Name of the Semester: IV (Undergraduate)
Name of the Subject: Microeconomics-II
Paper: GE 4.1Chg
Name of Teacher: Arindam Jana
Lecture No.: 1

Unit-III: Factor Price Determination

Concept of Interest

Gross and Net Interest

In the theory of Interest two terms are often used- Gross Interest and Net Interest.
The two terms can be developed by the definition of Chapman. According to him,

(i) Net interest is a payment for the loan of capital, when no risk, no inconvenience and no work is entailed on the lender.

(ii) Gross interest includes payment for the loan of capital, payment to cover risk of loss which may be personal or business, payment for the inconvenience of the investment and payment of work and worry involved in watching investment.

Therefore, Gross Interest = Net Interest + Return for risk + Return for inconvenience + Return for management of loan.

Theories of Interest Rate Determination

The Classical Theory of Interest

This theory was propounded by Ricardo, Hume, Fisher and others. As explained by L.M. Bhole. According to his static theory, the rate of interest is a real phenomenon in the sense that it is determined by real factors. It is the supply of savings and the DD for investment that decide the equilibrium rate of interest. The aggregate saving is the gap between the total national income & the total consumption expenditure. The savings may be affected by individuals, households, business and the government. Given the current income, there is a natural or normal tendency on the part of economic units to spend that income on current or present consumption i.e., there is a time preference in favour of present rather than the future consumption. To the consumers, business and government, money now is not the same thing as money next year; the money is valued more than the money next year. Because of this time preference, if it is necessary or desired that the current consumption should be postponed, there is a sacrifice involved in such a postponement. The various economic units can be induced to undergo this sacrifice and save if they are offered a reward for such an action. This reward is known as the "rate of interest". Thus, interest rate is a reward for the sacrifice or abstinence r waiting involved in the act of supplying savings. Interest rates are intimately involved with the role of time in economic activities and in te lives of economic units. They arise out of, and in a sense they measure, the preference for the present over the future. Irving Fisher, particularly, emphasized time preference or impatience or waiting or abstinence as a factor limiting the supply of saving. If people did not care about time they would save more of their incomes so long as interest rate was positive. The existence of time preference is requisite to explain the endurance of the interest. For greater saving, higher rate of interest needs to be offered.

There would be no saving at zero rate of interest, and greater and greater saving could be induced by offering higher and higher interest rates. On the demand side, firms and other economic units demand capital to make profits by producing goods. The investment takes place because by investing in roundabout or indirect methods or processes of production, economic units expect to obtain more consumption in future by sacrificing present consumption. The opportunities to produce more effectively by using roundabout methods of production determine investment demand. While the saving schedule is upward sloping, the investment schedule is downward sloping. The equilibrium rate of interest is determined by the interaction of S & I schedules in the economy. The classical view regards interest a determined by DD and supply, productivity of capital goods providing the main elements of demand, and the SS of capital being restricted by the disinclination to abstain from current consumption & do more savings. The rate of interest so determined is variously known as the "natural rate", "full-stock equilibrium rate", "classical real rate", & "true real rate".
In a static situation, this rate is unaffected by the money and price levels because fluctuations in the quantity of money lead to a proportionate change in all prices leaving the % ratio of money yield to money principal unchanged. Interest rates are not affected by the behavior of banks & other credit institutions.

The Neo- Classical Theory of Interest or The Loanable Funds Theory

The Loanable Funds theory of interest rates in the words of Dr S.B. Gupta is anpostponement of the classical savings & investments theory of interest rates. It incorporates monetary factors with the non-monetary factors of savings and investments. The theory was propounded by Wicksell, D.H. Robertson and several other Swedish and British economists.
According to the theory, the rate of interest is determined by DD and the SS of funds in the economy at that level at which the two (demand and supply) are equated. Thus it is a standard DD and SS theory as pragmaticto the market for loanable funds ,handling the interest rate as the price (per unit time) of such funds. The theory is centered on the givensimplifying assumptions:
The market for loanable funds is one fully integrated (and not segmented) market, characterized by perfect mobility of funds throughout the market.
Perfect competition is in the market so that each borrower & lender is a 'price-taker' &only one interest rateprevails in the market at given time. The forces of competition make this rate the market clearing (equilibrium) rate.
This theory has used partial equilibrium approach under which all factors other than the interestrate might get influences by the demand or supply of loanable funds and are assumed to be held constant. In other words it assumes that the rate of interest does not interact with other macro variables.
In its popular form, the theory is stated in 'flow' terms, considering flow demand and supply of funds per unit time. As such, the theory hypothesizes that it is the 'flow equilibrium' of loanable funds which determines the rate of interest.
Given these assumptions, the determination of rate of interest is easily explained, once the demand and supply of loanable funds is specified. At this point, the loanable funds theory is appealed to be an enhancement over the classical savings & investment theory of interest rate, since, besides the real factors; it also takes into account monetary factors of hoarding, dishoarding and increase in money supply in the analysis. In this sense it

combines both the monetary & non-monetary factors.
The supply of loanable funds (LS) is usually taken to be given by

LS= S+ DH+ ΔM (1)

Where S= aggregate savings of all households and firms net of their dissaving
DH= aggregate dishoarding (of cash)
ΔM= incremental supply of money

Following standard economic theory, both S and DH are
hypothesized to be increasing functions of interest rate.
ΔM to be autonomously given and so LS is also an increasing function of rate of interest.
The demand for loanable funds (LD) is given by

LD= I+ ΔMD (2)

Where I= gross investment expenditure
ΔMD= incremental demand for money (hoarding).
Following standard economic theory, each component of LD and so total LD is
hypothesized to be a decreasingfunction of rate of interest.
Equilibrium rate of interest is determined at a level where LD (r) = LS (r)['r' is the rate of interest], or where

I+ ΔMD = S+ DH+ ΔM (3)

Concept of Profit

Accounting Profit

Accounting profit = Total revenue – Explicit costs
Explicit costs are payments firms make to Purchase different factors of production or costs that require a money payment. Example of explicit costs include cost for purchasing factors of production like land, labour service etc.

Economic Profit

Economic profit = Total revenue - Sum of its explicit and implicit costs
Implicit costs are the opportunity costs of the resources supplied by the firm's owners or costs that do not require a money payment.

Normal Profit

Normal profit = Accounting profit - Economic profit

Theories of Profit

Risk Bearing Theory of Profit

According to Hawley the entrepreneur ears profit for the risk undertaken by him. Prof. Marshall also supported the risk bearing theory. According to this theory the entrepreneur earns profit as the reward for risk taking. The entrepreneur does not what will be the nature of the demand for the product to be produced him. There may also be change in consumers' taste and preferences and this may affect demand. If the entrepreneur cannot sell the products produced by him he will have to suffer a loss. Thus there is a risk associated with the undertaking of the production process. If there is no reward for risk taking nobody will be willing to take risk. Therefore the entrepreneurs get profit as a reward for the risk undertaken by them.

Uncertainty Bearing Theory of Profit

The uncertainty bearing theory of profit was developed by Prof. Knight. According to him, the main task of a producer is not to take risk but to bear the uncertainty.

The entire concept of risk can be decomposed into predictable or insurable risk and unpredictable or non-insurable risk.

Predictable or Insurable Risk

According to Prof. Knight, there are some risks which can be insured by offering premium, e.g. fire, accident etc. So if there is an accident, the loss will be compensated by the insurance company. Now this premium should be a part of the cost of production, means no uncertainty.

Unpredictable or Non- insurable Risk

There are some risks which cannot be insured. Profit is the reward for those uncertainties. According to Prof. Knight, these uncertainties are as follows:

(a) Change in fashion, taste, preference, i.e., uncertainty in market condition.
(b) Change in rival's policies, i.e., uncertainty from the competitors.
(c) Invention and innovation, i.e., uncertainty relating to the technical changes.
(d) Uncertainty regarding business cycle.
(e) Uncertainty regarding Government policies etc.

Hence following Prof. Knight, profit is the reward not for the risk- bearing but for the uncertainty- bearing. According to him, if all the existing factors are paid according to their marginal productivities then also an entrepreneur can earn some positive profit.

Walker's Theory of Profit: Profit as Rent of Ability

One of the most widely known theories advanced to explain the nature of profit was formulated by F.A. Walker. According to him, profit is rent of the exceptional abilities that an entrepreneur may possess over the least entrepreneur. Just as rent on land is the difference between the yields of the least fertile and super lands, pure profit is the difference between the receipts of the least efficient entrepreneur and that of those with greater efficiency or managerial ability.

Assumptions. In formulating his profit theory, Walker visualised a state of perfect competition in which all firms (or entrepreneurs) are presumed to possess equal managerial ability or entrepreneurship. There being no barrier to prevent the entry of new firms to the industry, the number of firms would increase until the remuneration of each was just enough to keep them in the industry. Each firm would then receive only the wages of management which, in Walker's view, formed no part of (pure) profit. He regarded wages of management as ordinary wages. Thus, under perfectly competitive conditions, there would be no pure profits and all firms would be no-profit firms.

However, when one departs from the realm of perfect competition, one finds, in almost every economic activity, some firms making only a bare living while other firms in the same industry are making pure profits. Walker regarded profits of profit-making firms arising from what a more efficient firm is able to produce over and above what the least efficient firm i.e., able to produce with same amount of capital and labour. Walker attributed this surplus wholly to the greater efficiency of a firm, which distinguishes it from the least efficient ones.

Thus, to Walker, profit is reward for exceptional business ability over and

above the ordinary ability required for management of the organisation which could be rewarded by a wage or salary. Just as rent is a reward for a higher productivity of land, so is the profit reward for superior managerial ability of an entrepreneur. A natural corollary of this view is that profit did not enter the cost of production as is the case with rent. Therefore, according to Walker, profit does not enter the price determination. The logic that Walker gives for his argument runs as follows. Market price is determined by the cost of production of that portion of supply which is produced by the least efficient firms. Prices so determined make allowance for only wages of management not the surplus that accrues to the firms with greater efficiency.

Clark's Theory of Profit: Profit as Reward for Dynamic Entrepreneurship

The dynamic theory of profit is associated with the name of J.B. Clark, which he propounded in 1900. According to Clark, profits accrue in a dynamic world, not in a static world.

The Static World. As visualised by Clark, a static world is one in which there exists absolute freedom of competition; but population and capital are stationary; there are no inventions; production process does not change; and the goods continue to remain homogeneous. Besides, in a static state there is perfect mobility of factors of production but there is no motion because marginal products of labour and capital are equal in all groups of industries. Also, in a static state, there is no uncertainty and hence, no risk. Whatever risks might arise due to natural calamities are covered by insurance.

No Profit in Static Society. To show how profits were eliminated in a static state, Clark draws a distinction between the work of an entrepreneur and that of a manager of business. He believed that the task of a manager could be described as labour which can be paid for by wage. In a static state, profit would not arise because competition would not permit any business manager to earn more than his actual wages which would be equal to marginal value his product. Therefore, there would be no surplus available which could be called as profit.

The Dynamic World. In contrast to static word, dynamic world is one in which the factors that remain constant in a static world undergo the process of change. Clark indicated certain generic changes that mark the transition of a society from a static to a dynamic state. Briefly speaking, generic changes include

(a) increase in population;
(b) increase in capital;
(c) improvement in production techniques;
(d) changes in forms of business organisation; and
(e) multiplication of consumer's wants.

Profit as Reward for Dynamic Enterprise. In Clark's view, the major functions of an entrepreneur in a dynamic society are related to these changes, i.e., to take the advantage of generic changes, promote their business, expand their sales, and reduce their cost of production. The typical changes that emerge out of this special effort of some entrepreneur are inventions and improvement in the methods of production. Such changes lead to increase in production given the costs or reduction in costs given the output, which results in emergence of profits to the initial inventors.

Innovation Theory of Profit

Prof. Schumpeter has developed this theory. There is a difference between invention and innovation. When a scientist or a talented prrson develop a new process of production or a new product it is regarded as invention. On the other hand innovation refers to the commercial utilization of invention. An entrepreneur can become an innovator if he introduces a new product for commercial purposes and can earn more than normal profit. However this excess profit can be earned in the short run only.in the long run similar products or similar processes will be developed by other entrepreneurs and this will reduce the profit margin of the innovator.

Theory of Monopoly Power

According to this theory the main reason for the emergence of profit is lack of competition. If perfect competition prevails in all markets then each firm earns only normal profit by virtue of the assumption of free entry and free exit. However perfect competition does not prevail in reality. In the real world we can find only imperfect competition. We know that in a perfectly competitive market price is equal to marginal cost while in an imperfectly competitive market price is greater than marginal cost. The difference between price and marginal cost can be taken as an indicator of the degree of monopoly power.