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For B.Com. IInd semester

THEORIES OF INTEREST

Interest refers to payment made to lender by borrower in addition to the principal amount. The interest is the price for the use of funds paid by the borrower to the lender. Interest is generally quoted in terms of percentage per annum. Earlier many economists questioned the payment of interest, as the borrower is paying back the principal amount. So interest payment was considered as unjust. However, many economists justified interest and propounded many theories. Before explaining these, there are two expressions associated with interest which need to be touched upon.

Interest may be expressed as the pure rate and or a gross rate. Pure interest rate is the payment for the use of funds. To pure interest rate if risk premium and administrative expenses are added then gross interest rate is obtained. This is also known as market rate of interest.

Productivity Theory of Interest

This theory of interest was expounded by J. B. Clark and F. H. Knight. According to this theory just like land and labour capital also has productivity and interest arises on account of the productivity of capital. Further some classical economists hold that Interest is the reward paid to capital because it is productive. In fact, Interest is paid out of the productivity of capital. When capital is employed along with labour and other resources, the productivity of these resources increases resulting in profit for the borrower. Therefore, the interest on capital is justified.

Criticism

Economists criticized theory on the ground that if interest is reward of productivity, then it should change according to variations in productivity. This theory has been called one-sided and related only to the demand aspect of capital, completely ignoring the supply side. Further, if a person borrows for the purpose of consumption he still has to pay interest although its productivity is nil. This is an inadequate theory of interest.

Abstinence or Waiting Theory of Interest:

This theory was expounded in 18th century by an eminent economist N. W. Senior. According to him, **"Capital is the result of saving".** A person sacrifices his consumption to save. People may spend the whole of their income on consumption of present goods.When they save they ÷abstainø from present consumption. Hence, Interest is a compensation for abstinence. It serves as a motivation for people to save. Marshall substituted the word ÷waitingø for abstinence. When a person lends he must wait, and people do not like to wait. So interest is a reward for waiting. Not only saving, but all kinds of productive activity involve waiting.

Criticism:

This theory completely ignores productivity of capital. This theory is subjective in nature as one cannot measure the sacrifice or cost of savings. As is well known, a large part of capital comes from the wealthy lenders with surplus income, the question of sacrifice does not arise.

Time-Preference Theory

Bohm-Bawerk, an Austrian economist, is the main exponent of this theory which seeks to explain interest on the basis of time-preference. According to this theory individualøs natural tendency is to prefer present consumption over future consumption. So, individuals discount future. Interest is the reward made for inducing people to change their time-preference from the present to the future.

Determination of Rate of Interest

The above three theories mainly concentrated on the rationale of charging interest. In following paragraphs those theories that analyse the problem of interest rate determination are analysed.

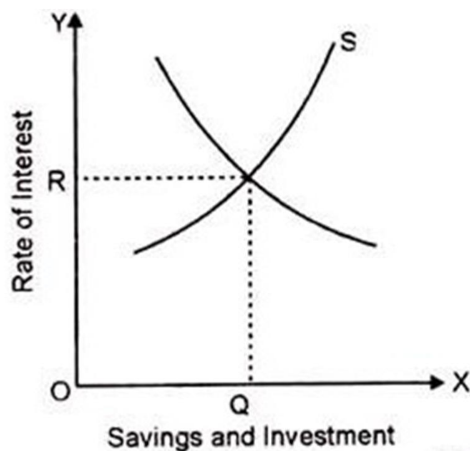
Classical Theory of Interest: The Demand and Supply Theory

According to the classical economists, interest is the reward of saving. They believed savings to be dependent on the interest rate. Higher the interest rate higher will be the amount of savings and *vice-versa.* Amount accumulated as savings is demanded for investment. Investment has inverse relationship with the interest rate. Higher the interest rate lower be the investment and *vice-versa.* According to this theory, interest is the reward for the productive use of the capital which is equal to the marginal productivity of physical capital.The theory is, therefore, also known as the supply and demand theory of waiting or saving.

Capital is demanded because it is productive, i.e., it has the power to yield an income even after covering its cost. The marginal productivity curve of capital thus determines the demand curve for capital. The marginal productivity of capital goods goes on diminishing with an increase in investment, giving rise to a downward sloping demand curve. Thus, there is an inverse relationship between rate of interest and investment. Supply of capital depends basically on the availability of savings in the economy. Savings emerge out of the peopleøs desire and capacity to save. It arises due to time preference, waiting. Therefore higher the interest reward higher will be the savings, showing a positive relation between rate of interest and saving.

Equilibrium Rate of Interest:

With a downward sloping demand curve for and upward sloping supply curve of capital, the equilibrium rate of interest is determined at the point of intersection. In other words, the point at which investment equals savings.



In the figure given here OR is the equilibrium rate of Interest which is determined at the point at which the supply of savings curve intersects the investment demand curve, so that OQ amount of savings is supplied as well as invested. This implies that the demand for capital OQ is equal to the supply of capital OQ at the equilibrium rate of Interest OR.

Criticisms:

According to Keynes, Classical theory of interest completely ignores the monetary factors. According to him interest is purely a money phenomenon, and is paid for parting with liquid cash rather than a return on saving. Classical economists only

considered money as the medium of exchange and ignored the other functions of money such as store of value. Keynes further said that the classical theory of Interest is confusing and indeterminate as one need know the savings and investment schedules to find rate of interest. The theory is based on assumption of full employment. Income plays an important role in saving and investment which was negated by classical economists.

2. The Loanable Funds Theory of Interest

The Neo-classical or the Loanable Fund Theory was expounded neo-classical economist Knut Wicksell. Further, this theory was elaborated by Ohlin, Roberson, Pigou and other neo-classical economists. This theory is an attempt to improve upon the classical theory of interest. According to this theory, the rate of interest is the price of credit which is determined by the demand for and supply of loanable funds. They said that the major shortcoming of classical theory was interest rate was supposed to be dependent on two factors only. They proposed that other factors should be included in the determination of interest rate.

Demand for Loanable Funds:

Demand for loanable fund means money demanded as borrowings for which interest is paid. Borrowing is done by various groups like government, businessmen and also consumers who need them for purposes of **investment, hoarding and consumption.**

The demand of loanable fund depends on rate of interest, higher the rate of interst lower will be the demand for loanable funds and *vice-versa.*

Supply of Loanable Funds:

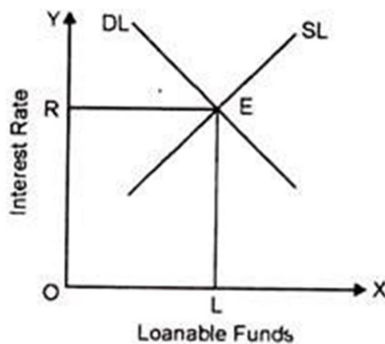
The supply of loanable funds comes from **savings, dishoarding and bank credit and disinvestment**. The higher the rate of interest, the greater will be the inducement to save and vice-versa.There is a positive relationship between Interest-rate and the supply of loanable funds. It means there will be more supply of loanable funds at higher interest and less supply on lower interest. Hence the supply curve of loanable funds will be an upward sloping curve from left to right.

Determination of Interest Rate:

The equilibrium between the aggregate demand for and aggregate supply of loanable funds (or the intersection between demand and supply curves of loanable

funds) indicates the determination of the market rate of interest. Adding together the downward sloping curves of investment, consumption and hoarding, showing a negative relation between these and the rate of interest, the aggregate demand curve for loanable funds is arrived at. Likewise adding together the upward sloping curves of savings, bank money, dishoarding and disinvestment, showing a positive relation of each with rate of interest, aggregate supply curve is determined. It has been shown in the diagram given here.

In the diagram aggregate demand curve for loanable funds (DL) and aggregate supply curve of loanable funds (SL) meet at point E. Therefore, E will be the equilibrium point and OR will be the equilibrium rate of interest. At this rate of interest demand for and supply of loanable funds both are equal to OL.



Given the supply of loanable funds, if the demand for loanable funds rises, the interest rate will also rise and if the demand for loanable funds falls, the interest rate will also fall. Similarly, given the demand for loanable funds, interest rate will rise with the fall in the supply of loanable funds and will fall with the rise in the supply of loanable funds. The equilibrium rate of interest is thus determined where SL = DL.

Criticism

Contrary to what this theory suggests, savings depend on income and the effect of rate of interest is negligible on savings. Similarly the amount of investment depends on Marginal Efficiency of Capital (MEC) and not on rate of interest. Also the theory mixes the real factors such as savings, investment with monetary factors such as bank money etc. which is illogical. Prof. Hansen asserts that the loanable funds theory is indeterminate. Because according to this theory Interest rate

determination depends on savings. But saving depends on income, income depends on investment and investment itself depends on Interest rate.

3. Keynes's Liquidity Preference Theory of Interest

Keynes in his seminal work, ÷The General Theory of Employment, Interest and Moneyø laid down that interest is purely a monetary phenomenon. It is the reward of not hoarding but the reward for parting with liquidity for a specified period. Here Liquidity Preference Theory is determined by the supply of and demand for money. Supply of money comes from banks and the government. On the other hand, demand for money is the preference for liquidity. According to Keynes people like to hoard money because it possesses liquidity.

Hence, when somebody lends money he has to sacrifice this liquidity. A reward which is offered to him for parting with liquidity is called Interest. Therefore, as per Keynes, õinterest is the reward for parting with liquidity for a specific period.ö

Liquidity Preference or Demand for Money:

Liquidity preference means demand for cash or money. People prefer to keep their resources **"Liquid".** It is because of this reason that among various forms of assets money is the most liquid form. Money can easily and quickly be changed in any form as and when we like. Suppose, you have a ten rupee note you can change it into either wheat, rice, sugar, milk, book or in any other form you like. It is because of this feature of liquidity of money, people generally prefer to have cash money.

The desire for liquidity arises because of three motives:

(i) The transaction motive;

(ii) The precautionary motive; and

(iii) The speculative motive.

(i) Transactions Motive:

The transactions motive relates to õthe need of cash for the current transactions of personal and business exchangesö. It is further divided into the income and business motives. The income motive is meant õto bridge the interval between the receipt of income and its disbursementö, and similarly, the business motive as õthe interval between the time of incurring business costs and that of the receipt of the

sale proceeds.ö If the time between the incurring of expenditure and receipt of income is small, less cash will be held by the people for current transactions and vice-versa.

(ii) Precautionary Motive:

The precautionary motive relates to õthe desire to provide for contingencies requiring sudden expenditures and for unforeseen opportunities of advantageous purchases.ö Both individual and businessmen keep cash in reserve to meet unexpected needs. Individual hold some cash to provide for illness, accidents, unemployment and other unforeseen contingencies. Similarly, businessmen keep cash in reserve to tide over unfavorable conditions or to gain from unexpected deals.

(iii) Speculative Motive:

Money held under the speculative motive is for õsecuring profit from knowing better than market what the future will bring forth.ö Individuals and businessmen have funds, after keeping enough for transactions and precautionary purposes, like to gain by investing in bonds.

Money held for speculative purposes is a liquid store of value which can be invested at an opportune moment in Interest bearing bonds on securities. There is an inverse relationship between interest rate and the demand for money i.e., more demands for money at lower Interest rate and less demand at higher interest rate. Hence, the liquidity preferences curve becomes a downward sloping curve.

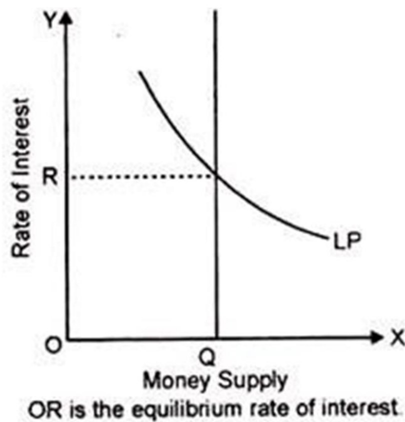
Supply of Money:

The supply of money refers to the total quantity of money in the country for all purposes at any time. Though the supply of money is a function of the rate of interest to a degree, yet it is considered to be fixed by the monetary authorities, that is, the supply curve of money is taken as perfectly inelastic.

The supply of money in an economy is determined by the policies of the government and the Central Bank of the country. It consists of coins, currency notes and bank deposits. The supply of money is not affected by the interest rate, hence, the supply of money remains constant in the short period.

Determination of Interest Rate:

According to the Liquidity-Preference Theory the equilibrium rate of interest is determined by the interaction between the liquidity preference function (the demand for money) and the supply of money, as presented in figure below:



OR is the equilibrium rate of interest

OR is the equilibrium rate of interest. The theory further states that any change in the liquidity preferences function (LP) or change in money supply or changes in both respectively cause changes in the rate of interest. Thus as shown in figure below, given the money supply the liquidity preference curve (LP) shifts from LP_1 to LP_2 implying thereby an increase in demand for money, the equilibrium rate of interest also rises(please read R_2 as R_1 and vice-versa in the first figure below).

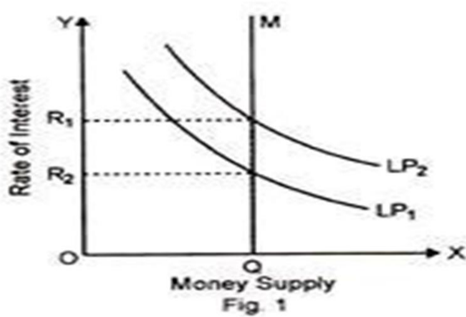


Fig. 1

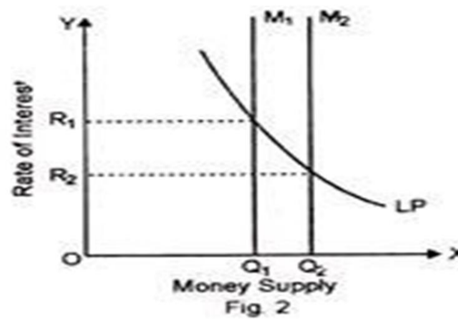


Fig. 2

Similarly, assuming a given liquidity preference function (LP) as in the second figure, when the money supply increases from M_1 to M_2 the rate of interest falls from R_1 to R_2.

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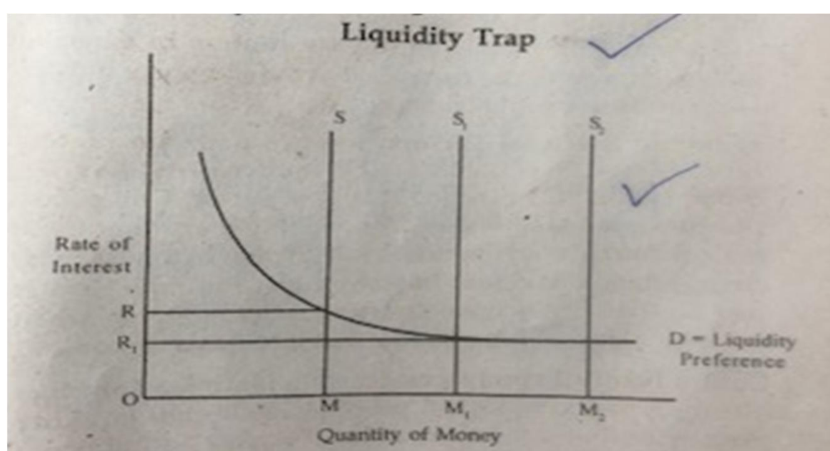
LIQUIDITY TRAP

Liquidity trap refers to a situation in which an increase in the money supply does not result in a fall in the interest rate but merely in an addition to idle balances, the interest elasticity of demand for money becomes infinite. Under normal conditions an increase in money supply, resulting in excess cash balances, would cause an increase in bond prices, as individuals seek to acquire assets in exchange for money, and a corresponding fall in interest rates. In such a situation, described by Keynes as liquidity trap, individuals believe that bond prices are too high and will therefore fall, and correspondingly that interest rates are too low and must rise. They, therefore, believe that to buy bonds would be to incur a capital loss and as a result they hold only money. This means that an increase in the money supply merely increases idle balances and leaves the interest rate unaffected.



Criticism:

Prof. Hansen and Robertson maintain that the Keynesian theory of interest rate, like the classical theory is indeterminate, inadequate and misleading. Keynes conceived demand for money on assumption of constant income. But change in income also affects the demand of money. Keynes completely ignored the real factors such as consumption, savings, investment. This theory furnishes too narrow an explanation of the rate of interest.

Refer to your prescribed text book also.