom and bust. ¬

In post-Keynesian work as a whole, one sees a consistency of conceptualization, if not of models. An enduring concept is that the economy is not stable: the invisible hand of the market does not work as well as neoclassical theory suggests. It follows that post-Keynesians see a much stronger

role for government action in correcting the problems of capitalism than does orthodox theory. Post-Keynesians are best known for their support of tax-based incomes policies (TIP).

5.2 The emergence of Econometrics as the sister discipline of economics

By the 1960s, Mitchell's approach to empirical analysis for the macro economy was supplanted by the econometric approach in both microeconomics and macroeconomics. There were a number of reasons why the mainstream turned away from Mitchell's methodology and toward econometrics: (1) the further development of statistical and econometric methods, which avoided some of Moore's problems; (2) the strong desire on the part of the profession and the society for precision in implementing and testing theories; (3) the development of mathematical economics; (4) the hope that econometrics would turn economics into an exact science; and (5) brilliant and strong-willed advocates of the econometric methods who proselytized for this approach.

E.J. Working and the Identification Problem

One of the developments that pushed forward the econometric approach in microeconomics was E. J. Working's (1900-1968) approach to the identification problem. A simple correlation between price and quantity that provides a "good fit" of the data has little meaning, because economic theory states that price and quantity are determined by an interaction of supply and demand. Has one found a supply curve or a demand curve?

Working showed that if one could independently specify supply, so that one precisely knew the supply relationship and how it would shift, the derived points would estimate a demand curve. Alternatively, if one independently specified the demand relationship, one could estimate a supply curve. If one could not independently specify either, then one could not estimate either a supply or a demand curve without additional information.

This "solution" to the identification problem made it possible, in principle at least, to specify empirically static relationships even if *ceteris paribus* conditions did not hold. It was believed that as calculating technology improved (which it has done with computers), better relationships between static theory and empirical theory and empirical measurement would be forthcoming.

Keynesian Theory and Macro econometrics

It was not developments in microeconomics that primarily propelled econometrics forward in the 1930s; it was developments in macro econometrics. The Great Depression turned economists' thoughts to macroeconomics. By the late 1930s, Keynesian theory was sweeping the field, and there were strong efforts to provide satisfactory explanations for, and policies to address, the Depression. Thus, the history of econometrics in the 1930s through the 1960s focuses on macro econometrics.

The interest in macroeconomic modeling in the 1930s was logical. During this time macroeconomics was enormously influenced by Keynesian macroeconomics, and there were attempts to find empirical counterparts to the Keynesian theory. A number of estimates of the multiplier were derived. Colin Clark estimated the multiplier at somewhere between 1.5 and 2.1; Kalecki estimated it at about 2.25.

Of course, the multiplier made sense only if Keynesian theory made sense, so there was a strong push to determine empirically whether Keynesian theory was correct. There were many attempts to measure the relationship between consumption and income, what Keynes had called the "consumption function." During this period there was also a loss of faith in the automatic tendency of economic forces to push the economy toward full employment and a corresponding increased interest in central planning. Such central planning required one to estimate relationships in the economy. Thus, it is not surprising that important work took place in institutes like the Netherlands Central Planning Bureau.

5.3 Neo Keynesians, Neo-Walrasians, and Monetarists

Neo-Keynesian Economics

Neo-Keynesian economics is a school of macroeconomic thought that was developed in the post-war period from the writings of John Maynard Keynes. A group of economists (notably John Hicks, Franco Modigliani, and Paul Samuelson), attempted to interpret and formalize Keynes' writings, and to synthesize it with the neo-classical models of economics.

Key points:

- Keynesian theory does not see the market as being able to naturally restore itself.

- Neo-Keynesian theory focuses on economic growth and stability rather than full employment.
- Neo-Keynesian theory identifies the market as not self-regulating.

One point of departure from classical Keynesian theory was that it did not see the market as possessing the capacity to restore itself to equilibrium naturally. For this reason, state regulations were imposed on the capitalist economy. Classic Keynesian theory only proposes sporadic and indirect state intervention.

Just as Keynes posited his theory in response to gaps in classical economic analysis, Neo-Keynesianism derives from observed differences between Keynes's theoretical postulations and real economic phenomena. The Neo-Keynesian theory was articulated and developed mainly in the U.S. during the post-war period. Neo-Keynesians did not place as heavy an emphasis on the concept of full employment but instead focused on economic growth and stability.

The reasons the Neo-Keynesians identified that the market was not self-regulating were manifold. First, monopolies may exist, which means the market is not competitive in a pure sense. This also means that certain companies have discretionary powers to set prices and may not wish to lower or raise prices during periods of fluctuations to meet demands from the public. Labor markets are also imperfect. Second, trade unions and other companies may act according to individual circumstances, resulting in a stagnation in wages that does not reflect the actual conditions of the economy. Third, real interest rates may depart from natural interest rates as monetary authorities adjust the rates to avoid temporary instability in the macro economy.

The two major areas of microeconomics by Neo-Keynesians are price rigidity and wage rigidity. In the 1960s, Neo-Keynesianism began to examine the microeconomic foundations that the macro economy depended on more closely. This led to a more integrated examination of the dynamic relationship between microeconomics and macroeconomics, which are two separate but interdependent strands of analysis.

The two major areas of microeconomics, which may significantly impact the macro economy as identified by Neo-Keynesians, are price rigidity and wage rigidity. Both of these concepts intertwine with social theory negating the pure theoretical models of classical Keynesianism.

For instance, in the case of wage rigidity, as well as influence from trade unions (which have varying degrees of success), managers may find it difficult to convince workers to take wage cuts on the basis that it will minimize unemployment, as workers may be more concerned about their own economic circumstances than more abstract principles. Lowering wages may also reduce productivity and morale, leading to overall lower output.

The two American Nobel Prize winners in economics, Joseph Stiglitz, and Paul Krugman are our time most famous exponents of the neo-Keynesian economic theory with its political diversions in combating the negative effects of crisis and recession.

Neo-Walrasian Theory: The Possibility of Disequilibrium at a Given Trading Round

Disequilibrium as a trading round outcome—that is, market non-clearing—within the Walrasian approach: first Patinkin's slow adjustment claim and, second, Barro and Grossman's fix-price model.

1.1 The Exclusion of Trading Round Disequilibrium from Walrasian Theory

To understand the lack of acceptability of market non-clearing in the Walrasian approach, it is necessary to reflect on the specific institutional assumption upon which this approach is based, the *taatonnement* or auctioneer hypothesis. The auctioneer's specific task consists of using the price system in order to make individual trade offers compatible and thereby bringing the economy to equilibrium. To this end, he announces price vectors to which agents react by expressing the optimal quantity they offer to trade. General equilibrium (at which every market excess demand is nil, assuming away free disposal) will be arrived at by trial and error. Only then is *taatonnement* declared closed and trade authorized.

Taatonnement consists of one unique overall contract, involving every participant in the economy and struck at one point in time. Agents are supposed to participate freely in this set-up and every agent's participation is needed for the deal to be struck. This amounts to a unanimous decision-making process. Were anybody facing a non-optimal situation, he would be entitled to refuse to ratify the overall contract, and the entire trade process would remain in abeyance. Hence, false trade will never occur. The stance could be described as: "Better no trade at all than false trading." Thus, in a *taatonnement* context, it is inconceivable that trade might occur with non-consenting

agents. Whenever an economic agent is observed as non-trading, it must be the case that such a lack of participation is the outcome of his optimizing choice.

Disequilibrium at Patinkin

Don Patinkin's main aim in *Money, Interest and Prices* (1965) is to give the Walrasian approach a stronger monetary foundation. The simplified Walrasian model he constructs to this end is also put to use to pursue the further (yet rather disconnected) aim of vindicating Keynes' insights about involuntary unemployment. Patinkin takes it for granted that disequilibrium transactions are possible both in the goods and in the labor market. In the latter, demand is the short side. As a result, suppliers are rationed. As long as the adjustment process remains unfinished, involuntary unemployment exists. The latter is an exclusively disequilibrium outcome, its existence being limited to the duration of the adjustment process. Were the adjustment process realized instantly, it could not exist.

Unfortunately, upon scrutiny, Patinkin's reasoning turns out to be wanting. The problem does not lie in bringing to the fore slow adjustment *per se* but rather in establishing a causal link between slow adjustment and market non-clearing. Slow adjustment is present both in Marshall's production model and in Walras's intertemporal equilibrium model, yet in both it goes along with market clearing. In Marshall's analysis this is due to the perfect information assumption. In Walras, the auctioneer insures market clearing. Neither of these two scenarios about the functioning of the market or the economy is satisfactory, yet they have at least the merit of existing. Patinkin's flaw is that he gives his readers no clue as to the specific market set-up in which such a slow adjustment caused market rationing might emerge. The steps through which, and the context in which, slow adjustment might lead to market rationing remain unspecified.

Disequilibrium at Barro-Grossman

Robert Barro and Herschel Grossman's 1971 paper and 1976 book have played an important role in fostering the so-called disequilibrium school, further developed by authors such as Jean-Pascal Benassy, Jacques Dreze, and Edmond Malinvaud. Their aim was to synthesize Patinkin and Clower's allegedly complementary views in order to get a more global picture of the possible sources of disequilibrium. In this process a surreptitious change in the factor responsible for market rationing occurred, from Patinkin's slow adjustment to their exogenous rigidity explanation.

Barro and Grossman reason in terms of a simplified general equilibrium model, comprising only three goods, labor, a commodity, and a monetary good. Prices are formed under the aegis of the auctioneer. It is assumed, however, that the Walrasian equilibrium price vector does not come through. This departure of the effective price vector from the Walrasian one can be rationalized as a blocking of the *tattonnement* process. It is as if, after the auctioneer had cried out a first price vector, nothing else occurred. As a result, prices are stuck at this initial vector. Most plausibly, it will be a 'false price' vector. Several configurations of the economy are conceivable according to the characteristics of the false price vector, i.e., the direction and size of its departure from the equilibrium vector. The most outstanding configuration is 'Keynesian unemployment,' which arises as the result of combining Clower's and Patinkin's insights. It exhibits excess supply in both the labor and the goods markets.

Robert E. Lucas, Jr. indicted Barro and Grossman's claim on the grounds that it runs counter to the spirit of the auctioneer hypothesis. As we know, in fix-price models the quantity traded is determined by the short-side trading rule. That is, if the fixed price is above the market-clearing price, demand will be the short side. Barro and Grossman justify this short-side trade rule on the grounds of the voluntariness of exchanges: 'Voluntary exchange is synonymous with the institution of free markets. Voluntary exchange means that no transactor can be forced to buy more than he demands or sell more than he supplies. Thus voluntary exchange suggests that actual total transactions of any good will equal the smaller of the quantities supplied and demanded'.

Neo-Walrasian Theory: The Possibility of Intertemporal Disequilibrium

The dynamization of Walrasian theory has led to several distinct lines of development. The temporary equilibrium model is first, paving the way for the others. It stands in continuity with the stationary approach. The Arrow-Debreu model and its outgrowths form the second line of development. Here, the idea of intertemporal adjustment is absent, since its precondition—deviations from intertemporal equilibrium—is excluded. As a result, disequilibrium makes no sense either. A third line, which has now become dominating in macroeconomics, is real business cycle models. While they claim the disappearance of the disequilibrium category.

To summarize, is disequilibrium an irrelevant concept for economic theory? The view that it is irrelevant can apply only to models belonging to the Walrasian approach. Disequilibrium definitely makes sense in classical models and, more importantly, in Marshallian models. Moreover, even when considering only Walrasian models, the matter is more complex than might be believed at first. Walrasian theory has witnessed a complex evolution to the effect that assertions valid for one type of model can be false for another. To clarify the matter, a distinction must be drawn between the possibility of point-in-time disequilibrium and that of intertemporal disequilibrium. As far as the first is concerned, my analysis confirms the dismissal of the once-called disequilibrium approach, be it Patinkin's or Barro and Grossman's model.

Thus, if disequilibrium is understood as market non-clearing, it has no room in the Walrasian approach. The heart of the matter then lies in the second dimension of equilibrium, intertemporality, where disequilibrium means a departure from intertemporal equilibrium going along with market clearing. In this respect, my analysis confirms the irrelevance of the disequilibrium concept in Walras's production model, the Arrow-Debreu model and its descendants, and the ``bygones are bygones' ' perspective. In contrast, the idea of intertemporal disequilibrium makes sense when it comes to Walras's capital formation and credit model, temporary equilibrium models, and real business cycle models.

Generally, Four different types of neo-Walrasian models are developed.

- the temporary equilibrium
- models, the Arrow-Debreu model,
- the real business cycle model and,
- ``bygones are bygones' ' models.

Monetarists

In Keynesian economics the focus is on aggregate demand. Keynesian economics focuses on the rate of spending in the economy. Spending is what pulls forth the output, and thus supports employment and incomes. Keynesian economics tells us that if we can understand what determines the level of spending (aggregate demand), we will know what determines the level of employment and production; i.e., of output and income in the economy.

Keynesian economics tells us that public policies which change the level of spending in the economy will change the level of employment and production, and output and income in the economy. Keynesian economics offers the government a positive approach to overcome depression.

Make total spending increase and the economy will speed up. Increase government spending. Cut taxes so people and businesses will have more money to spend. Permit the money supply to expand. As the government and the businesses and the people all spend more, people will receive more income. As people's incomes increase, their spending increases. The result will be prosperity. If on the other hand the economy overheats, soon the government will need to cut down on its spending and raise taxes to keep the boom from running away into inflation.

The basic idea of the Keynesian proposal for overcoming unemployment and depression was to unbalance the budget. The government would reduce its "tax withdrawals" from the income stream at the same time that it would increase its "spending injections" into the income stream. The idea was for the government to unbalance the budget, run a deficit, create more money to finance its expenditures, and thereby push more money into the spending and income flow of the economy.

While Keynesian economics was widely accepted in the 40s, 50s, 60s and 70s, a few economists were speaking loud and clear against Keynesian economics. They were arguing and building their case against the whole idea of government fiscal policy (of adjusting taxes and spending to influence the economy). The leading challengers have been Milton Friedman and his colleagues who make up the Monetarist School (or the Chicago school) of economic thought.

According to Milton Friedman and his followers, the government should never take any kind of direct discretionary action to influence employment or spending or wages or prices. A limit of 4% to 5% on the rate of expansion of the money supply will take care of the problem of inflation; automatic price adjustments and the automatic forces of the market system will take care of unemployment and depression. The government should not do anything to try to make the economy run better than it runs naturally.

To the monetarists, there is just no need to get involved with the Keynesian prescription. To do so would be harmful in the long run. The government's only economic policy should be to control the size of the money supply and its rate of increase. As total output and trade increase, the money

supply should be permitted to increase enough to finance the increasing economic activity. But that is all.

The very basis, or ‘root cause’ of the disagreement between the monetarists and the Keynesians stems from a basic difference in opinion about how to view the economy, and how the macroeconomic forces in the economy actually operate.

The monetarists take a long-run view, and assume that the short-run ups and downs of the economy (inflation, unemployment, etc.) are just short-run conditions which the natural market forces will work out in due time.

The monetarists assume that the economic forces of prices and competition will work more effectively than would any government attempt to stabilize the economy. Because of the great power and effectiveness of the ‘natural market forces,’ these factors should be allowed to control the economy. The government should not try to offset or overthrow the results of these natural forces. In short, the government should never try to achieve short-run price-level or production and employment objectives.

The Keynesian view of the economy is different. The Keynesians accept the proposition that the natural market forces are powerful. But the Keynesians do not believe that these forces are sufficiently powerful to guarantee healthy economy. The Keynesians focus on the fact that the world only operates in the short-run.

Keynes said in this way: “In the long run, we are all dead!” So according to Keynesian economics, whether or not in the long run the equilibrium conditions of full employment and stable prices might arrive, is irrelevant (and certainly should not be used as the only guide to government policy in macroeconomics).

The Keynesian position is that actual conditions in the modern economy are quite different from the assumed conditions in the ‘model economy’ (that the model therefore cannot be relied on as the complete guide to appropriate public policy). Keynesians emphasize the condition of inflexible prices, and the constant upward pressure on prices from business and labor organizations all trying to push their prices.

The Keynesians would agree with the monetarists that if spending in the economy slows down enough (so that unemployment is very high) it is not likely that prices will be going up under such depressed circumstances. Keynesians also would agree that when the economy is in a depression, some workers would be willing to take jobs for less than their previous wages. Some business would be willing to sell their products for lower prices.

But the Keynesians hold that in order for these conditions to arrive, the economy must be in a serious recession. The Keynesians do not believe that such suffering and misery are necessary. And they do not believe that such misery should be forced on the people; not when appropriate Keynesian-type government policies and programs are available to prevent and/or overcome such depressed conditions.

Those who accept the Keynesian view of the economy see an important role for government in economic stabilization. The government is supposed to maintain a stable, growing economy primarily through fiscal policy (taxing more and spending less to hold down excess demand; taxing less and spending more to speed up spending when the consumer and business sectors are not spending enough to maintain full employment).

The government is supposed to support its fiscal policy with appropriate monetary policy (tightening money and raising interest rates to help to hold down excess demand; easing money and lowering interest rates to speed up spending when the economy is depressed.)

The monetarists hold that if the government tries to follow these Keynesian policies, not only will it be unsuccessful; it will worsen the short-run fluctuations in employment and prices. The monetarists say that whenever the economy has a problem of either unemployment or inflation, the problem soon will be corrected through natural market forces.

The monetarists say that if the government tries to come in and offset a 'too fast' or 'too slow' rate of total spending, it will be adding its 'corrective' influence into the economy at the same time that the natural market forces are exerting their corrective influence. The total effect will be to over-correct and force the economy to respond too fast. So the economy will overshoot the 'desired equilibrium' rate of spending and wind up with the opposite direction.

Influential Monetarists Include:

- ✓ Milton Friedman (1912-), & Karl Brunner (1916- 1989)
- ✓ Allan Meltzer (1928-), & David Laidler (1938-)

Monetarism, as advocates of free market, started challenging Keynes's theory in the 1970s. Milton Friedman, the founder of monetarism, attacked Keynes idea of smoothing business cycle on the ground that such active policy is not only unnecessary but actually harmful, worsening the very economic instability that it is supposed to correct, and should be replaced by simple, mechanical monetary rules. This is the doctrine that came to be known as "monetarism." Friedman began with a factual claim: most recessions, including the huge slump that initiated the Great Depression, did not follow Keynes's script. That is, they did not arise because the private sector was trying to increase its holdings of a fixed amount of money. Rather, they occurred because of a fall in the quantity of money in circulation. With regard to the labor market, while not putting forward his own theory of the labor market, Friedman argues that people do tend to think in real terms and not in nominal amounts. Friedman had a strong faith in the ability of the private sector to produce growth and stability if it is not constrained by government. Friedman is a libertarian, opposed to government interference on principle.

Policy Rule under Monetarism

If economic slumps begin when people spontaneously decide to increase their money holdings, then the monetary authority must monitor the economy and pump money in when it finds a slump is imminent. If such slumps are always created by a fall in the quantity of money, then the monetary authority need not monitor the economy; it need only make sure that the quantity of money doesn't slump. In other words, a straightforward rule- "Keep the money supply steady"- is good enough, so that there is no need for a "discretionary" policy of the form, "Pump money in when your economic advisers think a recession is imminent." Thus, for Monetarists, depressions were the consequence of a temporary shortage of money and this implied that monetary policy was of prime importance in determining the aggregate level of output and employment.

5.4 Can Capitalism Survive? The radicals View

Neoclassical economic theory elaborates this powerful conclusion into one of the most influential claims found anywhere in social theory. A society that establishes capitalism will achieve the maximum possible wealth consistent with the free choices of its citizens. By establishing capitalism, neoclassical theory means establishing two social institutions. The first is a free and fully competitive market for all resources and produced goods, a market in which no individual can control prices and all individuals pursue their economic self-interests. The second is legally enforced private property, including the right of owners of resources and products to dispose of them as they please.

Capitalism conforms best then to what neoclassical theory assumes to be the wealth-accumulating nature of human beings. The theory understands capitalism to be the optimum social system-efficient and just- because it best facilitates what we all want to do: accumulate wealth for ourselves. It prompts and encourages each citizen to make decisions based on individual self-interest- that is, maximum wealth for each consumer and producer. As shown in our earlier chapter on neoclassical theory, the basic institutions of capitalist society guarantee a social equilibrium that maximizes both producer profits and consumer satisfactions.

This conclusion was first broached by Adam Smith, later presented in mathematical terms by Wilfredo Pareto, and still later given formal “proof” by Gerard Debreu (winning him the 1984 Nobel Prize in economics). It implies that capitalism is an intrinsically harmonious economic system. Producers and consumers seeking their own self-interest will thereby promote one another’s (and the whole society’s) interests automatically and optimally. Everyone ends up in the best possible economic position, and no one can become better off (acquire more wealth) unless someone else becomes worse off.

This neoclassical argument implies that the institutions of capitalism should be established everywhere as soon as possible since they best enable and facilitate what every rational individual and nation wants. Where capitalism exists, it must be protected from irrational forces that would replace it with inferior economic and social institutions such as collectivized (not private) property and centralized economic planning (not markets). Such non capitalist institutions would impose all manner of production inefficiencies and consumption dissatisfactions. Where capitalism does

not exist, rational self-interest drives people to establish it. In particular, poor nations must recognize that unfettered capitalism is the best way to become rich.

The Radical View

The radical school has its origins in Marx's analysis, but it has both extended Marxian economic analysis and moved beyond it. At the turn of the century, as neoclassical economics was being established, Marx had few followers among Western economists, in part because of his inherent anti-capitalist views.

Radical economics, based in part on Marx, evolved into a school of thought in its own right in the late 1960s and 1970s. Although radical views are diverse, certain ideas about what is wrong with neoclassical economics and market-oriented economics bind them together. According to Eileen Applebaum (1977), the radical position encompasses the following three points:

1. Radical economists think that "major socioeconomic problems can be solved only through a radical restructuring of our society." They argue that poverty, racism, sex discrimination, destruction of the environment, alienation of workers, and imperialism "are not pathological abnormalities of the system, but rather are derived directly from the normal functioning of capitalism."
2. Radicals argue that there are major inconsistencies between neoclassical theory and real-world experience. Where mainstream economists see social harmony, radicals see conflict.
3. Following their Marxist heritage, radicals view society as an "integrated social system existing in concrete historical circumstance." They believe that mainstream economics simply accepts existing institutions, such as the market, as given and does not consider a wide variety of proposals to change those institutions. They see the incremental changes advocated by mainstream economics as hardly worth considering. As Eileen Applebaum states, radicals "are interested in ending not salvaging or stabilizing monopoly capitalism" and replacing it with "a socialist society based on participatory planning, public ownership of the means of production, the elimination of private appropriation of profit, and a genuinely egalitarian redistribution of income and wealth."

Given these views, radical analysis of the economy is significantly different from mainstream analysis. The radical premise is that the problems of Western society are inevitable consequences

of the capitalist institutional structure. Radicals emphasize in their analysis that technology embodies the social relations between individuals and that any analysis must study why capitalism exists rather than take it as given.

Many radicals explain the existence of capitalism by means of class analysis, contending that any useful economics must incorporate class analysis. Most radicals also believe that capitalism embodies internal contradictions that inevitably will bring the system down, although this process is slowed by the repressive state, which exists to serve the interests of the capitalist class, and by institutions such as schools, which are arms of the state.

Since the mid-1970s, radicals have played a smaller role in mainstream economic debate. The reasons for this are varied. Some radicals have turned inward to debate doctrinal Marxian issues, such as the tendency for the rate of profit to fall and the transformation problem (how one can move from a labor theory of value to a set of values or prices of goods in a multi-industry model). But other radical work of the 1970s has influenced mainstream analysis. An example is Steven Marglin's "What Do Bosses Do?" Marglin argued that technology is not given but is chosen by a particular group of individuals within the society.

In capitalism this group is the managers, or "bosses," who choose the technology that provides them with the strongest role. In stating his argument, Marglin reconsiders Adam Smith's example of the pin factory, which Smith used to demonstrate the advantages of the division of labor. Marglin argues that by bringing all the workers under one roof, the bosses (organizers) gained control over the workers, securing their own role in the production process and allowing them to extract a larger surplus from the workers.

A second radical argument that has gained recognition within mainstream economics concerns the economics of education. The mainstream analysis of schooling holds that individuals invest in schooling and receive a return in the form of increased future earnings. The investment makes them and society better off. Significant empirical research has gone into showing what that return is, and on the basis of this research neoclassical economics concluded that we have underinvested in schooling. Samuel Bowles and Herbert Gintis disagreed, arguing that schooling does not necessarily enhance the well-being of society. Their hypothesis is that the higher earnings of educated persons are sometimes simply a return for being allowed into a monopoly.

Another inroad of radical thought into mainstream economics came from a “more acceptable” radical (so acceptable that he might not even be considered radical). That inroad is Michael Piore’s dual labor market analysis. Piore argues that it is wrong to view the labor market as a single market, because major structural and social constraints limit the mobility of labor. For example, a worker hired as a shipping clerk will find it almost impossible to be promoted to a managerial position, no matter how capable he or she is. It follows that the relative desirability of various jobs cannot necessarily be ranked by pay, because a position with possibilities of upward mobility may initially pay less than a position without such possibilities. Because each job is done by a separate class within labor, Piore says, neoclassical analysis of the labor market as competitive does not fit the reality. One should instead analyze the labor market as a structurally constrained market, which he calls a dual labor market.

With the demise of many of the world’s socialist economies, radical economists have been pressed to explain how they can maintain their position when the type of economy they proposed has failed. One response is that the so-called socialist economies of Eastern Europe, for example, did not really try true socialism, since their economies had been subverted by capitalist influences and by individuals who had lost sight of socialist ideals. Moreover, the failure of socialist economies has little or nothing to do with the problem of inequalities that radical economists see as existing (or inherent) in capitalist economies. A second response has been a gravitation away from Marxian socialist economics and a search for alternative institutional structures that avoid the problems of both socialism and capitalism.

Self-Test Exercise

1. What is the main emphasis of the post-Keynesian economic thought? Discuss it?
2. Are the post- Keynesians against Keynesian economics? Discuss?
3. Who are the radical schools and what is their main departure point of capitalism?
4. What rational expectation theory is about? What is Lucas Critics?
5. Compare on the Keynesian and Monetarist policy measures?

Chapter Six

6 The Development of Modern Microeconomic Theory

Introduction

Many elements of neoclassical economics still exist within modern microeconomics, but what distinguishes modern microeconomics is not these elements; it is a modeling approach to problems. The assumptions and conclusions of the model are less important than whether the model empirically fits reality. In this chapter we discuss the evolution of microeconomics from neoclassical to modern.

We trace that path from the 1930s through a highly formalistic stage in which there was an attempt to tie microeconomics together within a single theory—with little regard for that theory's empirical relevance—to its modern state, in which microeconomics consists of a set of models focused almost entirely on empirical relevance.

We start our story in the 1930s with the fall of Marshallian economics.

Marshallian economists were interested in the art of economics, not in positive or normative economics. As Joan Robinson put it, Marshall had the ability to recognize hard problems and hide them in plain sight.

Marshallian economics attempted to walk a fine line between a formalist approach and a historically institutional approach. It is not surprising that in doing so it created critics on both sides. In the United States, a group called the institutionalists wanted simply to eliminate the theory, arguing that history and institutions should be emphasized and the inadequate theory dropped. Other critics, whom we will call formalists, went in the opposite direction: they believed that economics should be a science, not an engineering field, and that if economics were to conclude that the market worked well, we needed a theory to show how and why it did so. These formalists agreed with the institutionalists that Marshallian economic theory was inadequate, but their answer was not to eliminate the theory: they wanted to provide a better, more rigorous general equilibrium foundation that could adequately answer more complicated questions.

Course objectives:

After completion of this chapter you will be able to:

- ☞ Analyse the 1930s microeconomic discourses and its move against Marshallian.
- ☞ Discuss on the Milton Friedman's and the Chicago approach to Microeconomics.
- ☞ Understand the Formalist Revolution in Microeconomics and their contribution.
- ☞ Recognize the existence of imperfect markets and its challenge to neoclassicals.

6.1 The Movement away from Marshallian Economics

Dear student! In chapter one you have learnt about the principles of Marshallian economics.

Please would you mention about his market principle in brief?

Marshall's engine of analysis, combining supply and demand curves with common sense, could answer certain questions, but others exceeded its scope. Supply-and-demand analysis was partial equilibrium analysis applied to problems of relative prices. But many of the questions economists were trying to answer, such as what determines the distribution of income or what effect certain laws and taxes would have either introduced problems beyond the applicability of partial equilibrium analysis or violated its assumptions. Nonetheless, economists continued to apply partial equilibrium arguments to such issues, assuming that the aggregate market must constitute some as yet unknown combination of all the partial equilibrium markets.

Most economists were content with this state of affairs for quite a while. After all, Marshallian economics did provide a workable, if not formally tight, theory that was able to answer many real-world questions. It was the middle ground. Marshallian economists were engineers rather than scientists, and engineers are interested not in pondering underlying forces but in building something that works. Marshallian economists were interested in the art of economics, not in positive or normative economics. As Joan Robinson put it, Marshall had the ability to recognize hard problems and hide them in plain sight.

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sides. In the United States, a group called the institutionalists wanted simply to eliminate the theory, arguing that history and institutions should be emphasized and the inadequate theory dropped. Other critics, whom we will call formalists, went in the opposite direction: they believed that economics should be a science, not an engineering field, and that if economics were to conclude that the market worked well, we needed a theory to show how and why it did so. These formalists agreed with the institutionalists that Marshallian economic theory was inadequate, but their answer was not to eliminate the theory: they wanted to provide a better, more rigorous general equilibrium foundation that could adequately answer more complicated questions.

The Formalist Revolution in Microeconomics

In the late 1930s the formalist research program won and the Marshallian approach started to wane. By the 1950s the formalists had reformulated microeconomics into a mathematical structure dependent on Walras, not Marshall. Applications became less important than logical consistency.

The formalist revolution reached its apex in 1959 with the publication of the Arrow Debreu model. With the completion of that general equilibrium work, economists turned once again to applied work. But they did not return to Marshall's engine of analysis approach, which downplayed the use of mathematics and stressed judgment. Instead, they integrated policy prescriptions into the mathematical models. As that happened, the neoclassical era evolved into the modern modeling era. In the modeling approach, mathematics is used to develop simple models that ideally capture the essence of the problem. Then econometric techniques are used to test those models. This development and empirical testing of models has become the modern economic method.

The Battle over Formalist Approaches

The mathematical approach is rooted in the thought of several nineteenth- and early twentieth century. The first of these great pioneers in stating hypotheses in mathematical form was A. Cournot, who published his *Researches into the Mathematical Principles of the Theory of Wealth* in 1838. Cournot expected that his attempts to bring mathematics into economics would be rejected by most economists, but he adhered to his method nonetheless because he found the literary expression of theory that could be expressed with greater precision by mathematics to be wasteful and irritating.

Leon Walras and Vilfredo Pareto, who succeeded Walras as professor of economics at Lausanne, were other early devotees of mathematical economics. Whereas Marshall had focused on partial equilibrium, Walras, using algebraic techniques, focused on general equilibrium. His general equilibrium theory has substantially displaced Marshallian partial equilibrium theory as the basic framework for economic research.

Jevons, in his influential *Theory of Political Economy* (1871), also advocated a more extensive use of mathematics in economics. Jevons was followed by another pioneer in mathematical economics, F. Y. Edgeworth (1845-1926), who pointed out in 1881 that the basic structure of microeconomic theory was simply the repeated application of the principle of maximization. Vilfredo Pareto, whose name is familiar to many students of economics from its use in the phrase Pareto optimal criteria, extended Walras's general equilibrium analysis in the early 1900s to questions of economic policy.

Irving Fisher (1867-1947), writing in the last decade of the nineteenth century, was an early American pioneer of formalism who supported and extended Simon Newcomb's (1835-1909) advocacy of increased use of mathematics in economics. The mathematical approach was not well received in the United States, however, until nearly the middle of the twentieth century. All these pioneers were, therefore, unheeded/not listened prophets of the future.

Inattention to their efforts can be attributed partly to the strength of Marshall's analysis, a judicious blend of theory, history, and institutional knowledge. Unable to compete with the Marshallian approach, early mathematical work in economics was practically ignored by mainstream economists until the 1930s.

In the early 1930s, this situation began to change. Expositions of the many geometric tools that now provide the basis for undergraduate microeconomics began to fill the journals. The marginal revenue curve, the short-run marginal cost curve, and models of imperfect competition and income-substitution effects were "discovered" and explored during this period. Though rooted in Marshall, these new tools formalized his analysis, and as they did so they moved farther and farther from the actual institutions they represented. The Marshallian approach to interrelating theory and institutions had been like a teeter-totter: it had worked as long as the two sides balanced. But once

the theory side gained a bit, the balance was broken and economics fell hard to the theoretical side, leaving history and institutions suspended in air.

History and institutions were abandoned because the new mathematical tools required stating precisely what was being assumed and what was changing, and stating it in such a way that the techniques could handle the entire analysis. History and particular institutions no longer fit in.

Though the use of geometry as a tool in Marshallian analysis was a relatively small step, it was the beginning of the end for Marshallian economics. When geometry disclosed numerous logical problems with Marshallian economics, the new Marshallians responded with further formalization. Thus, by 1935 economics was ripe for change.

Paul Samuelson summed up the situation: “To a person of analytic ability, perceptive enough to realize that mathematical equipment was a powerful sword in economics....”

Because many economists had by this time acquired the requisite analytic equipment, the late 1930s and early 1940s witnessed a revolution in micro- economic theory, which formalism won. Cournot, Walras, Pareto, and Edgeworth gained more respect, and Marshallian economics was relegated primarily to a role in undergraduate education.

The first step in the mathematization of microeconomic theory was to extend the marginal analysis of the household, firm, and markets and to make it more internally consistent. As economists shifted to higher-level mathematical techniques, they were able to go beyond partial equilibrium to general equilibrium, because the mathematics provided a method by which to keep track more precisely of items they had formerly kept somewhat loosely in the back of their heads. The second step was to reformulate the questions in a manner consistent with the tools and techniques available for dealing with them. The third step was to add new techniques to clarify unanswered questions. This process is continuing today.

In the 1930s, two mathematicians, Abraham Wald (1902-1950) and John von Neumann (1903-1957), turned their attention to the study of equilibrium conditions in both static and dynamic models. They quickly raised the technical sophistication of economic analysis, exposing the inadequacy of much of previous economists’ policy and theoretical analysis.

Their work was noted by economists such as Kenneth Arrow (1921-) and Gerard Debreu (1921-), who extended it and applied it to Walras's theory to produce a more precise formulation of his general equilibrium theory. Following Wald's lead, Arrow and Debreu then rediscovered the earlier writings of Edgeworth. So impressed were they by these writers that they declared Edgeworth, not Marshall, to be the rightful forefather of modern microeconomics. The work of these theorists, in turn, has continued a highly formalistic tradition of general equilibrium theorists.

General equilibrium theorists have found the answer to the question "Does the invisible hand work?" to be yes, as long as certain conditions hold true. Their proof, for which Arrow and Debreu received Nobel prizes, was a milestone in economics because it answered the conjecture Adam Smith had made to begin the classical tradition in economics. Much subsequent work has been done in general equilibrium theory to articulate the invisible hand theorem more elegantly and to modify its assumptions, but by first proving it, Arrow and Debreu earned a place in the history of economic thought.

Paul Samuelson: Another path was somewhat less formal, mathematically, but was still highly formal relative to Marshallian economics. This work had a major influence on the economics presented in economic texts. Of the many economists involved in this formalization, Paul Samuelson is probably the best known. Born in 1915, Samuelson began graduate economics studies at Harvard in 1935 after acquiring a strong undergraduate background in mathematics. There he proceeded to publish significant articles applying mathematics to both micro- and macroeconomic theory. He received his Ph.D. in 1941 at the age of twenty-six, and by the time he was thirty-two had become a full professor at the Massachusetts Institute of Technology and the first recipient of the American Economic Association's John Bates Clark Award, which is given to economists under forty years of age who have made significant professional contributions. Samuelson later became the first American to receive the Nobel Prize in economics.

The sources of Samuelson's intellectual inspiration were Cournot, Jevons, Walras, Pareto, Edgeworth, and Fisher, all of whom contributed piecemeal applications of mathematics to economic theory. Using his mathematical background, Samuelson extended their work and helped to lay the mathematical foundations of modern economic theory. Like Edgeworth, he had harsh words for Alfred Marshall, whose ambiguities, he said, "paralyzed the best brains in the Anglo-Saxon branch of our profession for three decades."

The direction Samuelson's contribution to economic theory would take is evident in his Ph.D. dissertation, completed in 1941 and published in 1947 as *Foundations of Economic Analysis*. A subtitle, "The Operational Significance of Economic Theory," was eliminated in the published edition, and the statement "Mathematics Is a Language" was added to its title page. The book undertakes to analyze mathematically the foundations of modern micro- and macro- economic theory. In the introductory chapter, Samuelson explains that his purpose is to work out the implications for economic theory of the following statement: "The existence of analogies between central features of various theories implies the existence of a general theory which underlies the particular theories and unifies them with respect to those essential features."

6.2 The Monopolist Competition Revolution

E. H. Chamberlin was born in Washington USA. He taught economics at Harvard University from 1937 to 1967, and made significant contributions to microeconomics, particularly on competition theory and consumer choice, and their connection to prices. One of the most influential economists of his time, he coined the word product differentiation to, describe how a supplier may be able to charge a greater amount for a product than perfect competition would allow. His works include, *Theory of Monopolistic Competition* (1933) and *Toward a More General Theory of value* (1957).

Although he insists that *Theory of Monopolistic Competition* is a blending or fusion of the hitherto separate theories of monopoly and competition, whereas, Robinson left the dichotomy as sharp as ever, almost all students of the matter have agreed with each other that in describing the structure and mechanism of equilibrium in firms and groups of firms when oligopoly and selling expenditure are absent, the two books present identical theories. Thus, although both works are similar; his work was more far reaching, because it attempted a thorough reconstruction of the theory of value.

Chamberlin's two key concepts for blending were product differentiation and the number of sellers. Each firm has some unique features, which make its product different from those other firms' location, selling costs, the personality of the manager, etc. thus each firm has some monopoly power. And the number of firms competing against each other obviously makes a difference in the price and output of the firms.

Chamberlin's career was devoted to an attempt to formulate theory out of these concepts. After many attempts, he decided that it was not possible to cover all price theory, including competition, in terms of ordinary monopoly. Thus, in his final attempt, he emphasized oligopoly, claiming that oligopolistic elements are very general in the economic system, that economic study must increasingly be concerned with them, and that the basis for general theory to replace that of pure competition is one in which oligopoly emerges with great force.

6.3 Milton Friedman and the Chicago Approach to Microeconomics

The modern modeling approach that has come to dominate the profession has some grounding, too, in the Chicago approach to economics, which ran counter to the formalist approach from the 1950s through the 1970s. The Chicago approach was characterized, first, by a belief that markets work better than the alternatives as a means of organizing society and, second, by its connection to the Marshallian informal approach to modeling.

Milton Friedman (1912-) was a counterweight to Paul Samuelson throughout the modern period of economics. Friedman summarized his Chicago approach as follows:

In discussions of economic policy, "Chicago" stands for belief in the efficiency of the free market as a means of organizing resources, for skepticism about government affairs, and for emphasis on the quantity of money as a key factor in producing inflation.

In discussions of economic science, "Chicago" stands for an approach that takes seriously the use of economic theory as a tool for analyzing a startlingly wide range of concrete problems, rather than as an abstract mathematical structure of great beauty but little power; for an approach that insists on the empirical testing of theoretical generalizations and that rejects alike facts without theory and theory without facts.

Friedman's approach to economics was Marshallian rather than Walrasian. He saw economics as an engine of analysis for addressing real problems and as something that should not be allowed to become an abstract mathematical consideration devoid of institutional context and direct relation to real world problems.

In his consideration of policy issues, he combined strong beliefs in individual rights and liberty and in the effectiveness of the market in protecting those rights (see *Capitalism and Freedom*, 1962). His political orientation was basically pro-market and anti-government. He advocated many policy proposals that at first were seen as radical but later became more acceptable: financing education with vouchers, eliminating licensing in professions, and legalizing drugs.

Around 1950, Friedman produced a number of provocative papers on methodology and also a paper on the Marshallian demand curve and the marginal utility of money. In the late 1950s, he made contributions to macroeconomics in his *Studies in the Quantity Theory of Money* (1956). His column in *Newsweek* was read by many, and a TV series titled “Free to Choose” gave him greater notoriety than most theorists. He won the Nobel Prize in economics in 1976.

Even as Friedman was becoming well known, his Marshallian approach was dying. In part, this was because it was seen by many as ideologically or normatively tainted, causing researchers to revert to formalism to avoid ideological bias. An example of what some economists considered to be the normative bias in the Chicago approach to economics can be seen in the Coase theorem, named for Ronald Coase (1910-), another influential Chicago economist whose work led to the recent field of law and economics. The Coase theorem was a response to the Pigouvian approach, which saw the existence of externalities as a reason for government intervention. In “The Problem of Social Cost,” Coase argued that in theory, externalities were not a reason for government intervention, because any party helped or hurt by an action was free to negotiate with others to eliminate the externality.

Thus, if there were too much smoke from a factory, the neighbors hurt by the smoke could pay the factory to reduce it.

The Coase theorem has been much discussed in the literature. The general conclusion is that in and of itself the theorem is no more ideological than is the theory of externalities that predisposes one toward government intervention. Issues involving government intervention are complicated, and there is no answer that follows from theory; in modern economics, a theory of government failure exists side by side with a theory of market failure. Which is more appropriate depends upon the relative costs and benefits, issues upon which individuals may disagree.

Nonetheless, the Chicago approach has stimulated many new ideas, and it, rather than the more formalist approach, may sow the seeds for major developments in microeconomics in the future.

The most important follower of Friedman was Gary Becker (1930-), who won the Nobel Prize in economics in 1992. He has used microeconomic models to study decisions about crime, courtship, marriage, and childbearing.

With the retirement of Milton Friedman and his colleague George Stigler and with Gary Becker's impending retirement, Chicago economics changed, becoming more mathematical and less intuitive. Not stopping at simple models, it generalized models along the lines suggested by Varian. Clearly, Chicago has entered the modern school of economics, and the modern school of economics has become quite homogeneous. What one learns in graduate programs at Harvard, Chicago, MIT, Stanford, or any top graduate school, is essentially the same thing.

6.4 Topics in Modern Microeconomics

Rational Expectations Theory

During the 1970s and 1980s a new attack was mounting against the Keynesians the theory of rational expectations. This theory leads to the conclusion that any government stabilization policy which the government might decide to undertake, and which the spending units in the economy (businesses, consumers, financial institutions, etc.) might have rationally expected the government to take, would be doomed to failure.

The basic idea of the rational expectations theory is this: When economic decision-makers (consumers, businesses, etc.) expect the government to initiate a certain economic stabilization policy, then these decision makers will take action to protect themselves, to 'maximize their own positions' in the light of the rationally expected effects of the government policy. As they do this, they will make it impossible for the government's stabilization policy to work.

The rational expectations theory concludes that government should never introduce any Keynesian-type stabilization policies. The government should emphasize that its only 'stabilization policy' will be to permit the money supply to expand by a low and constant rate (4 or 5 percent per year). Then the economic decision makers will make their decisions based on this

assurance that the government will not meddle in the economy to try to overcome or lessen the effects of any recession which might appear.

The rational expectation theorists (led by Robert Lucas of the University of Chicago) put forth the hypothesis that when everyone in the economy knows that the government will maintain slow and constant money growth, then they will know that they have no cause to ‘rationally expect’ continued inflation. In this stable environment they will be able to make proper decisions and thereby ensure that the economy will be as stable as it ever could be; that recessions which may occur will be short-term and self-correcting.

Recessions (recession refers to business slow down) are thought to be a natural part of the functioning of the market system. People should learn to accept them as that. They should not call on government policy to try to do anything about them because active government stabilization policies cannot help and will make matter worse.

As shown above, the rational expectations theory leads to exactly the same government policy recommendation as Friedman and the monetarists have been advocating all along. But rational expectations theory arrives at the same conclusion in a different way.

The logic of the more traditional monetarist position is this: the natural market forces for overcoming recession and inflation are powerful, and effective, but they operate with time lags. The economy ultimately will correct itself, but not immediately. If the government undertakes any stabilization policies to try to achieve a more immediate correction of either recession or inflation the ultimate result will be overkill (over-correction). The government’s corrective actions will be added to the already powerful corrective forces of the market. So the economy will overshoot the objective of long-term stability and growth. Government anti-inflation efforts will cause recession; anti-recession efforts will cause inflation.

The rational expectations theory does not focus on the effect of these time lags. It focuses on the way in which people’s expectations of the effects of government stabilization policies cause them to behave differently – and how this change of behavior renders the government’s stabilization policies not only ineffective but also destabilizing.

Equilibrium and Stability

According to Samuelson, the theoretical structure that underlies and unifies the individual elements of micro- and macroeconomic theory rests on two very general hypotheses concerning the conditions, first, of equilibrium and second, of its stability. For problems of comparative statics, the conditions of equilibrium can be placed in the familiar maximization framework in which much of the previous work in microeconomic theory had been done. Samuelson illustrates the unity of this approach by working through the firm's minimization of costs and maximization of profits, the consumer's maximization of satisfaction, and welfare theory. Whereas previous economists had paid less attention to dynamic analysis, Samuelson demonstrates that once the dynamic properties of a system are specified, its stability can be assessed. Equilibrium and stability conditions thus emerge as the two-part structure underlying economic theory.

Although Samuelson's *Foundations* and his subsequent work have dealt almost exclusively with mathematical economic theory, he is sensitive to the relationship between mathematical economics and the process of economic research. He consistently attempts to formulate operationally meaningful, not merely elegant, theorems—in other words, to provide testable hypotheses useful in economic research.

Evolving Techniques

The evolution of microeconomics has entailed a progression from one mathematical language to another, each of which has been able to resolve some of the ambiguities that marred its predecessor. Initially, economists such as Paul Samuelson and John Hicks (1904-1989) translated the geometry of the 1930s into the multivariate calculus of the 1960s.

The partial differentials of calculus represented the interrelationships among sectors; the sign of the second partial derivative illustrated stability conditions; and the sign of the first derivatives captured the interactive effects. Cross-partial elasticities of demand, linear homogeneous production functions, homothetic demands, and constant elasticity of substitution (CES) production functions all appeared in microeconomic terminology.

The results of the mathematical reformulation of microeconomics are impressive. As economists worked through the problems, they began to perceive the relationship between prices and Lagrangian multipliers (the values of the constraints). The question of whether prices were inherent in economic systems had been debated previously, but now mathematical economists

could show that prices occurred naturally through a maximization process and that even in the absence of markets, constrained maximization will still have a “price” (called a shadow price). If prices do not exist, another rationing device must replace price.

They also showed how one can easily reformulate a maximization problem subject to a constraint into a constrained minimization problem: by switching constraints and objective functions, the problem “Maximize output subject to technical production constraints” is equal to the problem “Minimize cost subject to producing a certain output.” Such a reformulation, which is known as “analyzing the dual,” affords insight into the nature of the maximization problem by showing how slight changes in the output or constraints change the situation.

The 1987 winner of the Nobel Prize in economics, Robert Solow, commented:

I detect a tendency ... to idealize the old, non-formalist days in economics. I lived through those days and I was educated when that was the way economics was done, and let me tell you—they were not so great at all. They were pretty awful, in fact. My non formalist education was full of vagueness and logical inconsistency and wishful thinking and mere prejudice and post hoc propter hoc, and pontification was everywhere in the classes I took and the lectures I went to.

But the reformulation of microeconomic theory in terms of multivariate calculus also had problems. Multivariate calculus requires an assumption of continuity and poses the maximization problem in a highly rarefied way. In response to these shortcomings of calculus, economists modified the maximization problem in a number of ways—some of which made microeconomics more practical and useful in business, while others provided deeper understanding of the economy.

By the 1970s, the possibilities of comparative static calculus had begun to be exhausted, and the cutting edge of theoretical work was being done in dynamic calculus, in which time is explicitly taken into account. To see why dynamic calculus is relevant, consider the production problem. The intermediate microeconomic approach is to say that the firm faces a production problem: given a set of inputs and relative prices, it chooses an optimal quantity of output. But where is time in the model? It is suppressed; so how the model actually works is unclear. Adopting a comparative static interpretation provides a somewhat temporal dimension. The problem is considered twice: before and after a single change.

Thus, it becomes an analysis of two points in time. No consideration is given, however, to how one gets from one point to the other or to how long that time period is. For a better analysis of the process of getting from one point to the other, the mathematical formulation of the problem must explicitly include the time path along which one goes from the initial state to the end state. The calculus that accomplishes this is optimal control theory. Students typically learn optimal control theory in the calculus course following differential equations, which follows multivariate calculus. The solution sets are similar, but instead of being expressed in Lagrangian multipliers, they are expressed in Hamiltonians and bordered Hessians.

Another significant change in microeconomics is evident in its handling of uncertainty. Economic decisions must be made in the face of an uncertain future. Marshall did not attempt to tackle the uncertainty problem directly. Modern microeconomics, however, formally confronts uncertainty, though often with stochastic rather than static processes. To analyze such models, microeconomics uses applied statistical decision theory, a blend of statistics, probability theory, and logic.

Thus, the logic of game theory is as compelling today as it was when John von Neumann and Oskar Morgenstern first published *The Theory of Games and Economic Behavior* in 1944. Modern graduate education strongly emphasizes game theory approaches, and games are part of the modern economist's tool kit.

Applying Models to Policy

By the 1980s, the theoretical work had largely been completed, and concern moved to the applicability of microeconomics to policy as economists started to apply the models to policy issues. As long as these models, generally partial equilibrium models were insightful and empirically supportable, they did not have to be consistent with general equilibrium theory, which except for a few studies of computable general equilibrium models moved to the background.

Hal Varian, a top modern micro economist, gives the following advice on how to build a model. He suggests that you look into the newspaper for a problem and then see if you can think of an economic explanation for it. For example: Why do stores run sales? Having chosen your problem, you should try to model it. He writes:

Luckily for you, all economics models look pretty much the same. There are some economic agents. They make choices in order to advance their objectives. The choices have to satisfy various constraints so there's something that adjusts to make all these choices consistent. This basic structure suggests a plan of attack . . . and can help you identify the pieces of a model. He continues by saying that you should then build your model, following the KISS criterion (keep it simple, stupid). After you have a simple model, you generalize the model.

Here is where your education can be helpful. At last you can use all those techniques you learned in graduate school. Most of the time you were a student you probably studied various canonical models: things like consumer choice, and producer choice, general equilibrium, game theory, and so on. . . . Most likely your model is a special case of one of these general models. If so, you can immediately apply many of the results concerning the general model to your special case, and all that technique you learned can help you analyze your model.

Since most of the models economists use are partial, not general, equilibrium models, as this applied modeling approach became the norm, the connection between modern applied work and general equilibrium theory has become tenuous. The Monopolist Competition Revolution.

Self-Test Exercise

1. What is the distinguishing feature of modern economics?
2. How did microeconomics evolve from the 1930s to the 1950s?
3. What is the main theme of formalist approach? Compare it with the non-formalist?
4. Why does Paul Samuelson believe that Marshall's dictum on using mathematics in economics should be reversed?
5. What does Paul Samuelson mean by a meaningful theorem? Are there other interpretations?
6. What is the relationship between Lagrange multipliers and prices?

Chapter Seven

7 The Development of Modern Macroeconomic Thought

Introduction

Interest in macroeconomic issues has fluctuated throughout the years, reaching its nadir around the turn of the nineteenth century. The attitude of the economics profession toward macroeconomic thought at that time could be characterized as one of benign neglect. The macroeconomic thinking that did exist, moreover, was somewhat confused. Alfred Marshall, who had codified and organized microeconomics in his *Principles of Economics*, always intended to do the same for macroeconomics, but he never did. He limited his discussion of macroeconomics to a determination of the general level of prices.

Analysis that used the full employment assumption and focused on explaining the forces determining the general level of prices continued until the 1930s, when the Great Depression led to new work on understanding business cycles. During the period from the 1930s to the late 1970s, macroeconomics continued to focus on business cycles, an approach that came to be known as “Keynesian economics.” The classification is not totally correct, since Keynesian ideas quickly merged with neoclassical ideas; the actual macroeconomics that developed in the texts might more appropriately be called neo-Keynesian economics. This chapter describes this evolution and its historical foundation.

The 1970s saw a reaction against neo-Keynesian economics in the form of the new classical revolution, which moved the focus of macroeconomics away from business cycles and toward growth. Since the 1990s, the primary focus of cutting-edge macroeconomics has been on growth.

This chapter will first consider early work on macroeconomic issues and then deal with the development of Keynesian macroeconomics. It will then cover the new classical revolution, and finally consider the current state of macroeconomics.

Course objectives:

After the completion of this chapter you will be able to:

- ☞ Identify the for runner and great contributors of Modern macroeconomics.
- ☞ Discuss on the Quantity Theory of Money.
- ☞ Analyse Business Cycle Theory.
- ☞ Synthesis the Growth Models.
- ☞ Discuss on the Neoclassical Macroeconomic thoughts.
- ☞ Contrast New Classical Economics vs New Keynesian Economics

7.1 Historical Forerunners of Modern Macroeconomics

Modern macroeconomics consists primarily of monetary theory, growth theory, and business-cycle theory. Emphasis on these has fluctuated over the years, in part as the experience of the economy has changed and in part as techniques have allowed economists to deal with issues that they previously found unmanageable.

Quantity Theory of Money

Dear Student! Please let you mention few points about quantity theory of money.

Classical and neoclassical theorists maintained an interest in at least one macro- economic question: what determines the general level of prices? They addressed this economic question by utilizing the supply-and-demand approach developed in microeconomic theory. The supply of money was assumed to be determined by the monetary authorities, so some orthodox economists contended that the basic issues to be analyzed were on the side of demand.

The first clear statement of the quantity theory of money was made by David Hume in 1752.

This theory, as it came down through the literature, held that the general level of prices depended upon the quantity of money in circulation.

Marshall's version of the quantity theory was an attempt to give microeconomic underpinnings to the macroeconomic theory that prices and the quantity of money varied directly.

Business Cycle Theory

Although fluctuations in business activity and in the level of income and employment had been occurring since the beginning of merchant capitalism and were acknowledged by orthodox

theorists, economists made no systematic attempts to analyze either depression or the business cycle until the 1890s.

After 1900, more serious work was done on business cycles by orthodox theorists, but curiously enough this work existed alongside a continuing fundamental belief that the long-run equilibrium position of the economy would provide full employment. Thus, we see economists such as Friedrich Hayek (1898-1992) exploring problems of aggregate fluctuation as a coordination failure while maintaining a solid belief in the self-equilibrating properties of the market economy. No one, either heterodox or orthodox, had been able to challenge this belief, because no one had built a theory of income determination to show that equilibrium was possible at less than full employment. When J. M. Keynes in 1936 developed a theory arguing that equilibrium at less than full employment could exist, a new phase of orthodox macroeconomic theory commenced.

Early Work on Growth Theory

Analysis of economic growth was the primary concern of Adam Smith, who emphasized the relationships between free markets, private investment spending, laissez faire, and economic growth. David Ricardo refocused economics, turning it away from economic growth and toward the issue of the forces determining the distribution of income.

Joseph Schumpeter, in the discussion of growth in his famous book on the history of economic thought, distinguishes two types of economists by their thinking about growth: the optimists and the pessimists. He argues that most mainstream economists fall within the pessimist group, the strongest pessimists being Malthus, Ricardo, and James Mill. These mainstream economists strongly emphasized decreasing returns, ever-increasing rent, and the stationary state toward which the economy was progressing. They did this even as the economy around them was growing at rates far exceeding those of earlier times. As Schumpeter notes, “They were convinced that technological improvement and increases in capital would in the end fail to counteract the fateful law of decreasing returns.”

Somewhat of an exception to this among the major mainstream economists was John Stuart Mill, who discussed growth and technology more than Malthus or Ricardo did, and who, moreover, was much more optimistic about the possibility of continued growth. Toward the end of his life, Mill

became more of a pessimist. He seemed convinced that the stationary state was near. However, he did not see this result as necessarily bad.

It was left to heterodox economists such as Henry Carey (1793-1879) and Friedrich List to support the optimist vision. List, discussed in previous chapter, was part of the German historical school, which emphasized empirical observation and history over theory. Since he could see that the economy was growing at a faster rate than it had earlier, it was only natural for him to believe that growth could continue, possibly indefinitely. Carey was an American economist who deemphasized theory and emphasized history and empirical observation. This led him to the same conclusion as List: there seemed no end in sight to the growth of the economy. Given the American experience at the time, with an expanding frontier and ever-increasing agricultural land, it was natural that diminishing returns would be less emphasized in the American context.

It is interesting that the optimists, List and Carey, supported tariffs, whereas the pessimists, such as Ricardo, generally supported free trade. This difference probably flowed from their view of theory and use of assumptions. Ricardo's theoretical comparative advantage model directed thinking toward the advantages of a policy of free trade. But the static nature of the model also led to the view that once the gains of trade had been achieved, growth would stop. List and Carey focused less on theory and more on observation and history. Direct observation of the economy suggested the importance of technology and the possibility of continued growth. It also suggested that protecting that technology by tariffs was important. Smith's argument that trade expands technology through expanding the division of labor and learning by doing, and therefore can be beneficial for all.

Mainstream economists of the time vigorously attacked both List's and Carey's views and delighted in pointing out their theoretical mistakes. But in doing so the mainstream economists failed to grasp the broader lesson of List's and Carey's work that diminishing marginal returns could be overcome, possibly forever, by technological development.

As neoclassical economics developed, the movement away from a focus on growth accelerated. The neoclassical, with the possible exception of Alfred Marshall, whose views on growth resembled Mill's, focused more on static equilibrium. Both Mill and Marshall held that

technological progress could temporarily create the conditions of growth but that the law of diminishing returns in agricultural and raw materials would ultimately win out.

For the most part, economists in the first half of the twentieth century did not deal with growth. An important exception was Joseph Schumpeter, who does not fit neatly into any school.

Schumpeter and Growth

Before Schumpeter was thirty years old, he had laid the foundation for his theory of economic growth in *The Theory of Economic Development*, first published in 1912 and translated into English in 1934.

Schumpeter's explanation of the process of economic growth does not fit into the orthodox mold, because he stressed the noneconomic causes of growth. Though he examined some strictly economic factors, he insisted that the principal elements in the past growth of the system and the elements that will reduce growth in the future are noneconomic.

First let us look at his novel analysis of economic factors. He essentially accepted Say's Law, although he recognized and analyzed the fluctuations in economic activity under capitalism. To him depressions were self-correcting, and there could be no equilibrium at less than full employment. Schumpeter considered depressions beneficial to the system; they were an integral part of the entire process of economic growth. Growth was tied to the prosperity stage of the cycle. The resulting depression is beneficial in that it shakes out the economy, removing managed, efficient firms, the less efficient firms, and thereby prepares the way for a growing economy of healthy.

But the principal agents of economic growth are noneconomic, according to Schumpeter, and are to be found in the institutional structure of the society. Schumpeter attributed to the activities of what he called entrepreneurs the tremendous growth that took place in the industrialized world. An entrepreneur to Schumpeter is not just a businessperson or manager; this person is a unique individual who is by nature a taker of risks and who introduces innovative products and new technology into the economy.

Therefore, economic growth is fostered by an institutional environment that rewards and encourages the activities of entrepreneurs; early capitalism, with its private property and laissez-

laissez-faire government, was ideally suited to economic growth. Insofar as it stresses the importance of incentive and laissez-faire government, this part of Schumpeter's analysis is in theoretical and ideological accord with the classical theory of growth; but where classical theory stressed the economic factor of the size of capital accumulation, Schumpeter emphasized a noneconomic, cultural, sociological factor in his analysis of the role of the entrepreneur.

Schumpeter received some acclaim, but not from significant mainstream economists. It was only in the work of Roy Harrod, Evsey Domar, Robert Solow, and Trevor Swan in the 1950s, which created formal models of growth, that growth theory caught on and became part of the core of macroeconomics. Interest in these formal growth models was, however, totally overshadowed as the profession digested the depression of the 1930s and concentrated on the theory of business cycles. Informal nature did not fit the formal modeling approach that was becoming the standard.

The Underconsumptionist Arguments

Dear student! Do you agree with the mercantilists underconsumptionist view? Write your view.

Interest in growth theory was paralleled by concern about whether a market economy would lead to full employment and whether the government should intervene in the economy to help maintain a full utilization of resources.

Mercantilists specifically wanted to understand the forces that determine the capacity of an economy to produce goods and services and to ascertain whether the actual level of output reached the potential level.

Many mercantilists perceived a fundamental conflict between private and public interest and therefore believed that the economy would fail to achieve its output potential unless the government intervened.

Their argument was twofold:

- first, following Jean Bodin, they believed that private interest led to monopoly and that monopoly restricted output;
- second, they believed that when individuals either saved or bought foreign goods, a shortage of demand for domestic goods ensued, which weakened the economy.

The mercantilist position was that the government should regulate domestic and foreign trade so that the economy would show a balance-of-payments surplus and increase the country's gold, which served as its money supply.

As mercantilism evolved into classical economics, attitudes toward government intervention changed dramatically. Unlike the early mercantilists, Adam Smith believed that competitive market forces were sufficiently strong that private interests, as though led by an “invisible hand,” would be directed to work for the public interest.

Smith and other classical economists attacked mercantilist underconsumption arguments. They argued that savings would automatically be translated into investment spending, because a decision to save is a decision to invest. The proposition that a laissez-faire economy would automatically produce full utilization of resources was called Say's Law, and it became a central element of classical and neoclassical economic thinking.

Classical economists also attacked the mercantilist argument for increasing the stock of gold by running a trade surplus, contending that the wealth of a nation is measured not in precious metals but by real output, and that a country would be better off allowing free trade, thereby gaining the advantage of foreign competition.

Classical economists, particularly Smith and J. S. Mill, agreed that market forces did not work perfectly but maintained that the market worked better than the alternatives. With the exception of Thomas Malthus, from 1800 through 1930 the analysis of business cycles was left to heterodox and nonmainstream economists such as Karl Marx, Mikhail Tugan-Baranowsky, and J. A. Hobson. The classical conviction that markets could be relied upon to control the economy shifted the focus of economic inquiry from monetary and financial forces to real forces, and the classical analysis of macroeconomic issues generally accepted a dichotomy between real and nominal forces.

7.2 Keynesian System: The Keynesian Revolution

Keynes's break with the past—that is, with the laissez-faire tradition running from Smith through Ricardo, J. S. Mill, and Marshall—was more complete. Although he was familiar with the basic Marshallian partial equilibrium analysis, he constructed a new theoretical structure to address the aggregate economy that had significant effects on both economic theory and policy.

Keynes began working on *The General Theory* immediately after completing his two-volume *Treatise on Money*, which made use of the quantity theory of money to discuss cyclical fluctuations. In *The General Theory*, Keynes abandoned this approach, much to the chagrin of his colleague Dennis Robertson, with whom he had previously worked closely.

Keynesian economics became embodied in the texts in a variety of models called the multiplier model (sometimes called the AE/AP model), the IS/LM model, and the AS/AD model. These models were the core of what was taught as macroeconomics through the 1980s and still appear in many recently published undergraduate texts. *The General Theory* (1936), which created modern macroeconomics and still forms the basis of much of what is taught in undergraduate macroeconomics. But cutting-edge macroeconomics, for the most part, went in different directions, as Keynesian economics lost favor.

7.3 Topics in Modern Macroeconomics

7.3.1 Monetarism

Throughout the 1950s and 1960s, the primary foil to the Keynesians was the monetarists. Under the leadership of Milton Friedman, they provided an effective opposition to Keynesian policy and theory. The consumption function model used by Keynesians in the 1950s had no role for money, nor did it consider prices or the price level. This initial lack of concern about money supply and prices manifested itself in policy based on Keynesian analysis.

Keynesians were soon willing to concur with the monetarists that money mattered, but they felt that the monetarists differed from them in believing that only money mattered. The debate was resolved by means of the IS-LM Keynesian-neoclassical synthesis, in which the monetarists assumed a highly inelastic LM curve and Keynesians assumed a highly elastic LM curve. Thus, at least in terms of the textbook presentation, monetarist and Keynesian analyses came together in the general neo-Keynesian IS-LM model, about which they differed slightly on some parameters.

Modern macroeconomics was a result of economists working through the neo-Keynesian model and discovering many problems, some purely theoretical, and some becoming apparent as neo-Keynesian policy failed.

7.3.2 Problems with IS-LM Analysis

IS-LM *analysis* remains part of most macroeconomists' toolbox; it provides the framework most economists initially use in tackling macroeconomic analysis. By the 1960s, however, it had been well explored in the literature and found wanting in several ways. First, it forced the analysis into a comparative static equilibrium framework. In the view of many economists, Keynes's analysis concerned—or should have concerned—speeds of adjustment. They believed that Keynes was arguing that the income adjustment mechanism (the multiplier) occurred faster than the price or interest rate adjustment mechanisms. Comparative static analysis lost that aspect of Keynes.

Second, in IS-LM analysis the interrelationship between the real and nominal sectors had to occur through the interest rate and could not occur through other channels. Monetarists were unhappy with this because they thought money could affect the economy through several channels. Many Keynesians were unhappy with the framework because it shed little light on the problem of inflation, which in the 1960s was beginning to be seen as a serious economic problem. Third, the demand for money analysis used to derive the LM curve was not based on a general equilibrium model; instead, it was assumed in a rather ad hoc fashion. It had not truly integrated the nominal and real sectors. Because it did not capture the true role of money and the financial sector, it trivialized their function. It made it seem as if a fall in the price level could bring about an equilibrium, when in fact most economists believed that a falling price level would make matters worse, not better. Nonetheless, the IS-LM model was adopted. It was neat, it served its pedagogical function well, it was a rough and ready tool, it provided generally correct insight into the economy, and it was the best model available.

Dissatisfaction with existing analysis, however, led many macroeconomists to turn to other models in their research. This led to a dichotomy. While IS-LM analysis remained the key undergraduate model in the 1970s and 1980s, graduate research started to focus on quite different issues. By the early 1990s the change in focus was filtering down to undergraduate courses. Modern theoretical debates in macroeconomics have little to do with the shapes of the IS-LM curves. Instead, they approach macroeconomic issues from a microeconomic perspective, and they deal with issues such as the speeds of quantity and price adjustment. In a sense, many macroeconomic researchers in the 1970s and 1980s argued that we should skip the Keynesian IS-LM interval and return to the

macroeconomic debate, as it existed in the 1930s, when issues were framed in microeconomic terms. Thus, starting in the 1970s, we saw a reaction against Keynesian economics.

7.3.3 The Micro foundations of Macroeconomics

In the 1970s, economists, in trying to fix this problem, began to lay the micro foundations of macroeconomics by attempting to fit the Keynesian models into the neoclassical general equilibrium model. They did this for two reasons: first, for theoretical completeness and, second, to be able to expand the model to include inflation in the analysis. As they did so, they discovered that Keynesian models broke down when normal neoclassical principles were applied to them. Keynesian macroeconomics, the traditional macroeconomics of the textbooks, was inconsistent with the microeconomics being taught.

The microeconomic foundations literature established new ways of looking at unemployment.

Whereas Keynesian analysis pictured unemployment as an equilibrium phenomenon in which individuals could not find jobs,
the micro- foundations literature pictured unemployment as a temporary phenomenon—the result of the interaction of a flow of workers leaving work and new workers entering.

Advocates of the microfoundations approach argued on theoretical grounds that the Phillips curve—a curve showing a tradeoff between inflation and unemployment—was only a short-term phenomenon and that, once the inflation became built into expectations, the unemployment-inflation tradeoff would disappear. The long- run Phillips curve would be close to vertical and the economy would gravitate toward a natural rate of unemployment.

The policy implications of the new microfoundations approach were relatively strong. Its analyses removed the potential for government to affect the natural rate of long-run unemployment through expansionary monetary and fiscal policy. Attempts to do so would work in the short run by temporarily fooling workers, but expansionary policy would simply cause inflation in the long run. According to the new microeconomics, government's attempt to reduce unemployment below its natural rate was the cause of inflation in the late 1970s.

Keynesian monetary and fiscal policies were not, however, completely ruled out. In theory, at least, they could still be used temporarily to smooth out cycles. Thus, in the early 1970s, a

compromise arose between Keynesians and the advocates of a microfoundations approach to macroeconomics economics: in the long run the classical model is correct; the economy will gravitate to its natural rate. In the short run, however, because individuals are assumed to adjust their expectations slowly, Keynesian policies can have some effect.

7.3.4 The Rise of New Classical Economics

Dear student! What is the contribution of new classical economics?

In the mid-1970s the term rational expectations first appeared on the macroeconomic horizon. The rational expectations hypothesis was a byproduct of the microeconomic analysis of Charles C. Holt (1921-), Franco Modigliani (1918-), John Muth (1930-), and Herbert Simon (1916-), who were trying to explain why many people did not seem to optimize in the way that neoclassical economics assumed they would. As long as the private actors in the economy are optimally adjusting to the available information (and there is no good reason to assume the contrary), they will always be on the optimal adjustment path.

Although Muth wrote his article in 1961, the rational expectations assumption did not play an important role in economics until it was adopted by Robert Lucas into macroeconomics and combined with the work being done in micro- foundations of macroeconomics. They can discover the underlying economic model and adjust immediately, and it would be beneficial for them to do so. Assuming that people have rational expectations, anything that will happen in the long run will happen in the short run.

In the mid-1970s, rational expectations caught on in macroeconomics, and there were significant discussions of policy ineffectiveness and the unworkability of Keynesian-type monetary and fiscal policy. This developing work in rational expectations soon came to be known as new classical economics, because its policy conclusions were similar to earlier classical views. By the late 1970s it seemed too many that the future of macroeconomics lay in new classical thinking and that Keynesian economics was dead.

One of the lasting influences of the new classicals on macroeconomics was their contribution to the theory of macroeconomic modeling. Keynesians had developed macroeconomic models to a high level of sophistication in the work of economists such as Jan Tinbergen (1903-1994) and Lawrence Klein (1920-). In the 1960s and 1970s, many of these econometric models were not good predictors of future movements in the economy, and many economists were beginning to lose faith in them. Robert Lucas, a leader of the new classicals, specified one reason why these models were poor predictors in an argument that became known as the Lucas critique of econometric models. He argued that individuals' actions depend upon expected policies; therefore, the structure of the model will change as a policy is used. But if the underlying structure of the model changes, the appropriate policy will change, and the model will no longer be appropriate. Thus, it is inappropriate to use econometric models to predict effects of future policy.

7.3.5 New Keynesian Economics and Coordination Failures

Other modern economists worked on developing foundations for macroeconomics from simulations, complexity, and agent-based models in which institutional characteristics were embedded within agents, and then, through simulations, one discovered what strategies survive. This work led to a new group, called new Keynesians, who argued that a new foundation for Keynesian-type economics could be developed. They reasoned that there was as much need for the macrofoundations of microeconomics as there was for microeconomic foundations.

7.3.6 The Movement Back to Growth and Supply

New classical economics notably influenced macroeconomics, but it did not garner data were simply insufficient to provide any answers. At that point macroeconomists stopped looking at business-cycle issues and started to focus macroeconomics on growth. This fit with the events of the time, as the U.S. economy grew throughout the 1990s and did not experience a business cycle. Significantly more proof for its theories than had Keynesian macroeconomics.

The analysis of growth started by going back to the Solow growth model, which had been developed in the 1950s as a response to the Harrod-Domar model. That model had argued that growth was a knife-edge and that, unless the economy was extremely lucky, it would likely fall into a depression. Solow's model challenged that conclusion by eliminating the assumption of a fixed capital/labor ratio; it showed that the economy would always come back to a balanced growth

path. The economy was stable, not unstable. The Solow growth model, also called the neoclassical growth model, focused completely on supply; demand played no role in determining output. New classicals found it to their liking and developed it further as they attempted to explain why growth rates among countries differed.

The movement of macroeconomics toward an emphasis on growth changed the nature of macroeconomics. Growth models were supply-based models: they had no role for demand in them. Thus, as growth models became more prominent, Keynesian models became less so.

Classical growth theory was supplemented with new endogenous growth theory. In endogenous growth theory, technological change was not considered something that occurred outside the economic model; it was endogenous to the model. It was the natural result of investment in research and development. Endogenous growth theory allowed increasing returns to overwhelm diminishing marginal returns, and the result of this could be continual growth and no eventual movement to the stationary state. Thus it brought mainstream macroeconomics back into the optimist, rather than the pessimist, fold.

7.3.7 Modern Macroeconomics in Perspective

To understand how these developments fit in with our assertion that a new economics has developed, you first have to understand that Keynesian macroeconomics never really fit in with neoclassical economics. It was something extraneous that was allowed to exist because it seemed to fill a policy need and explain economic events better than standard classical models.

The new classical revolution challenged Keynesian macroeconomics because of that incompatibility, and tried to bring macroeconomics into the fold of microeconomics. It was, in a sense, the last hurrah of neoclassical thinking, and it succeeded in undermining the theoretical base for macroeconomics but failed to bring macroeconomics back into the neoclassical fold. It simply fragmented it and allowed a variety of inconsistent models to develop and be used wherever they suited particular applications. Within this new reality, there was little to separate Keynesian from classical economics; both were simply aspects of modern economics—the use of models to try to understand reality.

Self-Test Exercise

1. The focus on growth displaced much of Keynesian macroeconomics. How? Discuss it.
2. Who are the new Keynesianism? What is their main focus?
3. What does mean by coordination failure? Discuss it.
4. Discuss on the rational expectation theory. Mention the influential contributors of it.
5. Discuss on the rise of modern macroeconomics? What is the deviation point from Keynesian macroeconomics? Who are the influential contributors?
6. Discuss on the monetarist policy implication.
7. Discuss on business cycle theory.
8. Summarize the early growth theory.

Chapter Eight

8 The Development of Econometrics and Empirical Methods in Economics

Introduction

Economics is about events in the real world. Thus, it is not surprising that much of the debate about whether we should accept one economic theory rather than another has concerned empirical methods of relating the theoretical ideas about economic processes to observation of the real world.

Objectives of the Chapter:

Dear learners, let's begin the chapter with the following basic questions!

- ☛ Is there any way to relate theory to reality?
- ☛ If there is a way, is there more than one way?
- ☛ Will observation of the real world provide a meaningful test of a theory?
- ☛ How much should direct and purposeful observation of economic phenomena, as opposed to informal heuristic sensibility, drive our understanding of economic events?
- ☛ Given the ambiguity of data, is formal theorizing simply game-playing?
- ☛ Should economics focus more on direct observation and common sense?

Dear student! The development of econometrics has played great role in the economic inquiries recently. Do you agree? Please try your own attempt in the line below.

Great! You tried to answer your own!

In this chapter, we briefly consider economists' struggles with questions such as these. Their struggles began with simple observation, then moved to statistics, then to econometrics, and recently to calibration, simulations and experimental work.

The debate about empirical methods in economics has had both a micro- economic and a macroeconomic front. The microeconomic front has, for the most part, been concerned with

empirically estimating production functions and supply-and-demand curves; the macroeconomic front has generally been concerned with the empirical estimation of macroeconomic relationships and their connections to individual behavior. The macroeconomic estimation problems include all the microeconomic problems plus many more, so it is not surprising that empirical work in macroeconomics is far more in debate than empirical work in microeconomics.

We begin our consideration with a general statement of four empirical approaches used by various economists. Then we consider economists' early attempts at integrating statistical work with informal observations. Next, we see how reasonable yet ad hoc decisions were made about the problems regarding the statistical treatment of data, leading to the development of a sub discipline of economics—econometrics. Finally, we consider how those earlier ad hoc decisions have led to cynicism on the part of some economists about econometric work.

8.1 Empirical Economics

Almost all economists believe that economics must ultimately be an empirical discipline, that their theories of how the economy works must be related to (and, if possible, tested against) real-world events and data. But economists differ enormously on how one does this and what implications can be drawn afterward. We will distinguish four different approaches to relating theories to the real world: common-sense empiricism, statistical analysis, classical econometric analysis, and Bayesian econometric analysis.

Common-sense empiricism is an approach that relates theory to reality through direct observation of real world events with a minimum of statistical aids. You look at the world around you and determine if it matches your theoretical notions. It is the way in which most economists approached economic issues until the late nineteenth century; before then, most economists were not highly trained in statistical methods, the data necessary to undertake statistical methods did not exist, many standard statistical methods that we now take for granted had not yet been developed, and computational capabilities were limited.

Common-sense empiricism is sometimes disparagingly called armchair empiricism. The derogatory term conveys a sense of someone sitting at a desk, developing a theory, and then selectively choosing data and events to support that theory. Supporters of common-sense empiricism would object to that characterization because the approach can involve careful

observation, extensive fieldwork, case studies, and direct contact with the economic events and institutions being studied. Supporters of common-sense empiricism argue that individuals can be trained to be open to a wide range of real-world events; individuals can objectively assess whether their theories match those events. The common-sense approach requires that economists constantly observe economic phenomena, with trained eyes, thereby seeing things that other people would miss. It has no precise line of demarcation to ultimately determine whether a theory should or should not be accepted, but it does have an imprecise line. If you expected one result and another occurred, you should question the theory. The researcher's honesty with himself or herself provides the line of demarcation.

The *statistical analysis* approach also requires one to look at reality but emphasizes aspects of events that can be quantified and thereby be subject to statistical measure and analysis. A focus is often given to statistically classifying, measuring, and describing economic phenomena. This approach is sometimes derisively called *measurement without theory*. Supporters of the approach object to that characterization, arguing that it is simply an approach that allows for the possibility of many theories and permits the researcher to choose the most relevant theory. They claim that it is an approach that prevents reconsidered theoretical notions from shaping the interpretation of the data.

The *classical econometric* approach is a method of empirical analysis that directly relates theory and data. The common-sense sensibility of the researcher, or his or her understanding of the phenomena, plays little role in the empirical analysis; the classical econometrician is simply a technician who allows the data to do the testing of the theory. This approach makes use of classical statistical methods to formally test the validity of a theory. The econometric approach, which developed in the 1930s, is now the approach most typically taught in modern economics departments. Its history is the primary focus of this chapter.

The Bayesian approach directly relates theory and data, but in the interpretation of any statistical test, it takes the position that the test is not definitive. It is based on the Bayesian approach to statistics that seeks probability laws not as objective laws but as subjective degrees of belief. In Bayesian analysis, statistical analysis cannot be used to determine objective truth; it can be used only as an aid in coming to a subjective judgment. Thus, researchers must simply use the statistical tests to modify their subjective opinions. *Bayesian econometrics* is a technical extension of

common-sense empiricism. In it, data and data analysis do not answer questions; they are simply tools to assist the researcher's common sense.

These approaches are not all mutually exclusive. For example, one can use common-sense empiricism in the initial development of a theory and then use econometrics to test the theory. Similarly, Bayesian analysis requires that researchers arrive at their own prior belief by some alternative method, such as common-sense empiricism. However, the Bayesian and the classical interpretations of statistics are mutually exclusive, and ultimately each researcher must choose one or the other.

Technology affects not only the economy itself but also the methods economists use to analyze the economy. Thus, it should not be surprising that computer technology is making major differences in the way economists approach the economy and do empirical work. As one observer put it: Had automobiles experienced the same technological gains as computers, Ferraris would be selling for 50 cents. Wouldn't that change your driving habits? The computer certainly has changed economists' empirical work, and it will do so much more in the future.

In some cases, technology has merely made it easier to do things we have already been doing. Statistical tests, for example, are now done pro forma by computer programs. Recursive systems with much more complicated dynamics are finding a wider audience. Bayesian measures are beginning to show up in standard computer software statistical programs. Another group of economists is using a VAR (Vector Auto Regression) approach. They simply look to the computer to find patterns in data independent of any theory.

Another set of changes is more revolutionary than evolutionary. Recently a group of empirical economists have been focusing more on agent-based modeling. These are simulations in which local individual optimization goals of heterogeneous agents are specified and modeled. But instead of being deductively determined, the results are simulated to determine the surviving strategies. In these simulations individuals are allowed to build up institutions and enter into coalitions, providing a much closer parallel to real-world phenomena.

Another change that we have seen is the development and use of a technique called calibration in macroeconomic models. Models are not tested empirically; instead, they are calibrated to see if the empirical evidence is consistent with what the model could have predicted. In calibration, the

role of simple general equilibrium models with parameters determined by introspection along with simple dynamic time-series averages is emphasized. Statistical “fit” is explicitly rejected as a primary goal of empirical work. There is debate about precisely what calibration shows, but if a model cannot be calibrated, then it should not be retained.

A final change has been the development of a “natural experiment” approach to empirical work. This approach uses intuitive economic theory rather than structural models and uses natural experiments as the data points.

8.2 Mathematical Economics, Statistics, and Econometrics

Before we consider the development of econometrics, it is worthwhile to briefly consider the distinctions among mathematical economics, statistics, and econometrics. They are often grouped together, even though they should not be.

The term *mathematical economics* refers only to the application of mathematical techniques to the formulation of hypotheses. It is formal, abstract analysis used to develop hypotheses and clarify their implications. The term *statistics* refers to a collection of numerical observations, and statistical analysis refers to the use of statistical tests derived from probability theory to gain insight into those numerical observations. *Econometrics* combines mathematical economics, which is used to formulate hypotheses, and statistical analysis, which is used to formally test hypotheses. The combination is not symmetrical; one can do mathematical economics without doing econometrics, but one cannot do econometrics without first doing mathematical economics. Only mathematical economics gives one a theory specific enough to be tested formally. Model cannot be calibrated, then it should not be retained.

A final change has been the development of a “natural experiment” approach to empirical work. This approach uses intuitive economic theory rather than structural models and uses natural experiments as the data points.

The separation of mathematical economics from statistics can be seen in history. In the late nineteenth century, the economists who most strongly opposed the mathematical formalization of economic thinking were the German historical school and the forerunners of the U.S. institutionalist school. These groups included some strong advocates of data collecting and

statistical analysis they argued that one had to know what real-world phenomena one was talking about before it made any sense to talk about theoretical generalizations. On the other hand, many formal theorists during that time were hesitant about using statistical analysis. For example, both Marshall and Edgeworth were hesitant about the ability to statistically measure a demand curve, believing that the *ceteris paribus* assumptions used to analytically derive the curves made them difficult to quantify. Edgeworth wrote in his discussion of demand curves in Palgrave. “It may be doubted whether Jevons’s hope of constructing demand curves by statistics is capable of realization.”

What economists hoped to gain from mathematical economics was a precision of hypothesis testing that would make it possible to reduce the ambiguity of tests. For example, instead of relying on common sense and a general heuristic understanding that demand curves slope downward, they wanted to be able to prove empirically that demand curves slope downward. Prior to the mathematical formalization of taken days now could be done in seconds. During that period the hopes for econometrics were high. Some believed that econometrics would make economics a science in which all theories could be tested. During this time, logical positivism and Popperian falsificationism were the reigning methodologies, and it was believed that the errors of the past—formulating theories in such a way as to render them untestable—could be avoided. Most of these initial hopes have not been realized. Economic theory, economists employed words to state economic theories and hypotheses. Testing of general hypotheses was done in relation to current circumstances or in relation to historical events, but in either case the use of statistics was minimal. This essentially heuristic approach did not permit hypotheses to be tested in a manner acceptable to formal economists.

The 1960s and 1970s saw enormous advances in formal statistical testing and in an understanding of econometric methods. Advances in computer technology made it possible to conduct extremely complicated empirical work. Statistical tests that earlier would have

8.3 Neoclassical Economics and Empirical Analysis

Early attempts at empirical work were the exception, not the rule. In the late seventeenth century most classical economists followed the common-sense empiricism approach. They posited their

laws about how the economy worked and supported those laws with examples. Because there was no accepted test of a theory, debates as to what theory was correct were ongoing.

With the beginning of neoclassical economics in the late 1800s, that approach was called into question. As we saw in Part III, neoclassical theories were becoming more formal, and there was discussion of economics becoming an exact science. That meant formalizing economists' approach to empirical work, and the approach that was most discussed was statistical analysis, which itself was undergoing a revolution.

Neoclassical economists followed many different approaches to statistical analysis. For example, Stanley Jevons saw statistics as a method of making economics into an exact science that could have exact laws. Léon Walras, on the other hand, had little place for empirical work; he continued to develop his theory independent of any chance of empirically testing it. Alfred Marshall believed in empirical work but did not conduct formal statistical analysis; he saw direct observation and common-sense empiricism as the most useful way to gather empirical information.

The Rise of Econometrics

By the 1960s, Mitchell's approach to empirical analysis for the macroeconomics was supplanted by the econometric approach in both microeconomics and macroeconomics. There were a number of reasons why the mainstream turned away from Mitchell's methodology and toward econometrics: (1) the further development of statistical and econometric methods, which avoided some of Moore's problems; (2) the strong desire on the part of the profession and the society for precision in implementing and testing theories; (3) the development of mathematical economics; (4) the hope that econometrics would turn economics into an exact science; and (5) brilliant and strong-willed advocates of the econometric methods who proselytized for this approach.

Self-Test Exercise

1. How might supporters of common-sense empiricism defend themselves from the criticism that they are simply unable to understand the technical issues that econometrics resolves?
2. How does technology affect the development of economic thought?
3. Identify types of econometrics?
4. Distinguish econometrics from mathematical economics.

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Assignment Questions

Total Mark= 30%

Instruction I: Read the Following Questions carefully and choose the Best Answer (15 pts)

- 1) What makes Warlas different from his predecessors like Jevons, Menger and others is his use of,
 - A. The notion of equilibrium
 - B. The case of sectional equilibrium
 - C. The general equilibrium method
 - D. The partial equilibrium analysis
 - E. None of the above
- 2) He is credited for establishing a scientific welfare economics,
 - A. Alfred Marshall
 - B. Arthur Cecil Pigou
 - C. J.M. Keynes
 - D. Eugen Bohn – Bawerk
 - E. None of the above
- 3) Which one of the following is true about Keynesian theory of unemployment?
 - A. The economy might come to rest at a position of unemployment equilibrium.
 - B. An equilibrium where there were natural forces operating to achieve full employment.
 - C. The level of employment is determined by certain causal factors.
 - D. A and B
 - E. A and C
- 4) Which statement is true about the monetarists?
 - A. The Monetarists focuses on aggregate demand or the rate of spending in the economy.
 - B. The government should never take any kind of direct discretionary action to influence employment or spending.
 - C. The monetarists take a Short-run view.
 - D. The government's only economic policy should be to control the size of the money supply.
 - E. B & D
- 5) Keynes divides effective demand into,
 - A. Income and consumption
 - B. Consumption and investment
 - C. Saving and propensity to consume
 - D. Import and export
 - E. None of the above
- 6) During the period from the 1930s to the late 1970s, macroeconomics continued to focus on
 - A) Economic growth
 - B) Monetary theory
 - C) Business cycles
 - D) Capital accumulation
 - E) B & C

- 7) Schumpeter's explanation of the process of economic growth does not fit into the orthodox mold, because he focuses on
- A) of the size of capital accumulation
 - B) the noneconomic causes of growth
 - C) depressions beneficial to the system
 - D) institutional environment
 - E) none of the above
- 8) One of the following statements doesn't show the position of underconsumptionist Arguments against the mainstreams.
- A) They believed that private interest led to monopoly and that monopoly restricted output.
 - B) They believed that when individuals either saved or bought foreign goods, a shortage of demand for domestic goods weakened the economy.
 - C) They perceived a fundamental conflict between private and public interest.
 - D) They believed that the economy would fail to achieve its output potential unless the government intervened.
 - E) None of the above.
- 9) The development of Keynesian theory has centered on all of the following related topics, except?
- A. the stability of a market system and particularly its ability to maintain full employment
 - B. the role of money in market a system
 - C. the long term dynamics of the market economy
 - D. All of the above
 - E. Only B and C
- 10) Which one of the following Not True about the principles of Institutional economics,
- A. Emphasize on historical approach and usage of inductive empirical.
 - B. The economy is governed by eternal and unchangeable laws of the society.
 - C. Men are influenced by supra - individual factors.
 - D. Their main point of interest was the behavior of «homo oeconomicus -economic man».
- 11) B & D are not true. Alfred Marshall,
- A. dismisses the labor theory of value as something that cannot stand for a moment.
 - B. prefers for the occurrence of large scale businesses competing with each other.
 - C. tends to support the self-correcting and optimistic implication of Say's Law.
 - D. tries to use an extensive use of mathematics in his presentation.
 - E. None of the above.
- 12) According to Veblen, which one of the following is not among the most important instincts that shape human economic activities?
- A. The parental instinct
 - B. Workmanship
 - C. Idle curiosity
 - D. Acquisitiveness
 - E. None

13) Which one of the following is Not compatible with Keynesian approach,

- A. Investment is influenced by a mere change in interest rate.
- B. Saving and investment are brought into equilibrium by changes in income.
- C. Money wages adjust slowly and workers resist any drop in the money wage.
- D. Economy is subjected to failure & it may not achieve full employment level.
- E. None of the above.

14) Which one of the following statements is Not True about the formalists?

- A) They wanted simply to eliminate the theory.
- B) They believed that economics should be a science.
- C) They wanted to provide a better, more rigorous general equilibrium foundation.
- D) They integrated policy prescriptions into the mathematical models.
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15) Paul Samuelson's contribution to economic theory would Not take one of the following.

- A) Equilibrium and Stability under dynamic condition.
- B) The multivariate calculus analysis.
- C) Testable hypotheses useful in economic research.
- D) Foundations of Economic Analysis.
- E) None of the above.

Instruction II: Short answer questions (15 pts)

16) Welfare economist identified factors which affect economic welfare with reference to three things. Enumerate them.

17) Keynes describes 'liquidity preference' (the demand for money) as depending on three motives. List and discuss on it.

18) In his criticism against Classicals' view Keynes said that "In the long run, we are all dead!"

19) What does he mean? Elaborate the quotation.

20) Compare and contrast on causes and policy implication for recession according to Keynes and Monetarists.

21) Joseph Schumpeter in the discussion of growth distinguishes types of economists by their thinking about growth. Mention them and compare and contrast on their stand.

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