

ECONOMICS

(Of Nobel Laureates)

By

Prof. V.T.Naidu

ECONOMICS
(OF NOBEL LAUREATES)

Dedicated To
My Children
Padma, Rama & Swamy
And their Spouses
Ramakrishna rao, Prasada Rao, Siva Sri
My Grand Children
Vidya Sagar, Santosh Kumar , Anusha & Dhanesh

By
Prof. V.T. Naidu

**“Read not to contradict and confute,
nor to believe and take for granted,
nor to find talk and discourses,
but to weigh and consider.”**

Francis Bacon: Essays, ‘Of Studies’

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PREFACE

Though my book on Economics is one among many, it is different from others, in emphasizing the contributions of Nobel Economists.

I hope my book serves as a supplement to the prescribed text books of Economics for P.G students of Business, commerce and Economics. Further this book might be of some interest to general readers also. If some students are induced to read some of the excellent text books and the original works of Nobel Economists, my effort would have been amply rewarded.

As usual with book writers, I have borrowed ideas and material from many books and I take this opportunity to thank all the authors and the publishers of the books.

I owe a deep debt of gratitude to my teachers, specially to Dr.D.N.Rao, Prof.B.S.Rao, Dr.Bhate, Prof.D.L.Narayana and Prof.Marvin Schars. I have been fortunate in having affectionate and friendly colleagues and well behaved students. My thanks to all of them.

I wish to express my homage to my parents Late.V.Appala Naidu Garu and Late Mrs. Kuramma to whom I owe everything. I recall to memory the affection shown to me by my adoptive father V.Swamy Naidu and two other uncles V.Satyam Naidu and V.Venkata Naidu.The affectionate encouragement of my brothers Sri V.L.Naidu, V.Seetha Ram Naidu and sister Parvatamma has been a source of encouragement to me in the early stages of my life. Finally all my efforts received the silent approval of my wife Sarojini.

Chapter I

ECONOMICS AND NOBEL ECONOMISTS

Adam Smith, the founder of Economics, wrote his Classic book, *Wealth of Nations* in 1776. The sub-title of his book, “An Enquiry into Nature and Causes of The Wealth of Nations” may be taken as Smith’s definition of Economics.

Lionel Robbins provided in 1935 an analytical definition of Economics. According to him, “Economics is the science which studies human behavior as a relationship between ends and scarce means which have alternative uses”. Samuelson in his widely read textbook *Economics* (first published in 1948 and 17th edition, co-authored with William Nordhus in 2001) defines Economics in terms of choice. According to him, “Economics is the study of how societies use scarce resources to produce valuable commodities and distribute them among different people”. Robert Mundell says that whenever alternatives exist, life takes on an economic aspect. Whenever decisions are made, the law of the economy is called into play. In short, Economics is the science of choice.

Douglas North approves of the choice definition, but he contends that the discipline neglects to explore the context within which choice occurs. North opines that we must understand the sources of human decision making and he advocates a new institutional Economics.

Friedman and others would like to restrict the scope of economics to Positive Economics, dealing with the issues of the functioning of the economic system while A.K.Sen and others want the scope of economics to be extended to Normative and ethical issues as well. Lucas and others want economics to be theory oriented while others like Akerloff want it to be more pragmatic. It is difficult to give a generally agreed definition of Economics

which accommodates the divergent opinion among economists and which encapsulates the ever widening fields and sub-fields of Economics.

Economics has become eclectic. Economics is now defined neither by its subject matter nor by its method. The Economist, a prestigious weekly, defines Economics as follows: “Economics is what Economists do – the best of them, anyway”. The Nobel Economists, by and large, are the best among economists. This explains our writing of this book, Economics, using the contributions of Nobel Economists and their equals.

Nobel prizes have been given annually for Physics, Chemistry, Medicine, Literature and Peace, for more than one hundred years. The Nobel Economics Prize was instituted in 1969 by the Central Bank of Sweden. Since then, the Swedish Academy has been awarding the economics prize along with other prizes. The stated reason for institution of Economics Prize is to commemorate the tri- Centennial year of The Bank of Sweden. The real reason behind might be that the Bank of Sweden had realized the significance of Economics.

The wider significance of Economics especially of its practical application is recognized by the Nobel committee by awarding Nobel Peace Prize to Norman E. Borlaug in 1970 and the 2006 Nobel Peace Prize to Muhammad Yunus and to the Grameen Bank of Bangladesh. Borlaug helped to solve the world food problem and Muhammad Yunus helped the world’s poor through Grameena Bank Credit to them. The 2009 Noble Peace Prize is awarded to Barrack Obama for creating a new climate of peace in International Politics. He justly deserves the prize for another reason. By his bold fiscal stimulus policies, he averted the U.S. Economic disaster and helped indirectly to solve the world economic crisis of 2008. By helping to solve the pressing economic problems of the world, these individuals have promoted lasting peace in the world.

Keynes recognized the significance of Economics much earlier. In his book, *General Theory of Employment*, Keynes states thus: “The Ideas of Economists and Political Philosophers, both when they are right and when they are wrong, are powerful than is commonly understood. Indeed, the world is ruled by little else.”

Economics, like all Sciences, need facts and theory. Economists collect facts and draw conclusions from them. If some needed facts or figures are not available, they are estimated by statistical (Econometric) methods. Economic theory is needed to prepare questions which we want to ask of the facts. Facts are collected on the basis of theoretical guidelines. After the collection of facts, they are arranged and analyzed so as to find answers to the questions raised’. Thus, Economics uses the deductive methods of Logic and Geometry in formulating Theory and inductive methods of statistical and empirical inference in Economic applications which includes Economic History.

Economics is discussed in this book under broad groups. They are: Economic Framework, Approaches to Economics, Methods and Tools of Economics, and Branches of Economics. The topics under each group are listed in the Contents. The topics are explained in one chapter each using the contributions of Nobel Economists. Names of Nobel Economists who have made significant contributions to the topic, figure in the chapter concerned.

The Nobel Economists have made important contributions not only to the areas listed in our classification, but also to other areas, such as Agricultural Economics, Demography, Energy, Ecology and Labor Economics. They have made forays into other disciplines such as Sociology, Psychology, Geography, Political Science, Ethics, Law and Philosophy. As the contributions of Noble Economists are vast, we are constrained to focus on one of their significant contributions only. It is not that their contribution is less in other areas but the one’s used are relevant to the topics discussed.

Many other eminent Economists (other than Nobel Economists) have made notable contributions to the areas classified and to other areas. The scope of Economics is vast and is expanding. There is Economics of war and Economics of Peace. There is Economics of poverty and there is Economics of Affluence. There is a Freakonomics too. StevenDLewitt collaborated withStephenJ Dubner in writing the books Freakonomics and Super Freakonomics. These books deal with everyday issues of modern world such as cheating corruption crime prostitution global warming-all hidden side of everthing As rightly noted by Robert Mundell “Economics seems to apply to every nook and cranny of human experience”.

It is said that Economics is not as precise as physics. A high degree precision is a characteristic feature of Physics. Earnest Rutherford, a noble prize winner in Physics, claimed that Science is Physics; everything else is not. Sciences differ in their degree of precision among them. To deny the label Science to others such as Economics is to falsify truth. Though Economic variables are difficult to measure, efforts have been made to measure them with adequate precision Economists have begun using systematically the experimental method in their investigations. In 2002 Nobel Prize is awarded to the pioneers in ‘Experimental Economics’, Danial Kahneman and Vernon Smith. Widespread use of Econometric methods is another step in the direction of making Economics a scientific one.

Economics, as discussed above uses many methods, several approaches, covers many areas and as integral links with many disciplines. Economics is an unique social science and indeed the queen of social sciences. Economics need not be as precise has physics. Prof. A.K. Sen rightly says that what Aristotle said of Political science applies equally well to Economics. Aristotle said that “the account of this science will be adequate if it achieves such clarity as the subject matter allows; for the same precision is not to be expected in all sciences”.

Economics too has become highly mathematical during the last half-century. There is a need to explain the advances made in economic theories and models to all – to non-mathematical professional economists, like this author, to students, lay readers and specially to policy makers – in an easy and lucid prose and in an engaging style.

Only a few policy makers like Dr. Manmohan Singh, Prime Minister of India can understand the esoteric language of the Economists. He belongs to the two cultures of top economists and top policy makers. Bridging the wide gap in communication between Economists and policy makers is a must. Otherwise, the rich contribution of Economists to knowledge become unused and remain in a limbo.

Chapter – 2

NATIONAL INCOME AND EMPLOYMENT

(Peter Diamond, Dale Mortenstern & Christopher Pissarides)

Richard Stone has done extensive work on National Income and Accounts. Along with James Meade, Stone wrote a book titled National Income and Expenditure which appeared first in 1944 and revised many times later on. In place of a fifth edition of the above book, Richard Stone (with Giovanna Stone) wrote a short book titled National Income and Expenditure.(1960) In their book, the authors define National Income as “the income which accrues to the inhabitants, or normal residents of Country from their participation in World production”. All such income is included, whether it is received by individuals in the form of wages, dividends interest, etc., or is retained in private businesses, or accrues to Government bodies as a consequence of their business activities. No other income is included, therefore, gifts, grants and benefits, which are not received for participation in production, are excluded and so is consumer’s debt interest. Income may come from production taking place within the Country concerned or from abroad. The income arising from the productive activity that takes place within the territorial boundaries of a Country is called Domestic income.

Hicks, in his book, The Social Framework, notes the relationship between Social (National) product and Social (National) Income.

$$\text{Net Social product} = \text{Wages} + \text{Profits} = \text{Social Income}$$

$$\text{Social Income} = \text{Consumption} + \text{Saving} = \text{Consumption} +$$

$$\text{Investment} = \text{Net Social Product}$$

So National income can be computed by using production method (Value added method) or by Income method or by Expenditure Method

National Income Analysis:- National Income Accounting, classified meaningfully provides the basis for Macro-Economic analysis. The division of output into factor payments (wages, etc.) on the production side provides a framework for studying aggregate supply. The division of income into Consumption and Investment on the demand side provides the framework for studying aggregate demand. Keynes is the leading architect of Macro-Economics and his book, General Theory of Employment, Interest and Money has revolutionized Macro-Economic thinking. Samuelson had described Keynes as the patron-saint of Macro-Economics.

We shall describe below the classical theory, Keynes theory, contributions made to Keynes theory by Samuelson and Hicks, and give a pre-view of the ideas of Monetarists and new classical economists, which are discussed in detail in Chapter Eleven.

J.B. Say, a French economist said that supply creates its own demand. Savings will get automatically invested. There cannot be any general over production. Classical economists starting from Adam Smith to Marshall and Pigou have subscribed to J.B. Say's view. The classical economists assumed that prices and wages are flexible. If there is excess supply of goods over demand, prices fall resulting in increased demand for goods ultimately leading to more production and more employment. Equilibrium will be restored in both product and labor market. Due to the operation of the market forces, full employment will prevail. In their view, business cycles are temporary and self correcting.

We shall now describe Keynes theory of business cycles, using the concept of multiplier. The multiplier concept is first introduced by Khan,

a contemporary of Keynes. The multiplier is the number by which the addition to investment must be multiplied in order to determine the resulting change in output. When aggregate income increases, consumption of house holds also will increase but not as much as real income. There must be an amount of current investment sufficient to absorb the excess of total output over what the consumers choose to consume. The equilibrium income (here after income and output are used inter-changeably) is given by the equality of investment with that of savings. The multiplier is determined by the marginal propensity to consume (m.p.c.) and it is computed using the formula, $1/1-m.p.c.$ The denominator in the formula is the marginal propensity to save (m.p.s.). Let us calculate the multiplier, using simple examples. Suppose, the m.p.c. is 0.5. Then the m.p.s. is also 0.5. Using the multiplier formula, the multiplier is 2. Now, let us increase the m.p.c. (spending) to 0.8. The, the m.p.s. (saving) decreases to 0.2. The multiplier increases to 5. Thus, the multiplier increases, when spending increases and when saving decreases. The multiplier decreases when m.p.s. (saving) increases. Savings are considered as a leakage from the circular flow of income.

In Keynes theory, it is the investment that gives rise to increased income through the multiplier and income, in turn, determines savings. At the equilibrium level of output, the receipts of the investors are equal to the required receipts by them to invest sufficiently to produce equilibrium output. According to Keynes, investment depends on the rate of interest and the marginal efficiency of capital (expected rate of return). Output fluctuates due to volatility of investment. If the investment level is insufficient, the level of income falls. Consequently, savings fall such that they equal investment at a low level of income (output). The equilibrium

level of output occurs at full employment (potential output), only by coincidence or design. There is no general rule that the equilibrium level will be at full employment level.

At the time when Keynes wrote his book, *The General Theory*, the great depression occurred. The competitive markets were caught in an under-employment equilibrium.

Keynes argued for enlargement of functions of Government to involve it in the task of adjusting to one another, the propensity to consume and the inducement to invest. While the classical economists want to leave everything to market forces, Keynes wants the Government's intervention to save capitalism.

Samuelson introduced the concept of accelerator, which says that a change in the rate of output induces a change in demand for investment in the same direction. The process of multiplier accelerator interaction results in continuous expansion of output until the economy reaches its full capacity level and then the growth rate of the economy slows down. The slower growth in turn, reduces investment and the process works in reverse direction. Thus, the multiplier-accelerator interaction results in business cycles.

In addition to the saving investment balance approach (also known as Keynesian multiplier model) discussed above, there is a second way of showing how output is determined. The method is called the consumption-plus-investment (or $C + I$) approach or aggregate spending approach. We can visualize a graph where total spending ($C + I$ measured vertically) is graphed against total output (measured horizontally).

Draw a 45 degree line through the origin to help to identify the equilibrium output. The total spending (or $C + I$) shows the level of

desired expenditure by consumers, and businesses. The economy is in equilibrium at the point where the $C + I$ curve crosses the 45 degree line. Aggregate demand is equal to national income. If the aggregate demand, comprising of desired consumption and autonomous investment is less than the equilibrium output, producers will cut back production. If the aggregate demand (AD) is more than aggregate supply (AS), it will lead to more production as long as unused resources are there. Thus, output adjusts itself to changes in aggregate demand. The total output cannot increase beyond full employment level. Any increase in AD beyond full-employment level of output result in inflation. This approach to Keynes theory is also known as 'Cross Approach' as the AD curve crosses AS curve at the equilibrium point. The equilibrium indicates a balance between aggregate spending and actual output. The actual output may be different from the potential output.

Synthesis:

Hicks well known article on Mr. Keynes and classics (1937) presents the gist of Keynes theory, compares it with the classical theory and synthesizes Keynes theory. Hicks condensed Keynes theory into three equations and derived the IS-LL curves. Later on, Hicks IS-LL curves came to be known as IS-LM curves. In many text books on economics, interest is presented on the vertical axis and income on the horizontal axis.

The IS curve presents a relation between income and interest. The marginal efficiency of capital schedule determines the value of investment at any given rate of interest and the multiplier tells us what level of income will be necessary to make savings equal to the value of investment. The curve IS shows the relation between income and interest that must be

maintained in order to make saving equal to investment. With increased income saving will increase and that implies investment should increase and investment increases only at lower interest rate. As interest rates and income vary in opposite directions, the IS curve slopes downward.

The LM curve represents equality of money supply to demand for money. As income increases, the transactions demand for money increases. As money supply is fixed, the residual money supply for speculative purposes decreases. To make money supply equal to demand, the demand for investment (speculative purpose) should also decrease. It implies higher interest rates. Money market equilibrium implies that interest rates and levels of income vary together in the same direction. As such LM curve slopes upward.

The IS curve represents equilibrium in the goods market and LM curve in the money market. The points of intersection between IS and LM curves determine the equilibrium interest rate and equilibrium output.

There is another way of illustrating Keynes theory. The aggregate demand AD and aggregate supply (AS) curves may be depicted on a graph measuring price on the vertical axis output on the horizontal axis. The AS curve slopes upward and AD curve slopes downward. The pointer intersection of AS and AD curves determine the equilibrium price and output.

One important source of business fluctuations according to Keynes, is shocks to aggregate demand. These shocks occur when consumers, businesses and the Government change the total spending relative to productive capacity. If there is no change in supply of goods any adverse shock to aggregate demand shifts the AD curve to the left, causing prices and output to decline. Thus the adverse shocks results in a recession.

Differences in the Classical and Keynesian views arise from their assumptions about the Aggregate Supply Curve (A S). The Classicists assumed that there is always full employment of labor. According to them AS curve is vertical at the full employment level of work and changes in output take place in the long-run due to growth factors such as technological progress. Keynes assumed horizontal Aggregate Supply curve (AS), indicating that firms will supply whatever amount of goods demanded at the existing price level. They will be able to do so because of existing unemployment of labor. If prices are measured on vertical axis and output Y on horizontal axis, then AS curve is horizontal at the existing price level. Given a perfectly elastic supply, a fiscal expansion leads to shifting Aggregate Demand (AD) to the right causing output to increase but leave the equilibrium price level unchanged. According to Keynes, in the short run, output is determined by Aggregate Demand alone. If AD is above AS, then output expands and vice-versa.

For simplifying our analysis, we have used a two-sector model, consisting of consumers and business persons and their expenditure on consumption and investment respectively. In the simple model, there is no government sector and the rest of the world sector. Actually, the components of aggregate demand (AD) comprises of expenditures of four sectors. The expanded version can be broken down as follows:

$$Y = C + I + G + X$$

Where C is consumption, I is investment, G is government expenditure and X is net exports. Treating each variable as an endogenous one, others constant, we can calculate multipliers for the endogenous variable.

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