JAYOTI VIDYAPEETH WOMEN'S UNIVERSITY, JAIPUR

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Faculty of Education and Methodology

Faculty Name- JV'n Dr. Md Meraj Alam

Program- BA B.Ed 3rd Semester

Course- Macroeconomics

Digital session name – Determinant of Investment.

Introduction:

The decision to invest in a new capital asset depends on whether the expected rate of return on the new investment is equal to or greater or less than the rate of interest to be paid on the funds needed to purchase this asset. It is only when the expected rate of return is higher than the interest rate that investment will be made in acquiring new capital assets.

In reality, there are three factors that are taken into consideration while making any investment decision. They are the cost of the capital asset, the expected rate of return from it during its lifetime, and the market rate of interest. Keynes sums up these factors in his concept of the marginal efficiency of capital (MEC).

Marginal Efficiency of Capital:

The marginal efficiency of capital is the highest rate of return expected from an additional unit of a capital asset over its cost. In the words of Kurihara, "It is the ratio between the prospective yield to additional capital goods and their supply price." The prospective yield is the aggregate net return from an asset during its life time, while the supply price is the cost of producing this asset.

If the supply price of a capital asset is Rs. 20,000 and its annual yield is Rs. 2,000, the marginal efficiency of this asset is 2000/20000 × 100/1 = 10 per cent. Thus the marginal

efficiency of capital is the percentage of profit expected from a given investment on a capital asset.

Keynes relates the prospective yield of a capital asset to its supply price and defines the MEC as "equal to the rate of discount which would make the present value of the series of annuities given by the returns expected from the capital assets during its life just equal to its supply price."

Symbolically, this can be expressed as:

$S_P = R_1/(1+i) + R_2(1+i)^2 + R_n/(1+i)_n$

Where Sp is the supply price or the cost of the capital asset, R_1 R_2… and R_n are the prospective yields or the series of expected annual returns from the capital asset in the years, 1, 2… and n, *i* is the rate of discount which makes the capital asset exactly equal to the present value of the expected yield from it.

This *i* is the MEC or the rate of discount which equates the two sides of the equation. If the supply price of a new capital asset is Rs 1,000 and its life is two years, it is expected to yield Rs 550 in the first year and Rs 605 in the second year. Its MEC is 10 per cent which equates the supply price to the expected yields of this capital asset. Thus

(Sp) Rs $1000 = 550/(1.10) + (605)/(1.10)^2$ = Rs. 500 + 500

In equation (1), the term $R_1/(1+i)$ is the present value (PV) of the capital asset. The present value is "the value of payments to be received in the future." It depends on the rate of interest at which it is discounted.

Suppose we expect to receive Rs 100 from a machine in a year's time and the rate of interest is 5 per cent. The present value of this machine is $R_1/(1+i) = 100/(1.05)$ = Rs 95.24.

If we expect Rs 100 from the machine after two years then its present value is $100/(1.05)^2$ = Rs 90.70. The present value of a capital asset is inversely related to the rate of interest. The lower the rate of interest, the higher is the present value, and vice versa. For instance, if the rate of interest is 5 per cent, PV of an asset of Rs 100 for one year will be Rs 95.24; at 7 per cent interest rate, it will be Rs 93.45; and at 10 per cent interest rate, it will be Rs 90.91.

The relation between the present value and the rate of interest is shown in Figure 3, where the rate of interest is taken on the horizontal axis while the present value of the project on the vertical axis. The curve PR shows the inverse relation between the present value and the rate

of interest. If the current rate of interest is i_i the present value of the project is P_1 On the other hand, a higher rate of interest (i_2) will lead to a lower present value (P_2) when the present value curve (PR) cuts the horizontal axis at point (Z), the net present value becomes zero.