REDEFINING WEALTH

Adam Smith defined Economics as science of wealth. Economists define wealth as one that has “Value in use” and “Value in exchange”. Economists also state that wealth should be scarce. How far is this definition scientific? Accountancy is another branch of science that deals with forms of wealth. Accountants are concerned with measurement and application of wealth. How do they define wealth? Whether this definition of wealth of economists is in conformity with that of accountants? As a layman I would think that all that are shown in financial statements like Balance Sheet and Profit and Loss Accounts are forms of wealth. I have not come across any official definition of wealth by accountants. If the definition of wealth of economists is accepted, accountancy will be in cross roads. In the discussions that follow we shall see how this definition of wealth of economists come in the way of accepted accounting principles. Hence a consensus is required as to what forms a wealth.

If we observe profit and loss account and balance sheet, we come across certain forms of wealth that do not have **value in exchange**. Let me cite examples. In a profit and loss account statement we see items like expenditure and depreciation that may/may not have value in exchange. Are they not forms of wealth? In a balance sheet we may come across items like goodwill, loss etc. These forms of wealth do not have value in exchange. According to the definition of wealth given by economists these items do not qualify to be forms of wealth. Then why are they shown in balance sheet? What is the official definition of wealth by accountants? Are not all items shown in profit and loss account and balance sheet, forms of wealth? Are items like good will, loss, items of expenditure and depreciation shown in profit and loss account and balance sheet merely to equate debits and credits? Why are they silent on definition of wealth?

In a situation like this it would proper to consult Mr. Mathematics who has a foolproof answer. If we go by fundamentals of addition and subtraction, 2a can be added to 3a making sum to 5a. Similarly when 2a is subtracted from 5a we get 3a. Let “a” be wealth and “b” be non-wealth. Can we add 2a and 3b? No. In algebra only like terms can be added. Similarly can we subtract 2b from 5a? No. We can subtract only like terms. Let us consider units. When we add 10cms to 15cms we get 25cms. Can we add 10cms and 20gms? No**. Therefore only wealth can be added to wealth and only wealth can be subtracted from wealth.** We cannot add or subtract non-wealth to wealth. This means that wealth cannot be created or destroyed but can be changed from one form to the other. This confirms that **Law of Conservation** is a universal Law that applies not only to mass and energy but applies to wealth as well. Therefore when we credit or debit items of expenditure and depreciation to other forms of wealth it is deemed that they are forms of wealth. Let us study the units we use to measure loss. When a house is burnt we say that Rs.150000 is lost. When floods damage agricultural produce we say crop worth Rs.5 million is lost. When a shirt is torn we say that a shirt is torn. In all the above examples we have used units of wealth to denote loss. If loss is not a form of wealth why should we then use units of wealth to denote loss? What is unit of measurement of loss? Similarly what are the units of other forms of wealth like depreciation, items of expenditure, goodwill etc. if one treats them as not forms of wealth since they do not have value in exchange? They all are expressed in units of money i.e. in units of wealth.

Forms of wealth that have value in use like sunlight, carbon dioxide, chlorophyll, oxygen etc. combine with forms of wealth that have value in exchange like agricultural inputs

(fertilizers, pesticides, seed etc.) we get wealth in the form of agricultural produce that has value in exchange. Therefore sunlight, carbon dioxide, chlorophyll, oxygen are all forms of wealth even though they do not have value in exchange. It also leads to further inference that wealth is not created in agriculture.

Law of Conservation is applicable to matter and energy. Law of conservation of Mass is stated as- when matter changes from one/more form/s to one/more forms, mass of transferor form of matter equals mass of transferee form of matter". This leads to an inference that matter can neither be created nor be destroyed but can be changed from one form to the other. Law of Conservation of energy is on the same lines. Energy can neither be created nor be destroyed but can be changed from one form to other. We have mathematically proved that this Law of Conservation applies to wealth. Let us define Law of Conservation of Wealth on the lines of Law of Conservation of Mass and Law of Conservation of Energy. When wealth changes one/more form/s to one more form/s the value of transferor form of wealth equals value of transferee form of wealth and it can be further deduced that wealth can neither be created nor be destroyed but can be changed from one form to the other. Since wealth only can be added to wealth and wealth only can be subtracted from wealth the question of creation or destruction of wealth is mathematically impossible.

In the context of Double Entry method of Bookkeeping this law fits in well with the accounting norms adapted by accountants. I should say that entire gamut of double entry bookkeeping rests on this Law. According to standard accounting principles a debit cannot be created without a corresponding credit. Similarly a credit cannot be created without a corresponding debit. The assets and liabilities in a balance sheet should match. In simple words the contents of Law of Conservation are to be strictly adhered to in Double Entry Method of Bookkeeping.

All Economic Laws are extended versions of Law of Conservation. Let us take Quantity Theory of Money and Law of Diminishing Marginal Utility. According to Quantity Theory of Money, at any given point of time, the value of goods and services offered equals money supply. This can be written as;

Value of goods + services = quantity of money

When wealth in the forms of goods + services is converted into wealth in the form of money, the value of goods + Services equals value of money.

From the above we can clearly make out that this Quantity Theory of Money is a limited version of Law of Conservation of Wealth.

Similarly let us state and compare Law of Diminishing Marginal Utility with Law of Conservation. Every successive addition of commodity results in less than proportionate increase in utility or with every successive addition in commodity Marginal utility of the commodity decreases. Let us prove this using Law of Conservation. According to Law of Conservation, value of transferor form of wealth (say commodity) equals value of transferee form of wealth (say utility). What should be value of wealth in the form of commodity? This can be expressed in money terms or in terms of utility. Let us express them in terms of utility.

Value of commodity in utility terms = Quantity of commodity $\times$ utility per unit of commodity

According to Law of Conservation,

Value of commodity = value of utility

Quantity of commodity × utility per unit of commodity = value of utility
If quantity of commodity increases and with value of utility remaining same i.e. right hand side of the equation, utility per unit of commodity decreases. We may call utility per unit of commodity as average utility. Always average utility is directly proportional to marginal utility. Hence as quantity of commodity increases marginal utility of the commodity decreases.
Economists say that Income = savings + expenditure. Here we observe that when wealth in the form of Income gets changed into wealth in the forms of expenditure and savings, the value of wealth in the form of income (transferor form) equals value of wealth in the forms of expenditure and savings (transferee forms). We also observe that in the reaction income= expenditure + savings, that economists have treated expenditure as a form of wealth even though expenditure may or may not have value in exchange.
In a perfect market, equilibrium price is arrived at by plotting demand and supply curves. At the point of interception of these curves, i.e. at equilibrium price,
Value of demand in commodity terms = value of supply in commodity terms AND
Value of demand in money terms = value of supply in money terms
This in itself confirms Law of Conservation.
I may go on giving examples where economic laws are based on Law of Conservation. All classical economists have endorsed indirectly the correctness or applicability of Law of Conservation of Wealth to economics. One important statement I want to make.
THERE CAN BE NO LAW OF EQUILIBRIUM WITHOUT LAW OF CONSERVATION. I claim that I am the first scientist to have said so. When we accept the concept of Equilibrium it is deemed that we have accepted Law of Conservation. Law of Equilibrium and Law of Conservation are always coexistent and one is prerequisite for the other.
Economists have accepted the concept of Equilibrium. What is equilibrium state? At equilibrium state value of transferor and transferee forms of wealth are equal. If there is inequality, wealth moves from higher concentration to lower concentration till such time that the concentration or level of both forms of wealth equalize.
Now let us revert back to defining wealth. Let us know how these words “Value in Exchange” come in the way of acceptability of Law of Conservation of Wealth in total. The derivative of Law of Conservation i.e. wealth can neither be created nor be destroyed but can be changed from one form to the other receives severe criticism from economists. Economists believe that wealth can be created and destroyed. When a form of wealth that has value in use is converted into a form of wealth that has value in exchange people and economists in particular believe that wealth is created. Conversely when a form of wealth that has value in exchange is converted into a form of wealth that has value in use we say that wealth is destroyed. Let us study taking examples.
Let us assume that an artist creates a piece of art. Here the reaction is;
Inputs + skill or intelligence = Finished product or piece of art.
Inputs like canvas, paint, brush etc have value in exchange. Finished product also has value in exchange. The skill or intelligence may or may not have value in exchange but has value in use. If we go by the definition of wealth as stated by economists wealth is created here. Here wealth merely changed forms. As proved earlier, if both (value in use and value in exchange) are not forms of wealth they cannot be added to get finished

product that has value in exchange. Similarly in industry wealth is not created but changes forms.

When a house is burnt, we get heat and light. Both heat and light are forms of wealth. We think that wealth is lost. But in nature no wealth is lost. Similarly when crops are damaged due to floods, the crop becomes food for trillions of microorganisms present in water. These microorganisms help keep ecological balance. The value of the remaining crop increases due shortage of inflow of the produce to the market and thus the value of the crop remains unaltered. Similarly when a shirt is torn, the utility of remaining shirts increase and value of the shirts a man possess in utility terms remains same. When a costly source of fuel like sandalwood is used to produce electricity, its value should be measured in terms of its fuel efficiency. Value of wealth always depends on its use. If an intelligent man like me works for a meager salary of Rs.8000/-p.m. my value depends on the use my intelligence put use to. When a house is used to burn it produces heat and light equivalent of its potential energy. If we are not using the heat and light it is not the fault of nature. Wealth on its own does not fix its value. We can create or destroy value in exchange component of wealth but we cannot destroy or create value in use. In nature every thing has value in use. Value in exchange of wealth depends on its use.

This Law of Conservation is universal and applies to soul also. Like matter, wealth and energy soul can neither be created nor be destroyed. Remember the words of Lord Krishna in Srimad Bhagavadgitha. Sword cannot cut soul into pieces and fire cannot burn the soul. Soul changes bodies the way we change our clothes. This Law of Conservation leads us to understanding God.

Therefore I think that a serious thinking be initiated to redefine wealth. In my view wealth is one that can be expressed in units of wealth, that can be changed into other forms of wealth and that moves from higher concentration to lower concentration. If this Value in Exchange concept is eliminated, wealth can be equated with matter and energy and subsequently economics shall be treated on par with any material science like, say, chemistry and we would be doing world of good to economics. The reaction here is:

Economics – value in exchange = Material science

Economics is indeed a material science but it is made out to be social science.

B.V.GOPINATH
M.Sc(agri)in Soil Science and CAIIB
Author *of* ECONOMIC REACTIONS
Parimala, H.No.10-3-9/2,
Vithal nagar,
GULBARGA 585103
Ph.No.08472-441706
e-mail; bvgopinath2001@yahoo.co.in