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Macroeconomics: A Critique of Textbook Version

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Ever since the publication of J.M. Keynes' General Theory of Employment, Interest and Money, macroeconomics has become an important part of the teaching curriculum in economics in all universities of the free world. Quite an impressive number of books have been published on macroeconomics. But a careful perusal of these books gives the impression that they have not really succeeded in explaining the core of macroeconomic analysis to the students. The purpose of this paper is to show the inadequacy of the textbook explanations of the meaning of macroeconomics and to suggest a more appropriate explanation of the differences between micro and macro economics in terms of their respective core determinants and analytical frameworks.

TEXTBOOK CRITERIA

Most of the textbooks on macroeconomics start with a brief introduction about the meaning of macroeconomics in which they attempt to convey the essence of macroeconomics by distinguishing it from microeconomics. The criteria used by the textbooks for highlighting the distinction between microeconomics and macroeconomics are: (1) size or scale of the economic entities studied, (including the level of aggregation), (2) approach to the economic investigation, (including the tools of analysis), and (3) contents of the study.

The standard explanation of the meaning of microeconomics is that it is concerned with the economic behaviour of individual consumers and firms whereas macroeconomics is concerned with the operation of the national economy as a whole. This textbook explanation of the meaning of macroeconomics, on the basis of size of the economic entity studied, may be observed from the following extracts reproduced from the popular textbooks. Ackley Gardner, in his book Macroeconomic Theory, gives the following meaning of macroeconomics:

> "Macroeconomics deals with economic affairs in the 'large.' It concerns the overall dimensions of economic life. It looks at the total size and shape and functioning of the 'elephant' of economic experience, rather than the working or articulation or dimensions of the individual parts.

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Too alter the metaphor, it studies the character of the forest, independently of the trees which comprise it."

"More specifically, macroeconomics concerns itself with such variables as the aggregate volume of the output of the economy, with the extent to which its resources are employed, with the size of the national income, with the 'general price level'. Microeconomics, on the other hand, deals with the division of total output among industries, products and firms, and the allocation of resources among competing uses. It considers problems of income distribution. Its interest is on relative prices of particular goods and services."

"Actually the line between macroeconomic and microeconomic theory cannot be precisely drawn. A truly "general" theory of the economy would clearly embrace both; it would explain individual behaviour, individual outputs, incomes and prices, and the sums or averages of the individual results would constitute the aggregates with which macroeconomics is concerned. Such a general theory exists; but its very generality leaves it with little substantive content. Rather, to reach meaningful results, we find that we must approach macroeconomic problems with macroeconomic models and microeconomic problems with microeconomic tools."[1]

Thomes Frederick Dernburg and Judith Dukler Dernburg, in their Macroeconomic Analysis: An Introduction to Comparative Statics and Dynamics, explain that:

"Microeconomic models focus attention upon the behaviour of individual economic agents - the individual consumer, the individual producer, the individual market. Macroeconomic models, by contrast, abstract from the interrelation between individual agents and describe overall economic behaviour in terms of such broad aggregates as total consumption, total investment, government expenditure and the like."[2]

R.G.D. Allen, in his Macroeconomic Theory: A Mathematical Treatment, explains that:

"The term 'macroeconomics' introduced by Ragnar Frisch in 1933, applies to the study of relations between broad economic aggregates as opposed to the decision taking processes of individuals and firms which is the subject matter of microeconomics."[3]

Robert L. Heilbroner, in his Understanding Macroeconomics, explains the meaning of macroeconomics in the following way:

> "What is 'macroeconomics'? The word derives from the Greek macro, meaning big and the implication is therefore that it is concerned with bigger problems than in microeconomics (micro: small). Yet the difference is really not one of scale. It is one of approach, of original angle of incidence."[4]

Thus it may be observed that the textbooks try to explain the meaning of macroeconomics with reference to the size of the economic phenomenon or the entities studied. Some of them give literal, (Greek) meaning of the words 'micro' and 'macro' as 'small' and 'big' respectively. This gives an impression that microeconomics is concerned with the economic motives, behaviour, operation and performance of individuals and firms whereas macroeconomics is concerned with the operation and performance of different sectors and the national economy as a whole. This is a crude method of distinguishing between macroeconomics and microeconomics. Besides, it raises a doubt that if the size of the phenomenon studied is the basis of demarcation between micro and macroeconomics, then there is no distinction between them because in microeconomics we study some aggregate phenomenon also. In fact, faced by this embarrassing situation, Ackley, tried to relegate the issue to a footnote, reproduced below:

> "Some economists may prefer to define microeconomic theory as relating to the behaviour of individual firms and households. If we do so we must realise that much of the traditional price and distribution theory involves aggregates. The concept of 'industry' for example, aggregates numerous firms or even products. Consumer demand for shoes is an aggregate of the demands of many households, and the supply of shoes is an aggregate of the production of many firms. The demand and supply of labour in a locality or an industry are clearly aggregate concepts. Our usage here is to confine the scope of macroeconomics to aggregates relating to the whole economy together with the subaggregates. ... Macroeconomics uses aggregates smaller than for the whole economy, but only in a context which makes them subdivisions of an economywide total. Microeconomics also uses aggregates, but not in a context which relates them to an economy-wide total."[5]

This gives an impression that though the size or the scale of the phenomenon studied is not the basis of distinction between micro and macro economics, the textbooks continue to perpetuate the crude method because they cannot explain to the students the true distinction between the two.

It is a well known fact that macroeconomic analysis, in the crude sense of the term, is found in the writings of some of the classical authors like, Adam Smith, Thomas Malthus, and David Ricardo. They were all concerned with the national wealth and with the principles which govern the production of output and its distribution. But modern economists have not categorised their analysis as macroeconomic analysis. What is more, the general equilibrium theory, which is a superstructure of the microeconomic theory, is an aggregation of the economic behaviour of all the individual entities. It attempts to find out whether the economy can reach the equilibirum position and also provide stability for that equilibrium when the economic behaviour of individuals and firms are considered together. This was attempted by J.B. Say who explained that supply creates its own demand in the aggregate economy as a whole.[6] Later, Leon Walras attempted mathematical derivation of this general equilibrium theory and derive a law which states that at the point of equilibrium excess demand for any commodity or factor is zero in the aggregate sense. Thus the general equilibrium theory, which is a part of microeconomic analysis, is an aggregation of the economic behaviour of individuals and firms. Yet it is not considered as a part of macroeconomic analysis. Because, as E. Roy Weintraub has observed that:

> "..... reflection will suggest that microeconomics is not in fact that study of completely disaggregated individual behaviours since the concept of a market price necessitates the existence of a market, which already embodies aggregate interactions. One cannot simply use the concept of aggregation to distinguish microeconomics from macroeconomics. Instead, we should examine and categorise the different kinds of inquiries that concern micro and macro theorists."[7]

It may be argued that if the distinction between the micro and the macro economic analyses is based on the size of the phenomenon studied, then it is possible to transform the microeconomics into macroeconomics by summing up the economic behaviour of individuals and firms. By reverse operation it is possible to transform the macro into microeconomics. Unfortunately this cannot be done for the simple reason that the distinction between micro and macroeconomics is not based so much on the size of the economic entity or the scale of the economic process studied as the determinant factors of the economic behaviour of the micro and the macroeconomic entities. The aggregate economic analysis is found in most of the pre-marginal school classical economists (like Adam Smith, David Ricardo, J.S. Mill, and Karl Marx). But their aggregate economic analysis was not christened as macroeconomic analysis probably because though their framework did emphasize the major determinant of the aggregate economic behaviour, they did not highlight its role in determining the process of aggregate economic behaviour. Hence the credit goes to General Theory for having provided a clearcut clue to this core determinant of macroeconomic analysis. The 'Keynesians' developed this framework into macroeconomic analytical framework. Thus the size of the

economic phenomenon studied is not relevant either for macroeconomic or for microeconomic analysis. In both micro and macroeconomic analyses relatively smaller as well as bigger entities are studied depending upon their relevance for the economic phenomenon studied. In other words, the size of the economic phenomenon studied is only an outword appearance of the economic principles involved and not the core of them.

Though, the 'size' of the economic entity studied is not considered a distinguishing feature of micro and macroeconomic analyses by some textbook authors, the failure to perceive the true distinguishing factors has forced them to find a compromising explanation by referring to the scope and coverage of economic problems studied in micro and macroeconomics. Even here, very few really underline the nature of the problems studied.

The textbooks also attempt to distinguish between micro and macroeconomics on the basis of the approach to the study of economic behaviour. But still it falls short of identifying the core of macroeconomics. This is evident from the following quotations taken from some textbooks.

R. Gale, in his Macroeconomics: Theory and Policy, states that:

> "Macroeconomics is that branch of economics which seeks to answer such questions as: What determines the level of unemployment? How is the general price level determined and what is the relative importance of the various factors that influence the price level? What determines the level of macroeconomic activity and its growth or decay over time?
>
> In contrast to macroeconomics, microeconomics, the other main branch of economics, seeks to answer such questions as: How is the purchasing behaviour of an individual influenced by the price of commodity? How does a firm determine the quantities of resources to buy and the manner in which they are to be combined to produce goods and services? What determines the pattern of distribution of the goods and services that the economy produces?

While microeconomics can be studied without any reference to macroeconomics, the converse is not true."8

F.S. Brooman, in his Macroeconomics states that:

> "One of the chief objectives of economic theory is to explain the working of the economy as a whole, by identifying and if possible measuring the forces which cause the nation's total output and level of employment to be what they are. But this is an extremely complex matter...to reduce the problem

to manageable proportions, it is necessary to simplify it by aggregation that is, by arranging the myriad products and decision makers into a reasonably small number of categories or "aggregates"; individual differences between one consumer and another, or between one business firm and another, are ignored; it is assumed that if the categories are well chosen, their members will be behaving in a sufficiently uniform way to make generalisation legitimate.

The kind of analysis which proceeds in this way is called macroeconomics, 'macro' being the Greek for 'large'. Though the word itself is of relatively recent origin (Ragnar Frisch originated it in 1933) the method of approach is by no means new - the eighteenth century Physiocrats for example, adopted it when they divided society into three "classes" to show the "circulation of wealth..."[9]

Warren L. Smith, in his Macroeconomics states that:

"The subject matter of this book - the study of the overall performance of the economy - is usually called 'macroeconomics.' This is to be contrasted with "microeconomics" which deals with the behaviour of individual decision-making units such as households, business firms, and governmental units... ... the best approach to the explanation of the behaviour of the economy as a whole would be to explain the behaviour of each decision-making unit and then combine these explanation into a theory of the entire economy, an approach along these lines, called "general equilibrium theory" has been developed at quite an abstract level. The study of general equilibrium theory is useful in developing an understanding of the relations between component parts of the economy and of the way in which the individual decision-making units fit together to form a coherent whole.

However, the general equilibrium approach is far too detailed and complex to be of practical use in explaining the behaviour of the economy as a whole."[10]

William H. Branson, in his Macroeconomic Theory and Policy, states that:

"In Microeconomic theory, full employment of resources is generally assumed, so that the focus of the analysis is on the determination of relative

> prices and the allocation of scarce resources among alternative uses. On the other hand, in its new traditional form macroeconomics focusses on the level of utilisation of resources - especially the level of employment - and the general level of prices."[11]

Even Axel Leijonhufvud, accepted this basis of distinction between micro and macroeconomics when he observed that:

> "Despite the several alternative ways that we have developed to make the gulf between micro theory and macro theory seem plausible to new generations of students, the micro distinction remains basically that between models with perfectly coordinated solutions and models where one or more markets reach such solutions only by chance."[12]

Thus the attempts to distinguish macroeconomics from microeconomics and to explain its meaning in terms of its distinct approach to the study of economic phenomenon only highlight certain characteristics of macroeconomics. But such attempts have not clearly demarcated the core determinants of micro and macroeconomic analyses. For instance, it is observed in the above quotations that the macroeconomic analysis is concerned with the study and analysis of general price level whereas microeconomic analysis is concerned with the study of relative price level. Further, it is suggested that macroeconomic analysis is concerned with the analysis of the working of the economy as a whole without reference to the individuals and firms, whereas microeconomics is concerned with the analysis of the working of the economic behaviour of the individuals and the firms. Furthermore, in microeconomic analysis certain assumptions such as full employment of resources, flexibility of prices and free movements of factors of production, perfect knowledge are made whereas such assumptions are not made in macroeconomic analysis. Though all these respective characteristics may be true, they do not go to explain the core of macroeconomic analysis.

Finally, attempts have also been made to explain the meaning of macroeconomic analysis by referring to its contents. For instance, Richard G. Lipsey, has attempted to distinguish between micro and macroeconomic analyses only in terms of different contents of these branches of economics. He has observed that:

> "There is no clear-cut dividing line between macro and microeconomics and perhaps the best way of showing the scope of macro-economics is to list the most important sets of problems with which we shall be concerned in the remainder of this book, and to contrast these where possible with the related problems dealt with in micro theory.

(1) Problems relating to fluctuations in the level of resource use particularly fluctuations in the level of employment of labour. In micro-economics we take the total volume of employment as given and consider how it is allocated between various sectors of the economy.

(2) Problems relating to fluctuations in the average level of prices, problems, that is of inflation and deflation. In microeconomics we take the absolute price level as given and account for the structure of relative prices.

(3) Problems relating to fluctuations in the general level of money wages. In microeconomics we are concerned with the relation between wages in different areas, occupations and industries.

(4) Problems relating to the allocation of resources between the production of consumers' goods on the one hand, and the production of capital goods on the other. This is an allocation problem similar to the one encountered in microeconomic theory. The level of aggregation is, however, different, here we are dealing with the allocation of resources between two sectors which together account for the whole economy, while in micro-theory, we split the economy up into many small sectors.

(5) Problems relating to the rate of growth of productive capacity...

(6) Problems concerning the relation between international trade and the levels of employment prices and growth in the economy... international trade has both its micro and its macroeconomic aspects."13

This 'content approach' to explain the meaning of microeconomics and macroeconomics, no doubt explains the subject matter of two branches, but still fails to identify the core principle which governs the macroeconomic analysis. The failure to identify the core distinction between micro and macroeconomic analyses has led Robert Y. Awh to observe that:

> "Economists do not all agree as to how micro and macro economics should be distinguished. Among some of the criteria proposed by various economists for distinguishing the two branches are:

(1) distinction according to how one looks at the economy - microscopic versus telescopic view of the economy;

(2) distinction according to whose actions are analysed - individual components of the economy such as consumers and firms in microeconomics versus aggregate economic variables such as income and unemployment in macroeconomics;

(3) distinction according to the role played by price - relative prices play an important role in microeconomics, but are usually left behind the scene in macroeconomics;

(4) distinction according to the level of abstraction - microeconomics which seeks general "principles", abstracts much more than macroeconomics, which examines problems and policies particular to a given time and place."[14]

This explanation only summarises the arguments which we have already examined above. The disagreement among economists on the criteria of distinguishing micro from macroeconomic analysis is not based on any well conceived arguments. If there is any disagreement it is because of the failure to perceive the governing principles of micro and macroeconomics. Of Awh's list of criteria, item (1) and (2) above refer to size of the unit studied which we have already shown as a crude method and extraneous. Item (4) is not a criterion as it is a matter of opinion. The only criterion which has particular relevance is the role played by price in the analysis of the economic behaviour.

FUNDAMENTAL DISTINCTIONS

We propose to show below two fundamental distinctions between micro and macroeconomic analyses. We would like to label them as (i) core distinction and (ii) analytical distinction. The best way of explaining the core distinction between micro and macro economic analyses is to explain first the 'core' determinant of microeconomic analysis. As we are all aware, in microeconomic analysis we are concerned with observing, understanding, analysing and predicting the economic behaviour of individuals and firms that is, the decision-making of the individual consumer, individual household, individual producer, (the firm), and industry. This behaviour is governed by one single economic variable, that is price. 'Price' of a commodity, or of a factor of production, is the core determinant of microeconomic behaviour. Price acts as a guiding signal to both the consumer and the producer in microeconomic analysis. It determines their decisions relating to consumption, saving investment, and output. Price of a commodity determines both the supply and the demand for it. If the price is high it indicates that production is attractive and gives a green signal to the producers to produce more. But if the firms produce more, given the demand, price will come down. Lower price gives a green signal to the consumers to demand more. It is the constant interaction of supply and demand for a commodity or for a factor of production which ultimately brings the equilibrium between supply and demand at equilibirum price. The same is true in regard to the prices of factors of production. Price effects allocation of scarce resources among competing demands and thereby acts as allocation agent in the free enterprise economic system. This is no doubt concerned with relative prices. But relative prices and absolute prices interact constantly.

This basic framework of microeconomic analysis was developed by the marginal school led by Jevons and Karl Menger and later by Alfred Marshall. However, because of the subjective basis of the logic of price determination based on utility concept, indifference curve analysis was developed later to replace the utility analysis. Notwithstanding this, the microeconomic analysis became the core of post-marginal classical economic

thinking. The subject matter was further developed into partial and general equilibrium analyses and the market structure was explained in terms of pure and perfect competitions. They ensured flexibility of price movements and the consequent full utilisation of all resources. Even with the advent of monopolistic competitive market analysis and its variants, price continues to be the core of microeconomic analysis. One may argue that income is also taken into account in the equilibrium analysis of the consumer. Income appears in the neoclassical price theory mainly in real terms, namely, as an effect of changes in prices. Money income is treated as only exogenous variable to the price system. Further, income is not treated as an independent variable as price is treated. Therefore, microeconomics is concerned with price determination, given the income.

Thus the core of microeconomic analysis is price and it is the price which encourages producers to produce more. It is the price which generates income for the producers and for the owners of factors of production. That earned income is expressed in terms of prices of factors of production. And that income itself is transformed into money demand which varies again according to the prices of commodities and of factors of production. Thus it is the price which guides consumption and production decisions. The price of factors of production in turn distribute the income produced among the owners of the factors in an economy. In short, price is the measure of economic efficiency in microeconomic framework.

As against this, in macroeconomic analysis the core determinant of economic behaviour is the income of the consumers, producers and the owners of factors of production. Level of income determines consumption and saving, and expected income determines investment. And it is the level of income which to a large extent determines the demand for money, demand for labour and other factors of production.

It is generally accepted that microeconomic analysis is concerned with the allocation of scarce resources among competing needs, whereas macroeconomics is concerned with the full utilisation of existing resources, which are not fully employed. Further, microeconomic analysis is concerned with the reaching of equilibrium point and maintaining that equilibrium, whereas macroeconomic analysis is more concerned with reaching the full employment of the resources than with equilibrium. In the words of E. Roy Weintraub:

> ".....the level of output becomes a crucial variable. For Keynes the distinction was between value theory which worked with given level of output, and monetary theory which worked to determine the total level of output..... In somewhat more modern terms, microeconomics is the study of (generalised) resource allocation and macroeconomics is the study of the level of economic activity."[15]

In short, the core distinction between the microeconomic analysis and the macroeconomic analysis is that the microeconomic analysis is concerned with price determination and all economic behaviour of economic entities is price determined. Microeconomics uses price as a guiding

factor for economic decision-making, whereas in macroeconomic analysis income determines the economic behaviour and it is the income which guides the economic agents in their economic roles and functions. This distinction is not mentioned in any of the textbooks so far published on macroeconomic theory. Though the basic or the underlying principle is implicit in the specific topics covered in all the books, it is not made clear explicitly to the students of macroeconomics.

The analytical distinction between micro and macroeconomic analyses is that the former is "equilibrium" economics and the latter is "disequilibrium" economics. This distinction was not clearly discerned by early Keynesians like J.R. Hicks and A.H. Hansen. Though Don Patinkin, recognised that Keynesian economics is the economics of disequilibrium, the idea did not catch the attention of economists quickly. Economics of disequilibrium as the analytical framework of macroeconomics became clear in the contributions of Robert W. Clower, and Axel Leijonhufvud. Macroeconomic theory is concerned with the analysis of economic behaviour of economic agents at the point of equilibrium whereas macroeconomic theory is more concerned with disequilibrium economic situations and with the analysis of their causes and remedies. Alan Coddington, has compared the classical microeconomic theory which he calls "reductionism" and the Keynes' General Theory which he calls "hydraulic theorizing" in the following way:

According to him:

> "Overwhelmingly, reductionist theorising has confined its attention to situations of market equilibrium; for these situations a choice theory basis is relatively straightforward."[16]

Further,

> "The concept of equilibrium is accordingly seen by fundamentalists not as a useful simplification for economic theorists but as a distraction. The essence of Keynes' thought is seen as the liberation from equilibrium theorizing, as an escape from the restrictions that it imposes on our thinking."[17]

Further, as F.H. Hahn, has maintained:

> "General equilibrium theorists have been unable to deliver one half at least of the required story: How does General Equilibrium come to be established?"[18]

Don Patinkin, rightly pointed out that:

> "Keynesian economics is the economics of unemployment <u>disequilibrium</u>. It argues that....the dynamic

> process.....is unlikely to converge either smoothly or rapidly to the full-employment equilibrium position. Indeed, (a variety of effects), ... may even render this process unstable."[19]

Thus, the distinguishing analytical framework of macroeconomics emerges from J.M. Keynes' General Theory. This distinct analytical framework of macroeconomics has not yet adequately percolated into the popular textbooks.

PRE-KEYNESIAN MACROECONOMICS

It may be useful to mention briefly to what extent the core principle and analytical framework of macroeconomic analysis are present in the pre-Keynesian economic writings. It may be observed that in Adam Smith's Wealth of Nations, the discussion is with reference to the national income and wealth. The analysis is done in terms of aggregate output or wealth. Value theory comes there in the form of labour embodied in producing commodities. This crude version was however further developed by David Ricardo who elaborated the distribution process of the capitalist economy and refined the labour theory of value. In the writings of J.S. Mill we do find the aggregate economic analysis but we do not find the core determinant of macroeconomics. However in the writings of Karl Marx we find both aggregate nature of economic behaviour of the agents of capitalism and also the income and its distribution as the factors determining the economics of the capitalist economy as a whole. He also recognised the disequilibrium nature of capitalistic economic system. Thus Karl Marx should be considered as the forerunner of the core principle and analytical framework of macroeconomic analysis. J. M. Keynes, no doubt, developed a different macroeconomic model to explain the operation or the aggregate functioning of the capitalistic economy. It may be interesting to recall that Ragnar Frisch coined the term macroeconomics in 1933 before the publication of Keynes' General Theory. But it was the 'Keynesians' who developed the macroeconomics into a separate branch of economics by logically ordering the relevant economic variables in the operation of the national economy.

It may be relevant to mention here the quantity theory of money, which was developed by the classical economists and their followers particularly by Irving Fisher, was treated as a part of the classical economic theory. By this, one would conclude that quantity theory of money is mainly concerned with microeconomic analysis. However, the quantity of money is concerned with the aggregate price behaviour as explained by the aggregate money supply, which according to quantity theory, determines price level, given the total volume of production. Thus in terms of 'crude (literal) definition' of macroeconomic analysis, quantity theory becomes a part of macroeconomic theory. However, as it was devoid of the true core determinant of macroeconomic analysis, J.M. Keynes could not integrate it into his framework of macroeconomics and therefore, he had to develop a new analytical tool, i.e., liquidity preference. However, the "Monetarists" have tried to integrate the microeconomic version of quantity theory of money with macroeconomic version of price behaviour. Milton Friedman, by linking the effect

of variations in money supply on variations in general prices through changes in income, has tried to convert traditional quantity theory into a modern macroeconomic monetary theory. But as Coddington, has observed:

> "Indeed the Monetarist arguments against Keynesian conclusions may be seen as one possible answer to this question, namely, that the scope of hydraulic theorizing is practically non-existent. In these arguments the Keynesian conclusions are undermined by the reintroduction of a choice-theoretic basis of the standard reductionist type."[20]

Thus, in spite of his attempt to reinterpret the theoretical foundations of traditional quantity theory of money by linking money supply to prices through income, Milton Friedmen has not changed its core principle and the analytical framework and hence it still remains a part of equilibrium economics.

MICRO VERSUS MACROECONOMIC AGGREGATIONS

We have argued above that the distinction between micro and macroeconomics, based on the study of the economic behaviour of disaggregated and aggregated economic units respectively, is untenable both on theoretical and empirical grounds. However, in order to reinforce our arguments, we have to show the distinctive characteristics of aggregations in micro and macroeconomics. John Green, attempted to show it but failed to highlight the distinct economic logic behind micro and macro aggregates. His analysis has been focussed more on the statistical problems of aggregating the economic behaviour of individual economic units or economic phenomenon to arrive at aggregate economic phenomenon. However, Erich Streissler, has attempted though not successfully to distinguish between micro and macro aggregates. According to him, in microeconomics:

> "It is general knowledge how one goes about analysing an aggregate via the concept of the representive individual. If you wish to know what happens to the whole take a representative i.e., an average individual, analyse its optimising action and then inflate the result by an appropriate factor - possibly unity as in the case of price - to arrive at the corresponding result for the whole."[21]

However, he has noted that:

> "The need for a substructure of macroeconomic models built upon a foundation of individual optimisation is often argued. It is asserted that only the aggregation of individual optima can yield determinate macroeconomic results...this chain of reasoning, offered as a methodological rule without exception shows important flaws."[22]

Streissler has argued that the transition from micro aggregates to macro aggregates will not yield the same economic result because of institutional "constraints" and uncertainty involved in macro aggregate economic phenomena.

Further, though microeconomics also studies aggregate entities, they are not the autonomously created homogeneous aggregates but deliberately generated sum of heterogeneous individual entities. In other words, the character and behaviour of autonomous aggregates studied in microeconomics are homogeneous whereas those of generated aggregates studies in microeconomics are heterogeneous. Two examples can be referred to here to elucidate the point: (1) While discussing the role of savings in a society, classical economists used to justify (glorify ?) individual savings as they would help the individual concerned as well as the society. But if all individuals save in a society during the period of depression, it is not helpful to the society though it may be useful in the short-run to those individuals. So what is virtue for an individual microeconomic unit becomes a vice for the society in macroeconomic analysis. (2) The classical solution to unemployment of labour is the reduction of money wage, (price of labour). In terms of microeconomic analysis, classical economists argued that this policy would make labour cheap and will increase the demand for labour. This policy may help in the case of a firm or an industry. But if wages of labourers in the entire economy are cut, it will reduce the wage income, and effective demand which in turn will perpetuate unemployment of labour. Thus what is true of microeconomic results cannot be obtained by summing up the behaviour of individual entities. Such summing is done in microeconomic theory of general economic equilibrium. But that does not represent macroeconomic behaviour. Macroeconomic behaviour is determined by income and it has got its own logic and operation which cannot be always obtained by summing up the individual entities.

Finally, the attempts to show the traces of classical economic analysis in the General Theory and to downgrade Keynesian economic analysis were made by using the microeconomic logic. For example, it is maintained that the Keynesian involuntary unemployment disequilibrium is only a special case of the general equilibrium theory of the classical economics. This is again based on the assumption that the Keynesian theory of general equilibrium is determined by the price of labour which is not true. It is the level of national income which determines the equilibrium between the supply and demand for labour in Keynesian theory whereas in the classical theory, it is the price of labour, (i.e. wage), which determines the equilibrium in the labour market. Though wage is part of income, in the Keynesian general equilibrium theory it is the income of a society which ultimately determines investment and savings.

A.C. Pigou, tried to disprove the involuntary unemployment disequilibrium of Keynes through what has come to be known as 'Pigou effect'. Pigou effect is the microeconomic solution to a macroeconomic problem. Here Pigou starts from the microeconomic determinant and comes up with the macroeconomic result. That is, if wages are cut, the price of labour

is reduced. This may be true in the case of a firm or industry. This makes labour cheaper and reduces the cost of production and pushes down the price of the products produced. Assuming that this will result in a fall in general prices consequent on the fall of labour cost, the real value of the cash balances held by the wage earners will go up and that will stimulate consumption which will in turn influence investment to go up and thus lead to full employment of labour. It may be observed that Pigou tried to use microeconomic logic to prove that classical solution could be applied to solve the problem of involuntary unemployment.

However, as in the case of many other economic laws, there may be exceptions to the rule that macroeconomic aggregates cannot be meaningfully derived from microeconomic aggregates. In this context E. Malinvaud, has maintained that:

> ".....since the aggregation problems tended to be specific to each problem, there was not much to be learnt from a general study of aggregation in the way of a justification for particular macroeconomic laws. On the contrary, when one looked at the justification for say, the macroeconomic investment function, it was important to derive it from a study of the microeconomic situations of firms in a variety of situations."23

Barring such specific exceptions, micro aggregates differ from macroaggregates in their determinants and economic behaviour.

MICROFOUNDATIONS FOR MACROECONOMICS

Ever since the publication of J.M. Keynes' _General Theory_, attempts have been made to integrate it into the neoclassical general equilibrium theory. In fact J.R. Hicks, in his attempt to explain the distinct analytical framework of _General Theory_ to the world of economists trained in neoclassical general equilibrium theory, used microeconomic logic. However, he failed to integrate neoclassical general equilibrium theory and the Keynesian disequilibrium economic theory in his _Value and Capital_. Oskar Lange, attempted in his _Price Theory and Employment_ to examine whether the conclusions of _General Theory_ could be reached through neoclassical general equilibrium analysis. However, Don Patinkin, made an ambitious attempt to explain Keynesian disequilibrium economics in terms of Walrasian general equilibrium framework. But again he committed the same flaw of using microeconomic logic to begin with and ended with macroeconomic results without establishing the theoretical links between them.

In recent years fresh attempts have been made to provide microeconomic foundations for the macroeconomic analysis of Keynes. Perhaps the attempts of Rober W. Clower, and Axel Leijonhufvud, are worth mentioning. After evaluating both neoclassical equilibrium economics and Keynes' disequilibrium economics, they have suggested discarding of the concept of equilibrium and using disequilibrium price theory to achieve full employ-

ment. This would amount to discarding the core principle of macroeconomics namely, income, and then integrating macroeconomic into microeconomics.

Coddington, after evaluating their attempts, has maintained that:

> ".....the Clower-Leijonhufvud position being that the concept of equilibrium should be abandoned in the interests of a more thorough-going reduction of Keynesian ideas to choice logic. The thesis is that once equilibrium has been abandoned and one focuses on a process of trading at disequilibrium prices, then one has a framework that is entirely congenial to Keynesian ideas ....." On its own terms then, the essence of the Clower-Leijonhufvud position is that in order to accommodate Keynesian ideas, we have to abandon equilibrium theorizing and address ouerelves to an understanding of the process of disequilibrium trading. In my terms, however, it is not just equilibrium theorizing that has been shown to be uncongenial to Keynesian ideas, but rather equilibrium theorizing within the reductionist program".....
>
> "It follows, however, from my characterization of such theorizing, that there are two distinct possibilities for the accommodation of Keynesian ideas: (i) the abandonment of equilibrium and (ii) the abandonment of reductionism. Clower and Leijonhufvud consider only the former possibility".24

Coddington has further observed that:

> ".....Clower and Leijonhufvud's version of Keynesianism is a reconstituted reductionism; it addresses itself not to the state of equilibrium, but to the problem of attaining it. It asks the question how a decentralized market economy might with some degree of effectiveness perform the task that the Walrasian auctioneer would perform smoothly. To ask this question one needs a construction in which prices adjust less than instantaneously to economic circumstances, so that at any point in time the prices may be effectively providing incentives to act but the information they reflect will not be appropriate for the equilibrium that is being approached."25

Therefore, he has concluded that:

> "Within the hydraulic approach, employment problems are quite distinct from allocation problems; they arise at the aggregate level, and they are independent of relative prices and the composition of demand or output. The thrust of the reconstituted reductionist approach, however, is to present un-

> employment as a by-product or even a species of allocation problem."[26]

Similar view has been expressed by other economists. For instance Paul Wells, has maintained that:

> "Although Leijonhufvud's book is important, both for the clear distinction it draws between Keynes and the Keynesians and for its critical dismemberment of the IS-LM orthodoxy, it largely failed to advance an understanding of the positive aspects of Keynes' economics. The reason for this failure is perhaps because Leijonfufvud attempted the hopeless task of trying to fit Keynes into an altogether unsuitable Walrasian general equilibrium framework of analysis."[27]

Victoria Chick, who has subjected Clower's counterrevolution to a critical appraisal, has argued that Clower has blindly attempted to integrate the dynamic production model of Keynes' General Theory into an essentially exchange model of Walrasian general equilibrium framework, and hence, his attempt is bound to fall.

Thus even the sincere efforts of Clower and Leijonhufvud were only aimed at eliminating income as the core variable from the analysis of macroeconomic behaviour and substituting it by price. Even their open promise of removing equilibrium from the microeconomic analysis and substituting it by 'disequilibrium' is only a camoflage because though disequilibrium is the 'rule' in actual economic situations normally prevailing, equilibrium situation as an exception, is not ruled out. All this boils down to the point that theoretically it is not possible to integrate macroeconomics into microeconomics by retaining their respective determinant core principles.

The International Economic Association arranged a conference of distinguished economists in 1974 at S'agaro, Spain, to debate on the ways of providing microeconomic foundations for macroeconomics. J.R. Hicks, who was one of the participants, has admitted its failure in the following way:

> "Though some excellent papers were given, reviewers have rightly perceived that the conference as a whole was a failure. We did not get a grip with the question we were supposed to be discussing. I could see that at the time, and as I came away I was asking myself why.
>
> One of the reasons, I became convinced as I thought it out, was that the question had been wrongly posed. It took for granted that 'micro' (the economics of the firm and of the individual) was a solid foundation, on which the more dubious 'macro' (economics of the whole economy usually a national economy) was to be built. What were the grounds for holding that the one was more solid than the other? We were begging that question... ....."[28]

In other words, the attempt to find microeconomic foundations for macroeconomics is a revival of the earlier attempts to prove that macroeconomics can be considered as a special topic of neoclassical microeconomics. The search for microeconomic foundations for macroeconomic analysis is futile because both of them have independent determinants and analytical frameworks.

This is evident from the following observation of Robert W. Clower:

> "In our earlier discussion of orthodox analysis, it was pointed out that the whole of traditional price theory rests on the tacit assumption that market excess demands are independent of current market transactions. This implies that income magnitudes do not appear as independent variables in the demand or a supply functions of a general equilibrium model for incomes are defined in terms of quantities as well as prices and quantity variables never appear explicitly in the market excess-demand functions of traditional theory... ... ...
>
> The importance of these propositions for Keynesian economics can hardly be overemphasized for they imply directly that the Keynesian consumption function and other market relations involving income as an independent variable cannot be derived explicitly from any existing theory of general equilibrium."29

Therefore, any attempt to provide microeconomic foundations for macroeconomic analysis is only an attempt to convert the macroeconomic analysis into neoclassical microeconomic analysis. Such an attempt, to say the least, is probably the result of the failure to appreciate, (let alone accept), the distinct paradigms and core determinants of micro and macroeconomic analysis.

FOOTNOTES

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14. Robert Y. Awh, Microeconomics: Theory and Application, (New York: John Wiley and Sons, 1976), p. 3.

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17. Alan Coddington, Op. cit., Footnote No. 7, p. 15.

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20. Alan Coddington, Op. cit.,Footnote No. 16, p. 1267.

21. Erich Streissler, "What Kind of Microeconomic Foundations of Macroeconomics are Necessary"? In H.C. Harcourt (ed.), The Microeconomic Foundations of Macroeconomics, (London: MacMillan, 1977), p. 96.

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24. Alan Coddington, Op. cit., Footnote No. 16, p. 1269.

25. Alan Coddington, Op. cit., Footnote No. 16, p. 1270.

26. Alan Coddington, Op. cit., Footnote No. 16, p. 1271.

27. Paul Wells, "Keynes' Disequilibrium Theory of Employment in Sidney Weintraub (ed.), Modern Economic Thought, (Oxford: Basil Blackwell, 1977), p. 95.

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