Module I

1

ECONOMICS OF AGRICULTURAL PRODUCTION RESOURCE USE AND INSTABILITY IN AGRICULTURE - I

Unit Structure:

1.0 OBJECTIVES

- To understand the theory of production
- To explain optimum utilisation of resources and input use
- To analyse factor – factor and product - product relationship
- To know the availability of substitute
- To understand the operational function of input and output

1.1 INTRODUCTION

Primary Sector production which is Agricultural productionis the production of inputs like grass or crop attached to the surface of the land, whether or not the grass or crop is to be sold commercially, and the production of any farm animals, including farmed elk, whether or not the animals are to be sold commercially. Agriculture is the practice of cultivating plants and livestock. Agriculture was the key development in the rise of sedentary human civilization, whereby farming of domesticated species created food surpluses that enabled people to live in cities. The history of agriculture began thousands of years ago.

Developing country like India is highly dependent on agriculture with respect to job and it is also very significant player in providing raw material for industrial sector as well . so we can analyse the contribution of agriculture in our GDP. Agricultural production economics is concerned with the productivity of farm inputs. As such it deals with resource allocation, resource combinations, resource use efficiency, resource management and resource administration. Agricultural production economics involves analysis of production relationships and principles of rational decision making to optimize the use of farm resources on individual farms as well as to rationalize the use of farm inputs from the point of view of the entire economy. Depending on variety, crops grow over a period of 120 to 180 days before maturity. The growth cycle and phenological stages include: germination, leaf development, tillering, inflorescence emergence, flowering, fruiting, maturity, senescence and harvesting. The main factors of production are natural resources (land, water, soil, rainfall), labour and capital. These are different products produced by farmers, each of which uses inputs to produce outputs.

1.2 RESOURCE AND INPUT USE

Economics: Economics is defined as optimum utilisation of resources. Which occurs due to scarce resources available to us. As wants are unlimited and means are limited thus to fulfil the need and requirement of people we use the resources economically.

Agricultural economics, is the study of the allocation, distribution, and utilization of the resources used, along with the commodities produced, by farming. Agricultural economics plays a role in the universal objective of economics of development, for a continuous level of farm surplus is one of the wellsprings of technological and commercial growth. Agricultural inputs are defined as products which is permitted for optimum use in organic farming. These include feedstuffs, fertilizers and permitted plant protection products as well as cleaning agents and additives used in food production.

Agricultural production means the production of an agricultural operation. It shall also mean the agricultural product storage, service facilities and farmsteads which relate to the individual farm unit; In this chapter we will be learning about theory of production and various concept about Production function. These terms are usuallypresented as part of an introductory economics or agricultural economics course and provide a starting point for the further study of agricultural production economics.

The significant objective of agricultural production are

- To create employment opportunity in order to solve the problems of unemployment.
- To increase the per capita income to remove the gap between rural and urban.

- To improve intake of nutritional foods item and upgrade the standards for betterment of health.

" THE PRIMARY GOAL OF ORGANIC AGRICULTURE IS TO OPTIMIZE THE HEALTH AND PRODUCTIVITY OF INTERDEPENDENT COMMUNITIES OF SOIL LIFE, PLANTS, ANIMALS AND PEOPLE."

1.3 THEORY OF PRODUCTION

Production as per the study with respect to manufacturing and agriculture is that technique which transforms certain inputs into a consumable form. The most important factors of farm product production are Land, Labour, capital and equipment's utilised for production of resources. Land is used to produce desired crop. Labour and capital are utilised for the cultivation and harvesting of crop.

Agricultural production is the study of quantitative relationship which are important in production process in agriculture. "These relationship is in the form of input – output patters, anddifferent type of interactions among the individual inputs themselves and among the product prices and with nature of production pattern which brings out the attainment of certain desired optima, like profit maximisation or cost minimisation.Agricultural production economics as a scope and coverage area of resource use and various other elements related to it are efficient utilisation of resources, resource combination, resource allocation , resource management and resource administration. Which covers the subject matter like factor - product relationship, factor – factor relationship, product – production relationship etc. The study of which is taken in to consideration through some Law's such as laws of returns to scale, law of diminishing returns and various important concepts such as Iso quants, Production Possibility Curves(PPC) and ISO - Cost Curve Etc.

Production decision faced by individual farmers is of three different forms:

1. Farmers are expected to use certain amount of given product having certain amount of resource to use. Farmers always try to maximise profitability by optimising the resources that is by using resources which yield most profitable amount of resources. This feature can best way explain with the help of factor – product relationship.

2. To produce specific amount of given output, producer need to take decision regarding the combination of maximum profitable resource use. It can systematically explained with the help of factor – factor relationship.

3. Sometime farmers find it difficult to take decision regarding the profitable combination of resources mix of products to produce. This is referred to as product – product relationship which is concerned with the determination of what crop to grow and which livestock to breed and in what combination given certain number of resources.

1.3.1 Production Function:

The entrepreneur or manager of the farm has to Take right decision regarding quantity to be produced and also combination of inputs do be used. The production function is the relationship between physical outputs and physical inputs farm firms use. It can be express Algebraically as well. in the following form:

$Y = f(x_1, x_2, x_{3.....}x_n)$

where Y is Quantity of output X_1, X_2, X_3 stands for quantities of factor X_1, X_2 , X_3…….X_n.

The Above equation shows relationship between output y and input X, X_2, X_3 etc.

$Y = a + bx$

The above equation shows that there is a constant relationship between inputs used and the output generated. This is also called as linear production function.

AccordingAc to A. Koutsoyian "Production function is a Purely technical relation which connects factor inputs and outputs. It describes - the laws of proportion that is the transformation of factor inputs into products at any particular time period. Production function represents technology of afilm of an industry. or of the economy as whole, it includes all the technically efficient method of production".

The production function is the conventional procedure in a production function study is to predict the total output curve as a regression equation. The Marginalproducts for factor inputs can then be predicted singly by computing the derivative of the product Y, with respect to the resource inputs X_1 and X_2 under consideration.

1.3.2 Types of Production function :

There are various algebraic equation forms derived for production function by economist. As it is known agriculture productivity is affected by multiple factors of example soil, Climate, type and variety of crop or livestock etc. so using one common method of production function will be giving misleading or wrong data. Hence in world economy country like U.S.A and Europe have Undertakenseveral different form of production function for agriculture.

The production function can also be classified on the basis of time period. Those are short term production function and longterm production. In short Jun because of lack of availability of timesome inputs are kept constant andsome inputs are variable.

For short term production function we usedLaw of variable proportion and for long term production function Law of returns to scale is the subject matter.

1. Homogeneous Production Function

A homogeneous production function is a function such that if each of the inputs is multiplied by k then k can be completely factored out of the function. The power v of k is called the degree of homogeneity of the function and is a measure of the returns of scale.

Suppose, we have a function.

$X_0 = f(L, K)$

and we increase both factors of this function by the same proportion in such a way that the resulting new level of output X* is given by

$X^* = f(a^L, a^K)$

If a can be factored out, the new level of out X* can be expressed as a function of a (to any power w).

$X^* = a^w f(L\ K)$

$X^* = a^w X_0$ …… Since $X_0 = f(L, K)$

This kind of production function is known as homogeneous and in case where 'a' cannot be factored out, the production function is known as non-homogeneous. In a more general form, a homogeneous production in case function can be expressed as:

$Ym^k = (mx, my)$

Where m is any real number and K is constant. This function is homogenous of Kth degree. If K is equal to one, then the function becomes homogeneous of the first degree. If K is equal to 2, thenfunction becomes homogeneous of the second degree and yields increasing returns to scale. If on the other hand, K is less than one, the function yields diminishing returns to scale.

It become essential to understand that if the production function is linear and homogeneous, all the isoquants in this case would be exactly similar in shape as shown in Figure No. 1.1 and expansion path of the farm-firm would be a straight line through the origin.

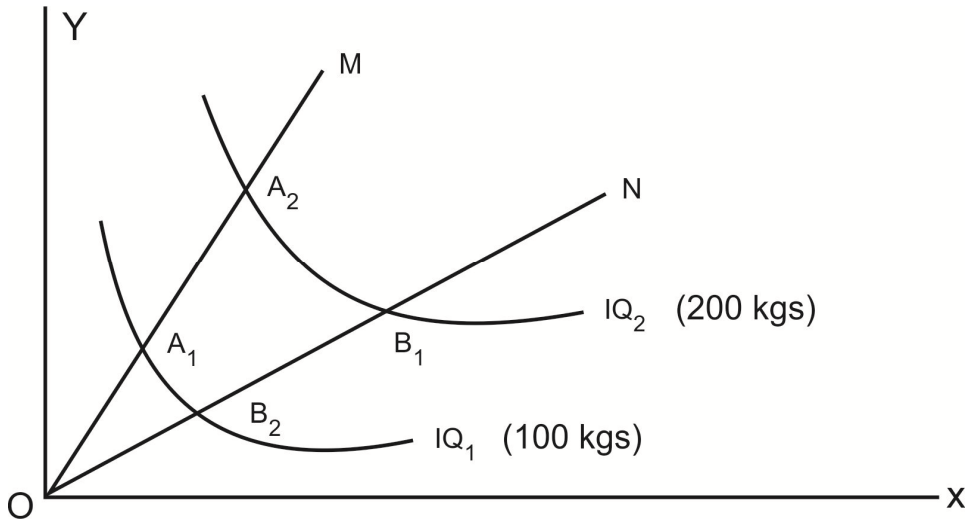

Figure No. 1.1

In fig 1.1 given above IQ_2 , is simply a greater than IQ_1 showing double the output. If a straight line OM is drawn from the origin which intersects the isoquants IQ_1 and IQ_2 at points A_1 and A_2 respectively, then in a linear homogeneous production function, the slope of the curve IQ, at A, must be equal to the slope of the curve of the IQ, at point A_2. In this sense, the curves must be parallel when seen from of the origin.

Properties of Linear Homogeneous production Function :

(1) If we are using two inputs, capital and labour, then product of either input depends upon the proportion in which inputs are combined.

(2) The Partial derivative $\frac{\partial R}{\partial Q}$ and $\frac{\partial Q}{\partial R}$ (Marginal Product of either input) are the function of the ratio to labour (K/L)

(3) If production function is homogeneous of degree one, the marginal productivities of labour and capital are homogeneous of degree Zero i.e., they remain unchanged for proportionate change of both the inputs.

(4) The linear homogeneous production function satisfies the Euler's Theorem which states that the total product is completely exhausted by the sum of factor payments, that is $\frac{\partial Q}{\partial L}$ L+ $\frac{\partial R}{\partial K}$ K = Q

2. Cobb- Douglas Production function:

It is applicable also in agriculture production. Agricultural productivity may be defined as the ratio of index of local agricultural output to the index of total input used in farm production.

The Cobb-Douglas production function is an empirical production function developed by Charles W. Cobb (American Mathematician) and Paul H. Douglas (American Economist) based on empirical studies of various manufacturing industries of the USA. This production function was published in American Economic Review in 1928 in the form of an

article A Theory of Production. By the name of mathematician C.W. Cobb and economist P.H. Douglas, this production function is termed Cobb-Douglas production function. Here we explain the major properties of the Cobb-Douglas production function.

The mathematical form of this production function can be expressed as

$$Q=A.K^{\alpha}L^{\beta}$$

Where,

Q=The level of output produced in a year,

K = Capital (machine, equipment, and buildings),

L = Labour,

A = It is an index of technology or efficiency parameter also called total factor productivity and is positive, a and B are positive parameters of the production function which measures output elasticities of capital and labor, respectively. These values are constants and are determined by the available state of technology.

It is confirmed by the C-D production function that it is a multiplicative production function which implies that both the factors of production are essential to produce goods and services. It means, if the amount of one of the factors of production is zero, no output can be produced. (i.e. if K=0, Q=0 and if L = 0, Q = 0).

Another important thing to note is that originally it was found that the sum of exponents of the C-D production function was equal to one. That is $\alpha+\beta$ is one.

From further research and analysis, it was generalized and found that the sum of exponents $\alpha+\beta$ could be equal.to one, more than one, and less than one.

Properties of Cobb – Douglas :

1. **The C-D Production Function Can be Used to Measure the Returns to Scale :**

The C-D production function can be used in the calculation of the nature of returns to scale. The sum of the powers/exponents of factors in Cobb-Douglas production function, that is a+ß measures the returns to scale. Therefore,

1. If $\alpha+\beta=1$, it exhibits constant returns to scale (CRS)
2. If $\alpha+\beta>1$, it exhibits increasing returns to scale (IRS)
3. If $\alpha+\beta<1$, it exhibits decreasing returns to scale (DRS)

2. The Factor Intensity (A Relative Importance of Factor in Production Process) :

In the C-D production function, the factor intensity is computed by taking the between ratio a and B (ratio between exponent of capital and exponent of labor) as

If α/β >1, there is the use of the capital-intensive technique of production (capital is more vital in the manufacturing process), and

If α/β <1, there is the use of the fabor-intensive technique of production (labor is more vital in the manufacturing process)

3. Average Physical Productivity of Inputs :

capital and labor (APK and APL) can be computed below.

APL = Q/L = AKαLβ/L = AKαLβ.L-1 = AKαLβ-1

APK = Q/K = AKαLβ/K = AKαLβ.K-1 = AKα-1L

4. The Marginal Product of an Input Can be Expressed in terms of its Average Product :

Marginal physical productivity/marginal products/marginal productivities of the inputs in the case of Cobb-Douglas production function can be expressed in terms of their average physical productivity/average productivities. It can be justified below.

A marginal product is a change in total output due to a one-unit change in the use of a particular input. The partial derivative of the C-D production function measures the marginal product of its factor inputs. Therefore,

Marginal Product of Labour (MPL)=$\frac{\partial Q}{\partial L}$ or $\frac{\Delta Q}{\Delta L}$

MPL = $\frac{\Delta Q}{\Delta L}$ = ∂(AKαLβ)/∂L = AKα∂(Lβ)/∂L= βAKαLβ-1= βAKαLβ/L =βQ/L = β.APL

Marginal Product of Capital (MPK) = $\frac{\partial Q}{\partial K}$ or $\frac{\Delta Q}{\Delta K}$

MPK = $\frac{\Delta Q}{\Delta K}$ = ∂(AKαLβ)/∂K = A Lβ ∂(Kα)/∂K = αAKα-1Lβ =αAKαLβ/K =αQ/K = α .APK

5. Output Elasticities :

The powers of labor and capital (that areβ and α) in the C-D production function measure output elasticities of labor (L) and capital (K) respectively. The output elasticity of a factor shows the percentage change in output due to a given percentage change in the number of factor inputs.

As we know that,

Q=A.KαLβ

Output elasticity of Labour- Exponents of labor in the C-D production function= β

The output elasticity of labor is given by $\frac{\Delta Q}{\Delta L}$ XL/Q

$\frac{\Delta Q}{\Delta L}$ X L/Q = βQ/L X L/Q = β

The output elasticity of Capital-Exponents of capital in the C-D production

Function = α

The output elasticity of capital is given by $\frac{\Delta Q}{\Delta K}$ X K/Q

And $\frac{\Delta Q}{\Delta K}$ X K/Q = αQ/K XK/Q = α

Therefore, the output elasticity of labor is β and the output elasticity of capital is α.

6. Marginal Rate of Technical Substitution (MRTS) :

The marginal rate of technical substitution (MRTS) in the theory of production that measures the degree of substitutability/ interchange ability /exchangeability between factors inputs. The MRTS in the case of the C-D production function can be expressed in terms of the ratio between labor and capital. It is given below.

$MRTS_{L,K}$= dk/dL= MPL/MPK = (β.Q/L)/(α.Q/K) = β / α (K/L)

And

$MRTS_{K,L}$= dL/dk= MPK/MPL= (α.Q/K)/(β.Q/L) = α / β (L/K)

7. Elasticity of Factor Substitution is Equal to Unity :

The elasticity of substitution (o) of the C-D production function is defined as the percentage change in the capital-labor ratio divided by the percentage change in the marginal rate of technical substitution and is equal to unity. It is given as

α = (Percentage change in K/L)/ (Percentage change in MRTSL,K)

= {d(K/L)/(K/L)}/{d (MRTSL,K)/ (MRTSL,K)}

={d(K/L)/(K/L)}/{d (β / α. K/L)/ (β / α. K/L)} = 1

The value of elasticity of substitution (α) can lie between zero and infinity. The larger the value of α , the greater the possibility of substitution

between factor inputs. In the limiting case if $\alpha = 0$, two inputs must be used in a fixed proportion and they are complementing to each other; in this case, the production isoquants are right angles or L-shaped. In another limiting case, if α tends to infinity, two inputs are perfectly substituted, and the isoquants are straight lines (linear) touching bothaxes. This indicates that a given amount of product can be produced by using only capital or only labor or by an infinite combination of K and L.

8. The Efficiency of Production :

In the C-D production function, the efficiency of production can be measured by coefficient A.

- If the value of A is higher, there is a higher degree of efficiency of production
- If the value of A is lower, there is a lower degree of efficiency of production

9. Linear Form of Cobb-Douglas Production Function :

C-D Production function can be made linear using logarithm and the level of output can be estimated based on regression analysis.

As we know

$Q = A.K\alpha L\beta$ …….. (1)

Applying log on both sides of equation (i) we get

Log Q = Log ($A.K\alpha L\beta$))

1.4 IMPORTANT PRODUCTION RELATIONSHIP

There are three different form of product relationship which covers the subject matter of production through significant way of analysis. They are as follows

1.4.1 Factor – Product Relationship

1.4.2 Factor – Factor Relationship

1.4.3 Product -Product Relationship

1.4.4 Factor – Product Relationship

This explains significant relationship between input and output and its production function is very much connected with the law of variable-proportions. The principle of production i.e., the amount of a resource that should be used and consequently the amount of the product that should be produced is directly related to the operation of Law of Diminishing Returns. This law explains how the amount of the output changes as the amount of one of the inputs is varied, keeping other inputs as fixed.

The law of variable proportions which is a new name given to old classical concept of "Law of Diminishing Returns" has played a vital role in the history of economic thought and occupies an equally important place in the modern economic theory. Assume that a firm's production function consists of fixed quantities of all inputs (land, equipment etc.) except labour, which is variable input. When the farmer expands output by employing more and more labour, it alters the proportion between fixed and the variable inputs. The law of variable proportions also known as law of diminishing returns can be stated as follows:

To explain the law more clearly, let us take an example of a farmer who has got many acres of land, building, equipment etc. He has now to make the decision regarding the number of workers he is going to hire for the coming crop season. In reaching this decision, the farmer will keep an eye on the physical productivity of labour on the farm. Table 17.1 contains a hypothetical example of a production function with labour as a variable input.

Table 1.1

Output at Wheat in physical Units from Five – Acre Land

No. of Workers	Total Product	Average Product	Marginal Product	
1	100	100	100	Stage I
2	220	110	120	Stage I
3	270	90	50	Stage I
4	300	75	30	Stage I
5	320	64	20	Stage II
6	330	55	10	Stage II
7	330	47	0	Stage II
8	320	40	-10	Stage III

In Table 1.1 if the farmer hires only 4 labourers during the season, his total product from the farm would be 300 units. If instead of 4, he lines 5, the product will increase to 320 and so on. The data contained in the first two columns of this table predict the production function. The 3rd and 4th columns have been derived from the first two columns.

The 3rd column shows average product per worker on the farm and is obtained by dividing column 2nd by column 1st. The 4th column contains marginal product and is obtained by substracting the total product produced by employing X, workers from the total product produced by

employing X, workers, i.e., marginal product of 3rd worker would be 270 - 220 50 units.

A close look at Table 1.1 reveals that both average product and marginal product increase in the beginning and then decline. Of the two, marginal product drops off faster than the average product. Total product is maximum when the farmer employs the 6th worker, nothing is produced by the 7th worker and its marginal productivity is zero, whereas marginal product of 8th worker is -10; by just creating a crowd, the 8th worker not only fails to make a positive contribution but leads to fall in the total output.

Production function with one variable input and the remaining fixed inputs is illustrated in Figure No. 1.2.

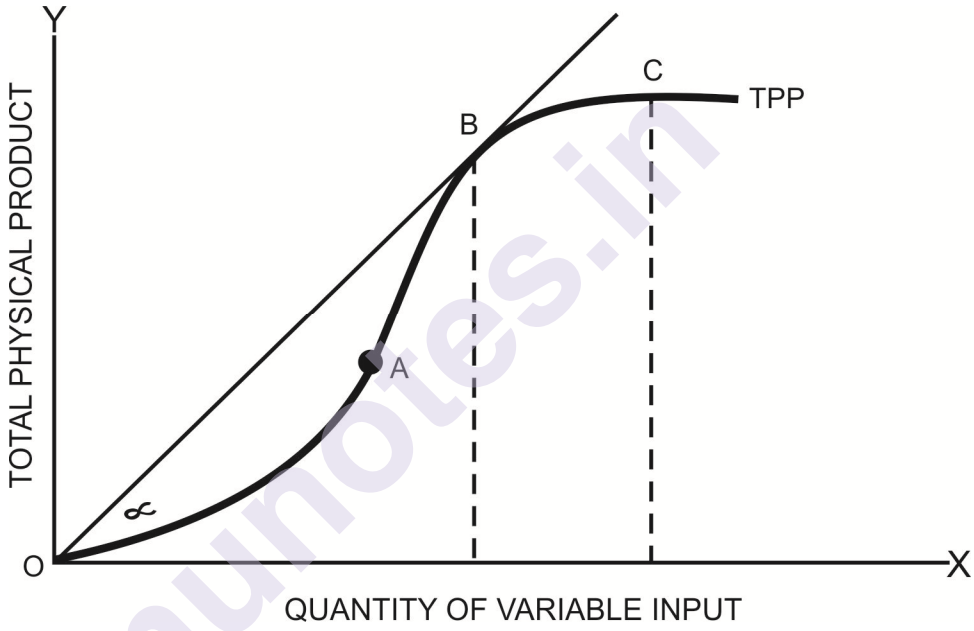

Figure No. 1.2

In Figure No. 1.2 total production rises from zero at an increasing rate point. A (the total product curve TPP is concave upward up to up to point A). Beyond A, output continues to rise but at a decreasing rate until it reaches a maximum, at point C. Point A on the production function, where the total product stops increasing at an increasing rate, is called the point of inflection. B indicates the point of maximum output. Beyond point B, the total product curve slopes downwards.

From the foregoing discussions, we conclude that there can be types of input-output relationships in the production of a commodity when only one input is varied and the quantities of all other inputs are kept constant. These are:

(1) Constant marginal rate of returns (constant productivity)

(2) Decreasing marginal rate of returns (decreasing productivity)

(3) Increasing marginal rate of returns (increasing productivity)

A brief discussion of these three types follows:

1. CONSTANT MARGINAL RETURN FUNCTION

Constant productivity or constant returns the true if all the variable factor which are applied to the fixed factor result in equal additions to the total output of the product. The relationship between factor input and product output is then termed as linear. For example if fertilizer applied at the rate of 0, 5, 10, 15 and 20 kgs. per acre, results in yields of 0, 10, 30 and 40 quintals of rice respectively, constant productivity is realised for the fertilizer input. Production function denoting constant or linear returns is shown in Figure No. 17.2.

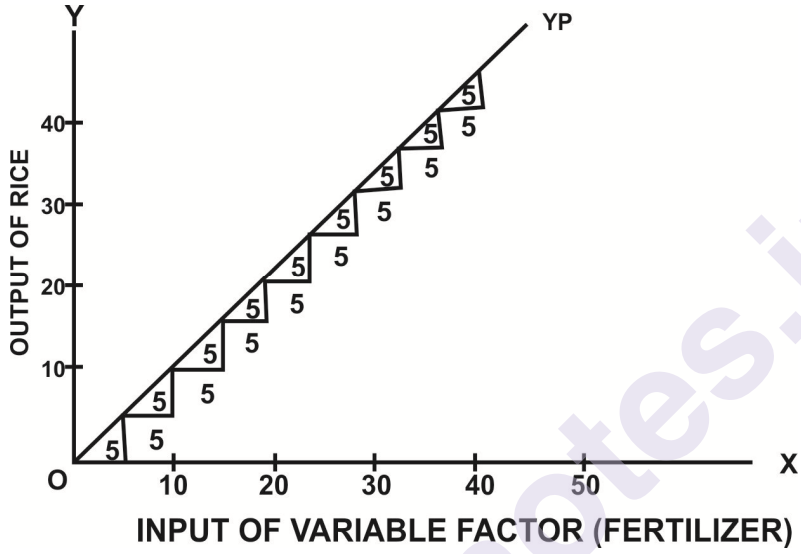

Figure No. 1.3

Constant Returns

In Figure No. 1.3 the output (rice) has been depicted on the Y-axis while the variable input fertilizer is depicted by X-axis. The resulting curve Y is a straight line and the production function is said to be linear Constant returns are shown by the triangles, the horizontal side of each triangle corresponds to an input of 5 kgs. of fertilizer the vertical side shows corresponding addition to output of rice of 10 units. This relationship can also be expressed as:

$$\frac{\Delta Y_1}{\Delta X_1} = \frac{\Delta Y_2}{\Delta X_2} = \ldots\ldots \frac{\Delta Y_n}{\Delta X_n}$$

In terms of algebraic equation, this production function can be as Y = a + bx. expressed

This kind of relationship does not generally exist when inputs per acre or per animal are intensified. Constant productivity is seldom found when only one factor is varied with respect to all other factors in agriculture.

2. DIMINISHING MARGINAL RETURNS FUNCTION :

Diminishing marginal returns function or diminishing productivity (the variable factor exists when each additional unit of input adds less to total output compared to the previous unit. Diminishing returns realised, for example, if the first input adds 25 units to total output, while the second adds 20 units, the third adds, 15 units, the fourth adds are 10 units, and the fifth adds 5 units and so on.

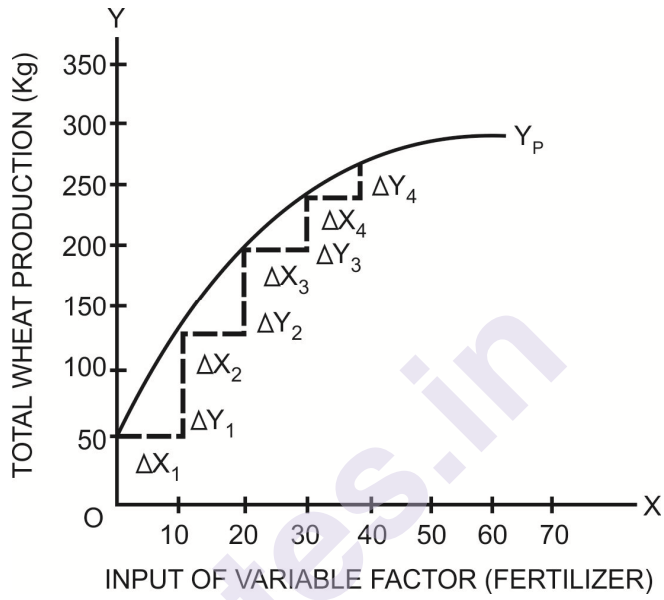

Figure No. 1.4

Decreasing Returns

As seen in Figure No. 1.4, the curve Yp is concave to the X-axis. This relationship can also be expressed as:

$$\frac{\Delta Y_1}{\Delta X_1} > \frac{\Delta Y_2}{\Delta X_2} > \ldots\ldots\ldots\ldots\ldots\ldots \frac{\Delta Y_n}{\Delta X_n}$$

Since ΔX1 = ΔX2 , ……ΔXn. Hence the ratio $\frac{\Delta Y}{\Delta X}$ goes on decreasing as we apply more units of input.This law is applicable in almost all practical situations of agriculture production. To land, it applies both in its intensive as well as extensive forms. The application of additional unit of labour and capital to a piece of land or raising the proportion of land to doses of labour and capital causes diminishing returns. It is due to the diminishing returns in agriculture that world food production could not be expanded in proportion to the increase in population.

The phenomenon of diminishing marginal returns has played a crucial role in shaping the classical theory of production. In fact, writers like Malthus, Ricardo and their contemporaries based a number of their ideas on the phenomenon of diminishing returns. The situation of diminishing returns, though not valid under certain exceptional cases, has universal

applicability in all production processes and hence exerts a significant impact on theorising several laws in economics.

3. INCREASING MARGINAL RETURNS FUNCTION :

Increasing returns to a single factor exist when each successive input of the variable resource adds more to the total product than the previous input. Increasing factor returns are illustrated in Figure No. 1.5, by the curve Yp.

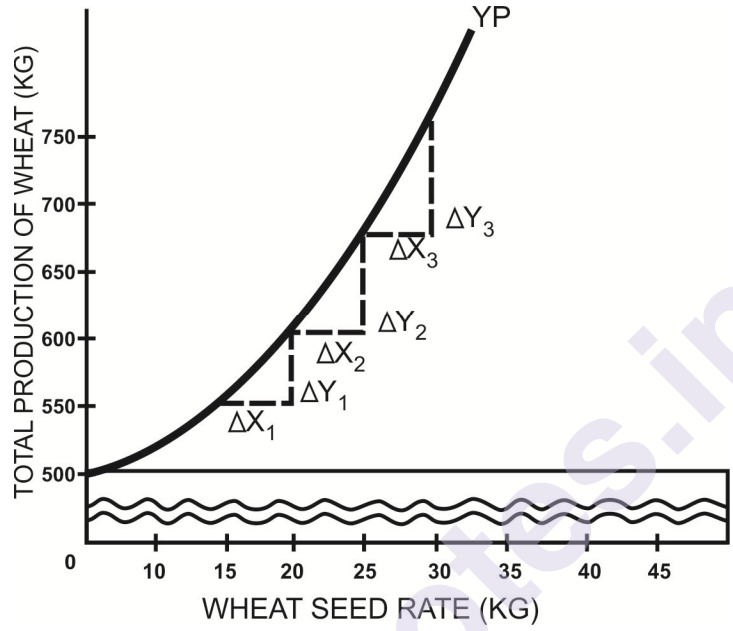

Figure No. 1.5

Physical Production Function Indicating Increasing Returns to a single Factor

The curve Y in Figure No. 1.5, is convex to the X-axis. The triangles in this figure illustrate returns; while the return from the first unit of input is, say $2Y_1$, the return from the second unit of inputs is 4Y,, the return from their is 6Y, and so forth. Each additional of the variable factor adds more to output than the previous unit which can be expressed in algebraic form in following way

$$\frac{\Delta Y_1}{\Delta X_1} < \frac{\Delta Y_2}{\Delta X_2} < \ldots\ldots\ldots\ldots\ldots \frac{\Delta Y_n}{\Delta X_n}$$

Since $\Delta X_1 = \Delta X_2 = = \Delta X3$, the ratio $\Delta Y/\Delta X$ will go on increasing as more and more units of input are added.

Measuring Factor Productivity

We express the factor productivity in two ways:

1. Average physical product = $\frac{\text{Output}}{\text{Input}} = \frac{Y}{X}$

2. Marginal Physical Product = $\frac{\text{Additional Output}}{\text{Additional Input}} = \frac{\Delta Y}{\Delta X}$

In Fig 1.6 we express input along the X-axis and output along the -axis. Therefore, AB is the output corresponding to input level of OB.

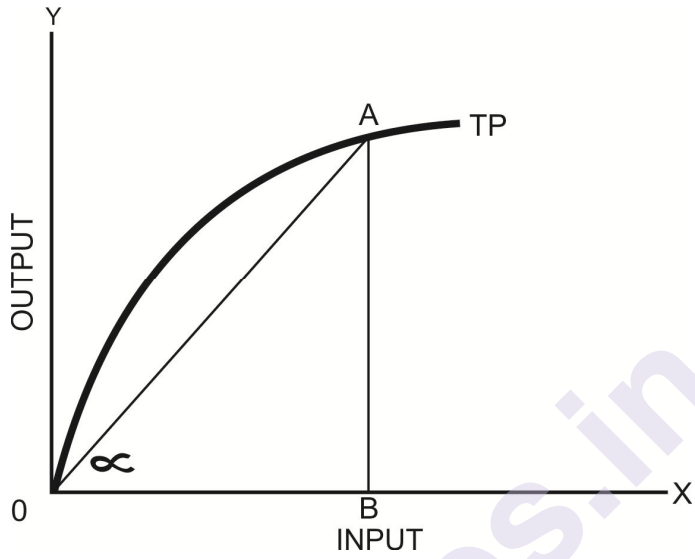

Figure No. 1.6

At this level, APP is measured by the ratio AB/OB. But we know AB/OB is also the tangent of the angle α which is derived by drawing a line from the origin through point A on the production function. Therefore, APP = tan α. In Figure No. 1.7 point C has chosen because it is at point that tan a is maximum.

Marginal productivity (MPP) has been measured in Figure No. 1.7.

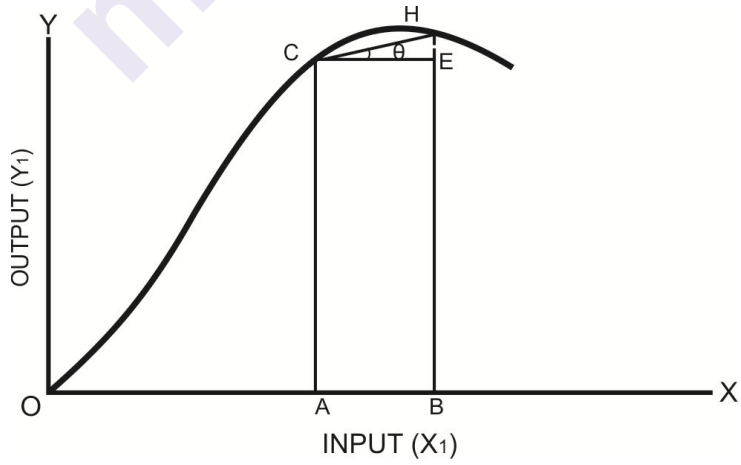

Figure No. 1.7

If the distance AB represents one unit of input, MPP can be measured by measuring HE. Here MPP =HE/CE = tan Θ, which indicates the slope between the points C and H. If we assume that units of input are very

small, such that CH coincides with the curve itself, MPP value the slope of the curve at that point.

Fig 1.8 has been drawn with derived MPP and APP curves

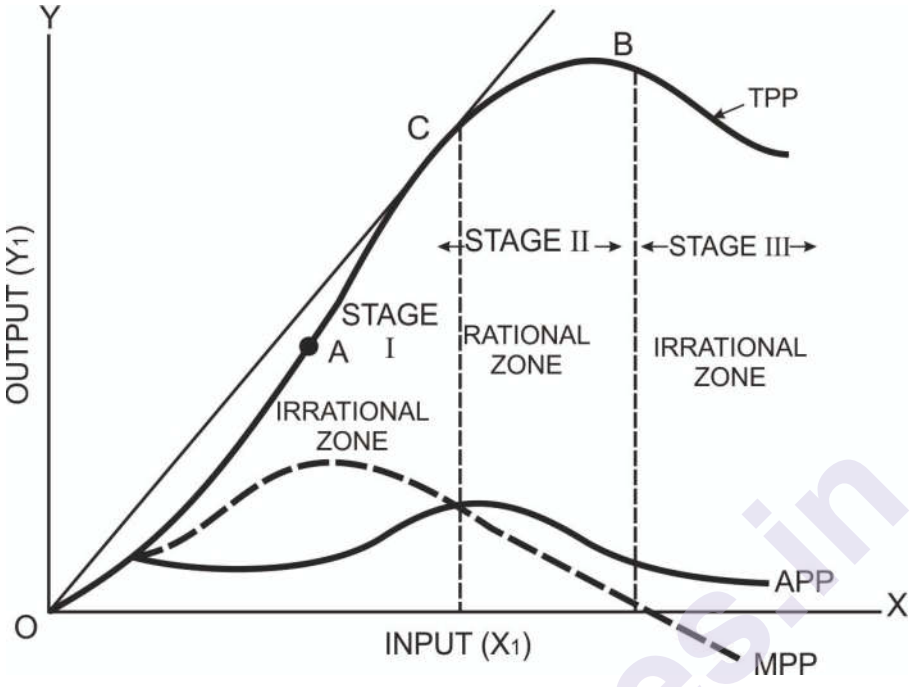

Figure No. 1.8

Relationship between Total, Average and Marginal Products :

In Fig 1.8, it is noted that so long as TPP rises at an increasing rate, MPP is also rising and production function curve is concave upwards. Beyond point A, TPP is increasing but at a diminishing rate. Corresponding to TPP, MPP starts declining. TPP achieves its highest level at B, at further which point MPP falls to zero. Beyond this point, if variable input is further increased, TPP will fall absolutely in which case MPP becomes negative.

MPP starts declining from the inflexion point A and it intersects the APP curve at D, the point of maximum value of APP. This intersection indicates the equality of MPP and APP at maximum APP.

THREE STAGESOF PRODUCTION FUNCTION

The relationship between average product and marginal product, thus, can be reduced to three propositions as follows:

1. In the beginning, total physical product (TPP) rises at an increasing rate, average and marginal products also increase but MP rises at a faster rate than AP. Production function in this part is concave upwards.

2. When average product attains maximum value and is constant, marginal product is equal to it.

3. Beyond the point of maximum value, average product starts falling but marginal product falls more than average product.

We can sum the above relationship thus:

- When AP is maximum and constant, MP becomes equal to AP;
- when AP starts falling, MP falls faster than AP.

In the same manner in Figure No. 1.8 the relation between input and output can be divided into three stages.

❖ **Stage 1** is Characterised by an increasing product per worker. Two workers produce more than twice as much as one worker. Increasing returns to scale are reaped due to indivisibility of factors of production. By indivisibility, we mean that the fixed inputs like machinery, management, finance, etc. are not available in very small sizes. When the supply of variable factor is increased in the initial stages, we get increasing returns because fixed factors are made to work to their full capacity. Since the concept of indivisibility is considered vague, modern economists have attributed increasing return to the economies of scale and specialisation. In stage 1 the production function continues to rise up to the level of input at which the average productivity is at a maximum. In this stage the marginal productivity remains always higher than average productivity. To maximise his profit, the farmer can continue to increase variable factor as long as the average productivity is increasing.

❖ **Stage 2** the total product curve continues to increase but at a diminishing rate. Stage is extended upto a point where total product reaches maximum but marginal productivity equals zero. This stage is known as the stage of diminishing returns as both average and marginal products of variable input continue to fall during this stage.

❖ **Stage 3** the total product is declining. In this stage, the farmer is incurring greater costs, as he is utilizing more of the variable input, but is simultaneously receiving less output.

Our farmer who is concerned with profit maximisation would find two of the above stages 1st and 3rd as irrational. In stage 1, though the farmer is faced with increasing returns, yet the farmer can increase his profit only by switching to stage 2 in which the total product is still rising. For profit maximising farmer to produce in stage 1 is thus irrational.

Stage 3 similarly is irrational. In this stage, the farmer will be incurring greater costs as he is utilising more of the variable factor, but is simultaneously receiving less returns because each additional unit of variable input results in a decline in total output.

We, thus, conclude that for a profit maximising farmer, the level of resource use occurs in stage 2. Regardless of factor cost and product price, the chosen level of input application should be somewhere in the range between maximum APP and zero MPP.

The small farmer, who has limited funds and as a consequence, may operate in a range of increasing returns to capital, is, however, not an irrational producer. The central problem here is one of capital limitations rather than ignorance. The small-scale farmer often can only maintain production in stage 1 if he is to produce at all since he does not have enough resources to extend production into stage 2.

1.4.2 FACROR – FACTOR RELATIONSHIP :

In production process, factors of production generally substitute for each other. In case of cattle feed, barley can well be substituted for maize. Similarly, substitution can take place between hired labour and family labour. This substitution not only takes place within similar factors but even within dissimilar factors as well. We very well know that a machine is a substitute for labour, and in many countries suffering from labour shortage, this kind of substitution has taken place.

- **ISOQUANTS OR ISO-PRODUCT CURVE**

A production function with two variables which are substitutable for one another within limits can be represented by a family of iso product curves or isoquants, sometimes also known as production indifference curves. It is the locus of all combinations of X1 and X2 which yield a specified output level. For a given output level, farmer's production becomes

$Q^0 = f(X_1X_2)$

Where Q° is a parameter. The locus of all the combinations of X_1 and X_2 which satisfy the above equation forms an isoquant.

Let us suppose, the farmer can produce a given output of wheat, say 50 quintals by employing any one of the following alternative combinations of two factors, labour and capital.

Table No. 1.2

Labour	Capital	Output (wheat)
1	+10	50 quintals
2	+7	50 quintals
3	+5	50 quintals
4	+4	50 quintals

If this iso-product schedule is plotted on a paper we get an iso product or equal product curve as shown in Figure No. 1.9. The amount of labour has been depicted on the X-axis and the amount of capital along the Y-axis. AB is the iso-cost curve which shows all the alternative combinations which can produce 50 quintals of wheat.

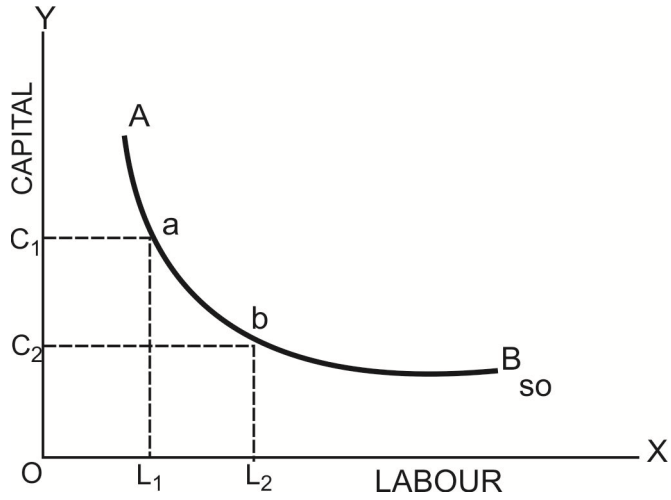

Figure No. 1.9

Point a on the curve shows that 50 quintals of wheat can be produced by C, of capital and L, units of labour. Point b shows that the same output can be produced with C_2 amount of capital and L, units of labour. In Figure No. 1.10 an iso-product map has been depicted which shows a set of four equal product curves which represent 50 units, 100 its, 150 units, and 200 units of wheat output respectively.

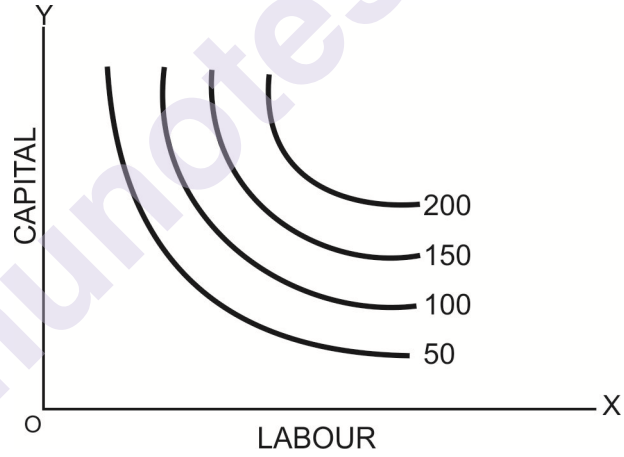

Figure No. 1.10

The shape of the isoquant will depend upon the extent of substitutability of the two inputs. In case the two inputs are perfect substitutes, the shape of the isoquant would be a straight line: in case they are good substitutes, the isoquant would be slightly curved and convex to the origin; in case the factors are poor substitutes, the isoquant will have a steep curvature. If the two input factors are to be used in a fixed proportion i.e., they are absolutely non-substitutable, isoquants are right angles as shown in Figure No. 1.11 (a), (b), (c), and (d) respectively.

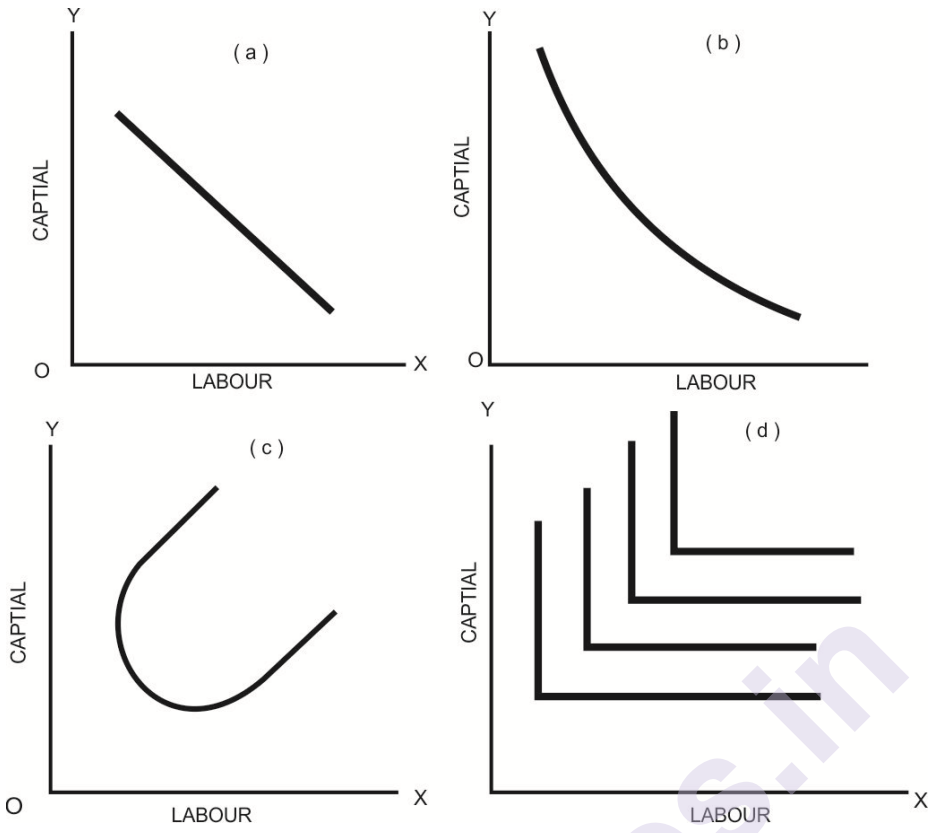

Figure No. 1.11

There are, thus, three broad categories of such combinations inputs:

1. Fixed proportion combination of inputs,

2. Constant rate of substitution, and

3. Varying rates of substitution.

1. Fixed Proportion Combinations :

Certain products can be produced only if inputs are mixed in a fixed proportion at all levels of production. The product contour under fixed coefficients is of the type as shown in Figure No. 1.12

There is only one combination of resources for producing the quantity of product represented by the contour LS. A product output of 100 units requires an input OK of resource X_2 and OM of resource X_1. If input of X_2 is increased to OL while X, is held constant at OM, the output remains at 100. Hence both X_1 and X_2 are limitational factors since output is limited by the input of either.

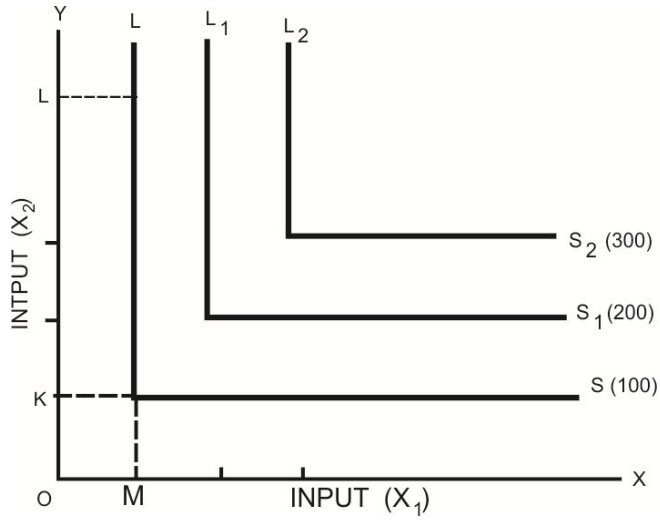

Figure No. 1.12

Input which combine in Fixed Proportions

2. Constant Rate of Substitution :

Perfectly substitutable factors replace each other at a constant rate, regardless of the level of output or of the proportion in which the factors are combined. Examples of this are family and hired labour, home grown and purchased grain and two different brands of some seed or fertilizer which are basically identical. Two inputs which substitute at constant rate are shown in Figure No. 1.3.

In Figure No. 1.13, the factor substitution rates are constant because when product is held constant at one level, one unit increase in X_1 always results in one unit decrease in X_2. Constant substitution rates can further be illustrated in the example given in Table.3.

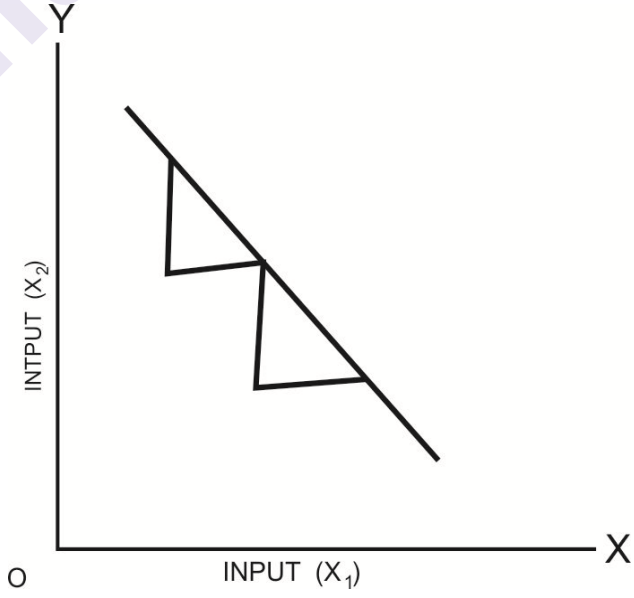

Figure No. 1.13

Inputs which substitute at Constant Rate

Table 1.3

Iso – Product Relationship indicating constant rate of substitution with output fixed

	X_1	X_2	ΔX_1	ΔX_2	$\frac{\Delta X_2}{\Delta X_1}$ (MRS)
1	0	50			
2	5	40	5	10	2
3	10	30	5	10	2
4	15	20	5	10	2
5	20	10	5	10	2
6	25	0	5	10	2

In Table 1.3, the substitution ratio is constant throughout all combinations of the two factors. Substitution at a constant rate is, however, one of the extremes in factor - factor relationships.

3. Varying Rate of Substitution :

In most cases of input combinations, factors substitute for each other at diminishing rates because the factors of production are incomplete substitutes for each other. For example, the marginal rate substitution of hay for grain becomes smaller and smaller as hay continuously replaces grain, with milk output remaining constant. In other words, increasingly greater quantities of hay are required to offset or replace each successive decrement in grain input. The shape of iso product curves in such cases is the convexity towards the origin as shown in Figure No. 1.14

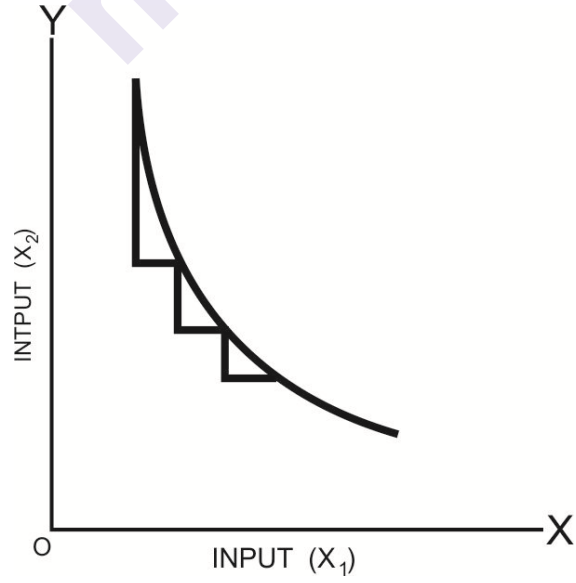

Figure No 1.14.

An Illustration of Decreasing Rate of Substitution

PROPERTIES OF ISOQUANT :

Isoquants or equal product curves normally possess properties

which are similar to those generally assumed for indifference curves.

The following are the important properties of isoquants:

1. An isoquant curve is negatively inclined. This property signifies that when the quantity of factor X is increased, the quantity of factor Y must be reduced, in order to maintain the same level of output.

2. An isoquant curve does not cross or cut the higher or lower isoquants. If the two equal product curves, say, one corresponding to 30 units of output and the other to 40 units of output cross each other, they will then have a common factor combination corresponding to the point of intersection. This would mean that some factor combination which can produce 30 units of output according to one isoquant can also produce 40 units of output according to the other equal product curve. This seems quite absurd. How can the same factor combination produce two different levels of output, while techniques of production remain the same.

3. Isoquants are convex to the origin. The degree of convexity of the isoquant indicates the relative ease or otherwise with which one factor can be substituted for the other while the total output remains same. This is because of the diminishing marginal technical rate of substitution of one input for another along an isoquant when we move from left down to the right.

Product – Product Relationship :

The third production decision involves product-product relationships, that is, decisions as to which crops and/or livestock should be produced from the available stock of inputs. Taking into account the conditions of soil and weather and also the number of resources at the disposal of the farmer, a list of all the products which can be raised on his holding can be drawn up.

BASIC RELATIONSHIPS

Farm products having various relationships to each other. These basic product-relationships can be: joint products, complementary, supplementary and competitive products.

A. Joint products are produced through a single production process. One of the products cannot be produced alone but must be accompa ed by one or more products. All agricultural products are mostly joint docts. For example, wheat and straw, mutton and wool, corn and acks, hogs and manure are produced jointly. The case of joint products depicted diagrammatically in Figure No. 1.15

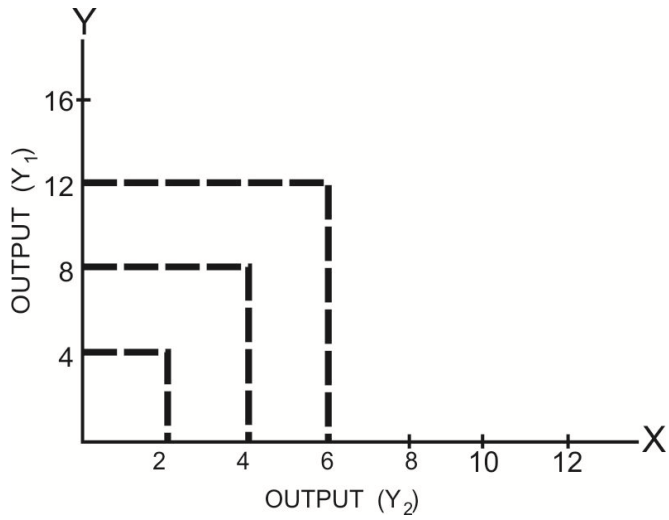

Figure No 1.15

Production Possibilities for Joint Products

For short period analysis, joint products may be treated as a single Product. But in the long-run, adjustment can be made in the combination if the price of one product is higher than that of the other.

B) Complementary Enterprises :

Two products are technically complements to each other when an increase in output of the one, with resources held constant in amount, also results in an increase in output of the other.

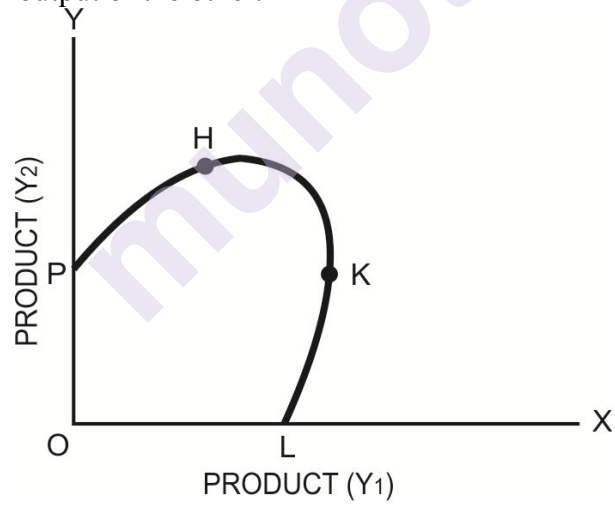

Figure No. 1.16

Production Possibility Curve Showing Complementary Relationship

In Figure No. 1.16 the range of complementarity is from point P to H and from point K to L. Thus, we find that two enterprises are never complementary over all possible combinations of the two. The complementary relationship always gives way to competition.

C) Supplementary Relationship :

This relationship exists when, with resources constant, output of one product can be increased without gain or sacrifice in another product. For example, a small poultry enterprise is supplementary to the other enterprises on many farms. Dairying is also a semi supplementary enterprise in many farming regions. Figure No. 1.17shows supplementary enterprise relationship.

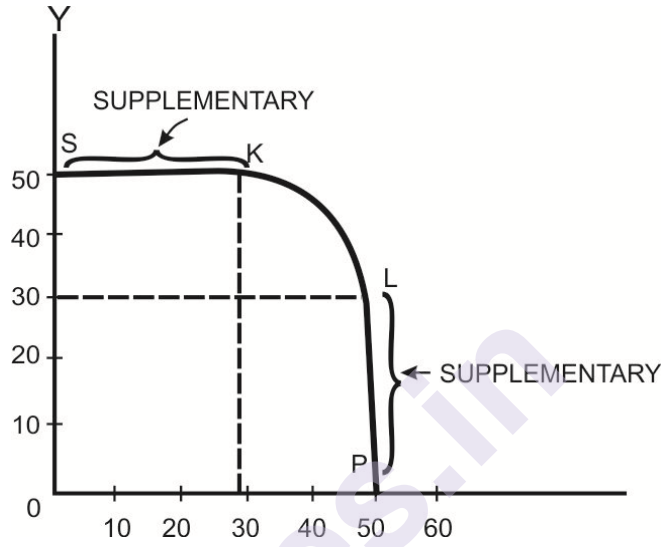

Figure No. 1.17

Production Possibilities and Range of Supplementary Enterprises

D) Competitive Relationship

Competing products are those which compete for use of the farmer's resources. With limited resources at the disposal of farmer, all crop and livestock enterprises become competitive at some point. With two competing products, the use of resources to produce more of one necessitates a sacrifice in the amount of the other product. When the two products are competitive, they may substitute at a constant rate or increasing rate.

1.5 ECONOMICS OF INPUT AND PRODUCT SUBSTITUTION

1.5.1 Marginal Rate of Technical Substitution :

As noted above, an equal-product curve represents all those input combinations which are capable of producing the same level of output We have also noted that the substitutability among the factors is limited and in order to produce a given output, when the less of one factor is used, a greater amount of the other factor will have to be associated with it so as to keep the output level same. Accordingly, isoquants in Figure No. 1.18 have been drawn with a downward slope through part of them to indicate the fact that when less of one factor is used, a greater amount of the other factor will have to be associated with it. In fact, the substitution of one

factor for another will not only become more difficult as it is pushed further and further; there usually is an absolute limit to it, beyond which further substitution becomes impossible. At this point the isoquant becomes parallel to one of the axes, representing the fact that beyond this point an increased use of one factor will not increase output at all even when the quantity of the other factor is not varied further but kept constant. Hence, the points where the isoquants become parallel to the axis show the limits within which substitution is possible If all those points beyond which the isoquants become

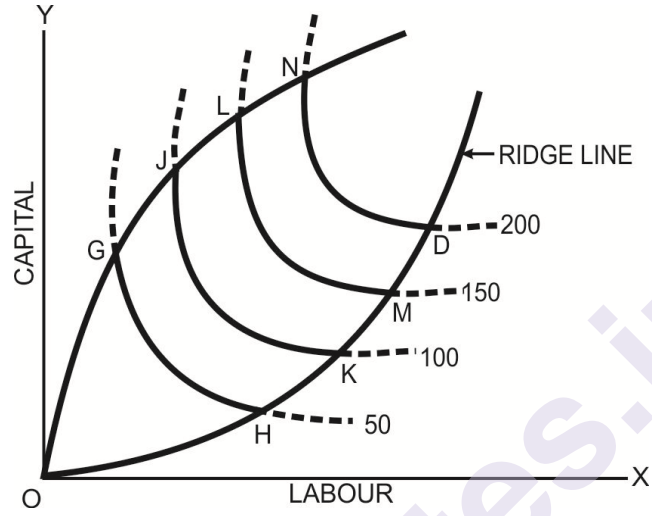

Figure No. 1.18

parallel to the axes are joined together, we get ridge lines which show that in between them, economically feasible units of capital and labour can be employed to 50, 100, 200 units of wheat as shown in the Figure No. 1.18

In between the ridge lines, the isoquant curves show the different combinations of capital and labour which can produce a given level of output. The slope of isoquants within the ridge lines shows the rate at which one factor can be substituted for another without altering the amount of output. The rate at which labour can be substituted for capital in the production of wheat, without changing the quantity of output is known as marginal rate of technical substitution. The marginal rate of technical substitution between factor L and C, $MTS_{L,K}$, expresses the rate at which K can be substituted for L in the production of A without changing the quantity of output. Let there be a small movement on the isoquant PP, from G to H as shown in Figure No. 1.19

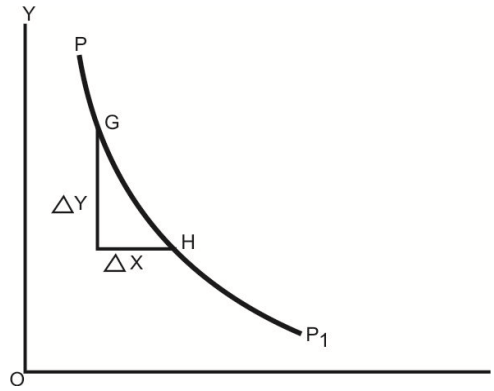

Figure No. 1.19

In this movement a small amount of factor Y, say, ΔY has been replaced by a small amount of factor X say ΔX, without any change in output. The slope of isoquant PP, at point G is, therefore, equal to ΔY/ ΔX. The slope of isoquant at a point can also be known from the slope of the tangent drawn on the isoquant from that point. In the Figure No. 1.20 TT_1 is the tangent drawn at point G on the isoquant curve PP_1

The slope of the tangent to a point on an isoquant is the rate at which X_1 must be substituted for X_2 (or X_2 for X_1) in order to maintain a corresponding output level. The negative slope defines the rate of technical substitution, so that:

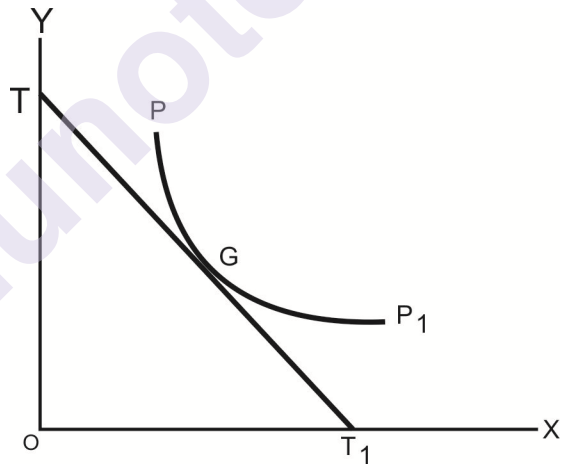

Figure No. 1.20 Least Cost Combination of Inputs

The slope of the tangent TT_1 is given by OT/OT_1. We can, therefore, say that the marginal rate of technical substitution at point G is equal to OT/QT_1.

Since by changing the factor composition, the output remains the same along the isoquant, the loss in physical output from a small reduction in factor Y will just be equal to the gain in physical output from a small increment in factor X.

Accordingly, loss of output gain in output = gain in input

ΔY.MPY = ΔX. MPx

where MPy and MPx are marginal physical products of factor Y and X respectively.

$$\frac{\Delta y}{\Delta x} = \frac{MPx}{MPy}$$

$\frac{\Delta y}{\Delta x}$ = Marginal rate of technical substitution.

$$MRTS_{xy} = \frac{MPx}{MPy}$$

This suggests that the marginal rate of technical substitution is also equal to ratio of the marginal physical products to two factors.

1.5.2 Iso Cost Line :

In order to achieve the least cost combination of factors of production, the farmer must know the prices of these factors. The prices of factors are represented by the iso-cost lines. The Iso-cost line shows various combinations of labour and capital that the firm could buy for a given amount of money at the given factor prices. An iso-cost line shows the quantity of either factor and combina ion of both factors which can be purchased for a given cost. This has been illustrated in Figure No. 1.21

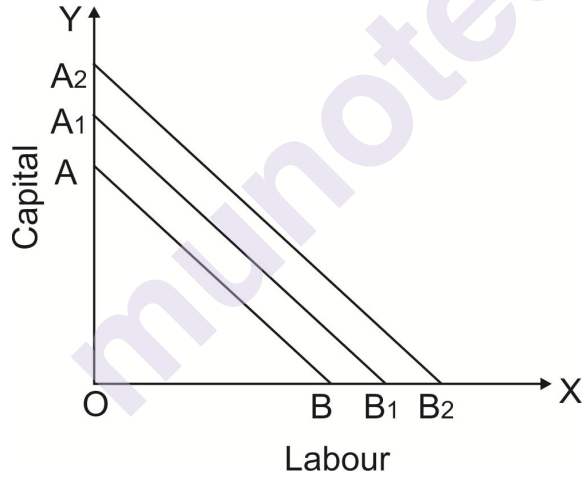

Figure No. 1.21

In Figure No. 6.11 the line AB is the iso-cost line. It shows that the firm can hire OA amount of capital or OB amount of labour or some combinations of labour and capital along the AB line. Thus, iso-cost line is the locus of all those combinations of labour and capital which, given the prices of labour and capital, could be bought for a given amount of money. The slope of the iso-cost line is equal to the ratioof the factor prices, that is, the slope of iso-cost line = $\frac{P_L}{P_K}$

where P_L is the price of labour and P_K is the price of capital.

Similar iso-cost lines can be drawn for different sums of money. If the money to be spent on the factors increases the iso-cost line will shift to the

right and it denotes that, with the given factor prices, the firm could buy more of the factors. Thus, we can have a family of iso-cost lines AB, A_1 B_1, and A_2B_2 as in Fig 1.21 They are all parallel to one another because the factor prices are assumed to be the same in all Cases The iso-cost lines closer to the origin show a lower total cost outlay.

1. Optimal Input Combination for Minimising Cost :

In this case, the firm has to produce the given output with the minimum cost. This is explained in Figure No. 1.22

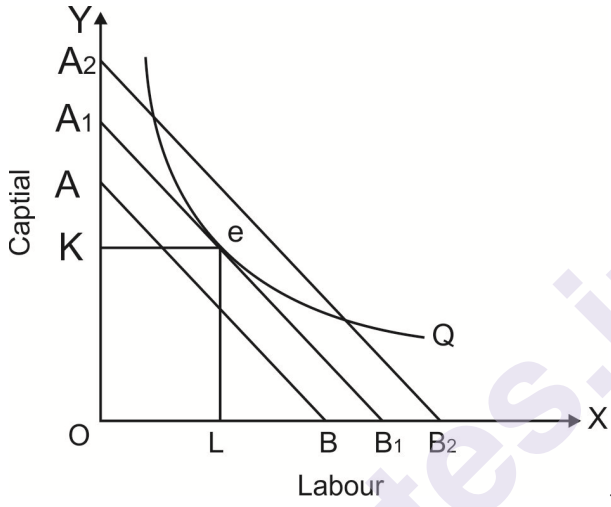

Figure No. 1.22

The single isoquant Q denotes the desired level of output to be produced. There is a family of iso-cost lines AB, A_1 B_1 and A_2B_2. The so-cost lines are parallel because the factor prices are assumed to be constant and, therefore, all the iso-cost lines have the same slope.

The firm minimizes its cost at the point 'e' where the isoquant Q is Tangent to the iso-cost line A_1 B_1. The optimal combination of factors OK and OL. The optimal combination takes place at the point 'e' where the given output can be produced at the least cost. Points below e are desirable (in terms of cost) but are not attainable for output Q. Points above e are on higher iso-cost lines and they show higher costs. Hence, the point e is the least cost point and it is the west cost combination of factors for producing the maximum tput, Q. It is produced by OK amount of capital and OL amount of Labour.

At the point of tangency, that is, at point e, the slope of iso-cost line is equal to the slope of the isoquant. This is the first condition for the equilibrium. The second condition is that the isoquant should be convex to the origin at the point of equilibrium. Thus at the point e the ratio of marginal product of two factors is equal to theratio of their factor prices, that is,

$$\text{At point e} = \frac{Marginal\ Productivity\ of\ Labour}{Marginal\ Productivity\ of\ Capital} = \text{Slope of Isoquant}$$

Where $= \frac{Price\ of\ Labour}{Price\ of\ Capital}$ = Slope of Iso – Cost Line

2. Optimal Input Combination For Maximisation of Output :

The equilibrium conditions of the firm are the same as above, that is, the iso-cost line should be tangent to the highest possible isoquant and the isoquant must be convex. However, the present problem is conceptually different. In this case the firm has to maximise its output for a given cost. This is explained in Figure No. 1.23.

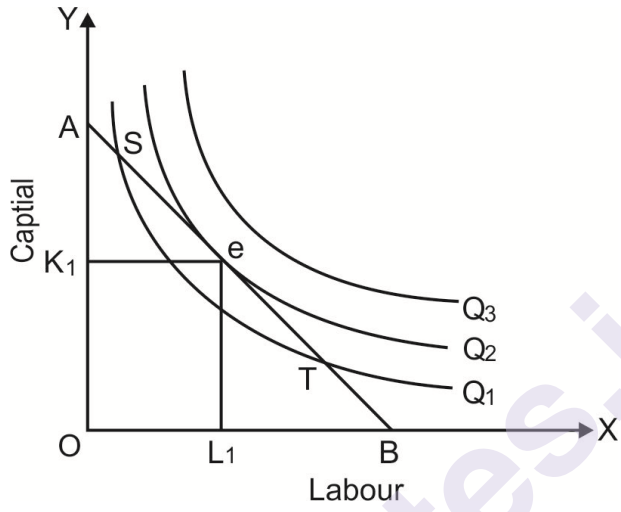

Figure No. 1.23

The firm's cost constraint is given by the iso-cost line AB. The maximum level of output that the firm can produce is Q_2 because the point 'e' lies on the isoquant Q_2. The point 'e' is the equilibrium point because at this point the iso-cost line AB is tangent to the isoquant Q_2. Other points on the iso-cost line, that is, S and T, lie on a lower isoquant Q_1. Points above 'e' that is on isoquant Q, indicate higher levels of output which are desirable, but are not attainable due to the cost constraint. Hence, Q_2 is the maximum output possible for the given cost. The optimal combination of factors is OK_1 and OL_1 . At tangency of Isoquant Curve and Iso-Cost Line.

1.5.3 Expansion Path (Scale Line):

In this section we try to study how the firm, given the factor prices, will change its factor combinations as it expands its output in the long run. This is explained in Figure No. 6.15.

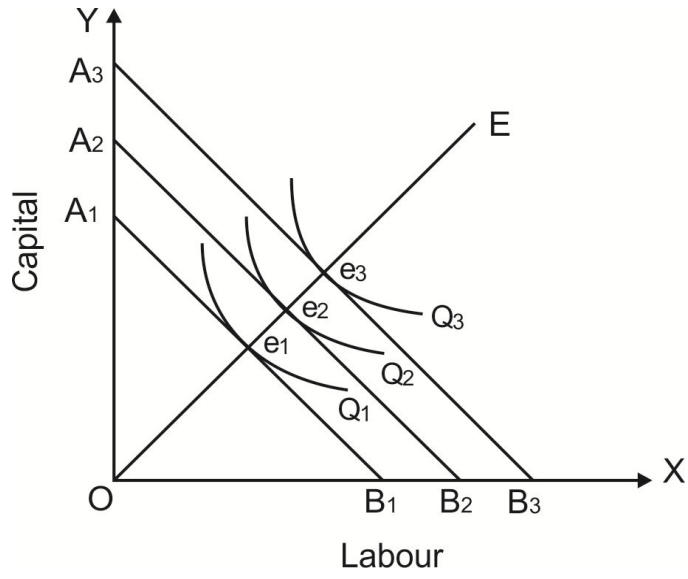

Figure No. 6.15.

The iso-cost lines $A_1 B_1$, A_2B_2 and A_3B_3, are drawn parallel to each ther because the relative factor prices are assumed constant. If the im wishes to produce the level of output denoted by isoquant Q_1 will choose the least cost factor combination e, at which isoquant $Q_1$is tangent to iso-cost line A_1B_1. Similarly, if the firm wants to produce higher levels of output denoted by isoquants Q_2 and Q_3 it will choose the factor combinations e, and e, which are the least cost factor combinations for the outputs Q_2 and Q, respectively. Itshould be noted that at the points e_1, e_2, and e_3, the marginal rate of technical substitution of labour for capital is equal to the ratio of factor prices, that is, each isoquant is tangent to the relevant is cost line.If we join the minimum cost factor combinations e_1, e_2 and e_3 we geta line OE. It is called the expansion path or the scale line. The expansion path is defined as the locus of the points of tangency between the isoquants and the iso-cost lines. It shows how the firm, given the factor prices, will change the amount of two factors when it increases the scale of production. Since the expansion path represents least cost combination of factors for different levels of output, it shows the cheapest way of producing each level of output given the relative factor prices. The rational entrepreneur will choose to produce at some point on the scale line when both factors are variable in the long run.

The scale line can have different shapes and slopes depending ap the relative prices of the factors used and the shape of the isoquam Thus, on every isoquant map there will be different scale lines in every different relative prices of the factors.

1.6 QUESTIONS

Q1. Explain theory of Production with respect to agriculture.

Q2. What to you understand by factor -factor relationship, explain with suitable diagram?

Q3. What are the properties of Cobb – Douglas Production Function?

Q4. Describe Expansion Path.

Q5. Explain the concept of Marginal Rate of Technical Substitution.

1.7 REFERENCES

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2. Sundharam, R. D. (2010). *India Economy.* Delhi: S. CHAND & COMPANY LTD.

2

ECONOMICS OF AGRICULTURAL PRODUCTION RESOURCE USE AND INSTABILITY IN AGRICULTURE-II

Unit Structure:

2.0 OBJECTIVES

- To know imperfection in product and input market
- To understand different aspect of sources of variability in price
- To make students aware of role of government intervention in stabilising price
- To understand the concept of Minimum Support price
- To understand the term Buffer Stock

2.1 INTRODUCTION

On the basis of the experience of the agricultural sector during independence period, the government of India realised the need to reform the agricultural sector to meet the challenges at home as well as in the changing global scenario in the 21st century.

The post Agriculture period is the base for the development of other sectors like Industry manufacturing etc. Its importance lies in the fact that it provides the most essential consumption goods for the people. It is however depressing to note that since independence agricultural growth on an average was less than 4 percent. Not only this but in certain years the growth rate was even negative.

The Government plays significant role in eradicating or reducing the constraints faced by the agriculturists. With an objectives of establishing an appropriate and conducive environment to achieve a higher growth rate the Government of India announced a National Agricultural Policy on 28th July 2000.

❖ The most important Objectives of National agricultural Policy are as follows:

1. To achieve a growth rate of more than 4 percent per annum in agriculture.

2. To introduce the required structural changes.

3. To bring in necessary reforms.

4. To make efficient use of resources.

5. To sustain higher growth rate with necessary supporting services - Technological, environmental and economic.

6. To make agriculture more market oriented.

7. To achieve equity, that is, all the farmers should benefit from the positive changes in agriculture.

2.2 IMPERFECTIONS IN PRODUCT AND INPUT MARKETS IN DEVELOPING AGRICULTURE

The imperfections can be viewed in terms of factors such as land, labour and credit; and output markets.

a) Labour market imperfections - To carry out farming activity, while small farms mainly rely on family labour, large farms have to depend on hired labour either on a permanent or a seasonal basis. Family labour being the residual claimant as well as bearer of residual risks is considered to be well-motivated. Hired labour, on the other hand, is considered to require continuous supervision as they do not put in much effort and judgement as family labour.

b) Land market imperfections - Land market imperfections are associated with the assumption of sticky operational holding due to imperfect land rental markets and inflexible owned holding due to sales market imperfections. The imperfections in land rental markets arise due to the uncertainty created by ambiguous and inexpedient land reform legislation, by Marshallian inefficiency and by transaction costs.

c) Credit market imperfections - Since risks and asymmetric information is inherent in agriculture, the amount of credit supplied to the farm sector is rationed by the formal financial institutions. For the purpose of getting loans, farmers need to submit collateral in the form of land or other fixed assets to the financial institutions. Thus the farm households face liquidity or credit constraint. The lack of access to credit can limit the ability of

farmers to rent or purchase the required inputs such as land, labour, fertilisers and so on.

d) Product market imperfections - It can be understood that market imperfections include missing markets (an extreme case of market imperfection), partly missing markets (rationing, seasonality), thin markets (imperfect competition) and interlinked markets. The causes of pervasive market imperfections are covariate risk, asymmetric information, moral hazard and transaction costs.

2.3 SOURCES OF PRICE VARIABILITY AND INCOME INSTABILITY

2.3.1 PRICE VARIABILITY: The instability of farm prices results from several factors.

1. The relative sluggishness with which farmers are able to respond to changes in the demand for their product.

2. Farmers generally must produce on the basis of expectations, and if their expectations turn out to be wrong, the resulting surplus or shortage cannot be corrected until the beginning of the next production cycle.

3. Once a crop is planted, very little can be done to increase or decrease production in response to market prices.

4. As long as prices cover current operating costs, such as the cost of harvesting, it pays farmers to carry through their production plans even if prices fall to a very low level.

5. It is not unusual for the prices of particular farm products to vary by a third or a half from year to year.

6. That extreme variability results from the relatively low responsiveness of demand to changes in price—i.e., from the fact that in order to increase sales by 5 percent it may be necessary to reduce the price by 15 percent.

2.3.2 INCOME INSTABILITY: The instability of farm prices is accompanied by instability of farm income.

1. Gross income from agriculture generally does not vary as much as do individual farm prices, net income may vary more than prices.

2. In modern agriculture, costs tend to be relatively stable; the farmer is unable to compensate for a drop in prices by reducing his payments for machinery, fertilizer, or labour.

3. The incomes of farm workers are generally below those of other workers.

4. There are two major reasons for that inequity. One is that in most economies the need for farm labour is declining, and each year large numbers of farm people, especially young ones, must leave their homes to seek jobs elsewhere.

5. The difference in returns to labour is required to bring about that transfer of workers out of farming; if the transfer did not occur, farm incomes would be even more depressed.

6. The farm people generally have less education than do nonfarm people and are able to earn less at nonfarm jobs.

7. The difference in education is of long standing and is found in all countries, developed and undeveloped; it also exists whether the national education system is highly decentralized, as in the United States, or highly centralized, as in France.

Thus the high levels of price and income volatility for farmers are related to the market fundamentals of supply and demand. However, they can be intensified by other macro-economic variables, the broad political and legislative environment for farmers, and speculation on agricultural products. Large price fluctuations and the resulting variations in income, which are caused by the endogenous and exogenous factors described above, represent risks that are specific to farmers. However, the agricultural sector also faces multiple risks that affect other sectors as well, including business/entrepreneurial risks, legal risks, social risks, financial risks etc.

2.4 RATIONALE FOR AND TYPES OF GOVERNMENT INTERVENTION FOR PRICE SUPPORT AND REDUCTION IN INSTABILITY

The Government of India, felt the need for a price policy set up a committee under the chairmanship of Prof. Jha in 1964-65. The Jha Committee recommended the prices for agricultural commodities for the year 1964-65. The committee further recommended setting up Agricultural Price Commission. As per the Agricultural Price Commission was set up in 1965. Currently the commission is called - Commission For Agricultural Costs and Prices (CACP). Thus accordingly commission is expected to determine and announce administered prices on a yearly basis.

(A) DETERMINATION OF APPROPRIATE LEVEL OF PRICE

The CACP while determining an appropriate level of price is expected to consider the following factors:

(i) the cost of production

(ii) changes in input prices

(iii) market prices

(iv) demand and supply

(v) risk factors

(vi) effect on industrial cost

(vii) effect on cost of living

(viii) effect on general price level

(ix) international price situation

(x) parity between price of different crops, parity between input and output prices and also parity between price received by the farmers and paid by the consumers and

(xi) trend of price level in the past.

(B) ANNOUNCEMENT OF ADMINISTERED PRICES

Government of India introduces three different types of administered prices, namely, minimum support prices, procurement prices and statutory minimum support prices.

(i) Minimum Support Prices (MSP): The minimum support prices announced each year by the CACP takes into account the abovementioned factors. Special consideration is given to the cost factor. The cost concept covers all items of expenses of cultivation including the imputed value of inputs owned by farmers.

(ii) Statutory Minimum Support Price: Earlier in the case of two commodities namely jute and sugarcane the minimum support prices had been assigned a statutory status. This made it illegal for anybody to purchase the commodity at less than its minimum support price. In the case of sugarcane, no factory can pay a price lower than the statutory minimum. In case of jute, the market infrastructure continues to remain weak, hence the enforcement of minimum support price has become a difficult task. Inspite of its statutory basis, the implementation of statutory minimum price remains unsatisfactory. Thus limitations of the law to deal with the economic spectacles are to be recognised and dealt with.

(iii) Procurement Price: Procurement price is the price at which the government procures grain from producers. Normally, the procurement price is lower than the open market price but higher than the minimum price.

(iv) Issue Prices: They are prices at which the government supplies food grains at ration shops. They are lower than the procurement prices to protect consumer's (BPL) interest. The difference between the MSP and issue price is met by the government through subsidy. For Antyodaya Anna Yojana (AAY) scheme the issue price was 300 per quintal. Since 2002-03 the issue price for AAY categories have remained unchanged. The MSP for these items was much higher than issue price.

(C) IMPLEMENTATION OF ADMINISTERED PRICES

Government need to consider following measures for the implementation of administered price:

(i) Entrusting the Task to Different Agencies: The Food Corporation of India (FCI) undertakes prices support operations for most foodgrains. The National Agricultural Cooperative Marketing Federation (NAFED) undertakes such operations for coarse cereals, pulses and oilseeds. The Cotton and Jute Corporations of India are entrusted with the price support operations for cotton and jute respectively. In the case of sugarcane, sugar mills are required to pay the minimum prices to the producers.

For tobacco, the responsibility for implementing the price policy decisions rests on Tobacco Board. Similar specialised Commodity Boards exist for rubber, coffee, tea, spices, coconut, oil-seeds and vegetable oils, horticulture etc.

(ii) Establishment of National Crop Forecasting Centre (NCFC): It was established by the Government in January 1999 to keep a careful watch on the prices of primary products which include wage goods and other items of common man's consumption and recommend vigorous intervention if necessary by the government in the market. NCFC will put an advanced warning system that signals likely supply shortfalls. This was found necessary till now in the case of onions, pulses, and edible oil.

(iii) Setting up of High Powered Price Monitoring Board: It was set up in 1999 for monitoring the essential commodity prices and anticipating the need for government's intervention in the market.

(iv) Buffer Stocks: Buffer stocks are stocks build up by the government to stabilize prices. Food corporation of India and NAFED build-up buffer stocks of essential grains which are utilized when there is shortage of output. Since 1992 onwards buffer stocks have gone up continuously. Currently we have enough buffer stocks of essential grains.

(v) Warehousing: Government has made arrangements to set up warehouses including warehouses of FCI. Such warehouses help farmers store the farm products till they are demanded in the market.

MSP is the minimum price is nothing but the government pays for the farmers' produce at the time of procurement. It is aimed at saving the crops from price fluctuations in the market. The MSP fixed by the government is considered as being remunerative for farmers. But MSPs do not have legal backing.

MSPs were first introduced in 1966-67 when the country adopted Green Revolution technologies. To boost the domestic production and encourage farmers to plant the high yielding varieties, the government resorted to MSP. A minimum support price was guaranteed to them.

It is fixed by the centre based on the recommendations of the Commission for Agricultural Costs and Prices (CACP) which is a statutory body.

CACP submits two separate reports for Kharif and rabi seasons and based on these, centre fixes MSPs twice a year.

The important cost concepts used by CACP are the C_2 and C_2 costs.

C_2 cost includes all actual expenses in cash and kind incurred in production by actual owner plus rent paid for leased land plus imputed value of family labour plus interest on value of owned capital assets plus rental value of owned land net of land revenue.

C, cost is equal to C_2 + 10 percent of cost to account for managerial remuneration to the farmer.

Hence the formula for Minimum Support Price (MSP) can also be expressed in the following way

MSP = C = (C_2 2+ C3)

Swaminathan Formula: The M.S. Swaminathan Committee titled as 'The National Commission on Farmers' recommended to fix MSP at level 50 percent more than the weighted average cost of production C_2, in its report submitted in 2006. It is called C_2 + 50%. Farmers during their recent agitation in Maharashtra demanded the implementation of Swaminathan formula.

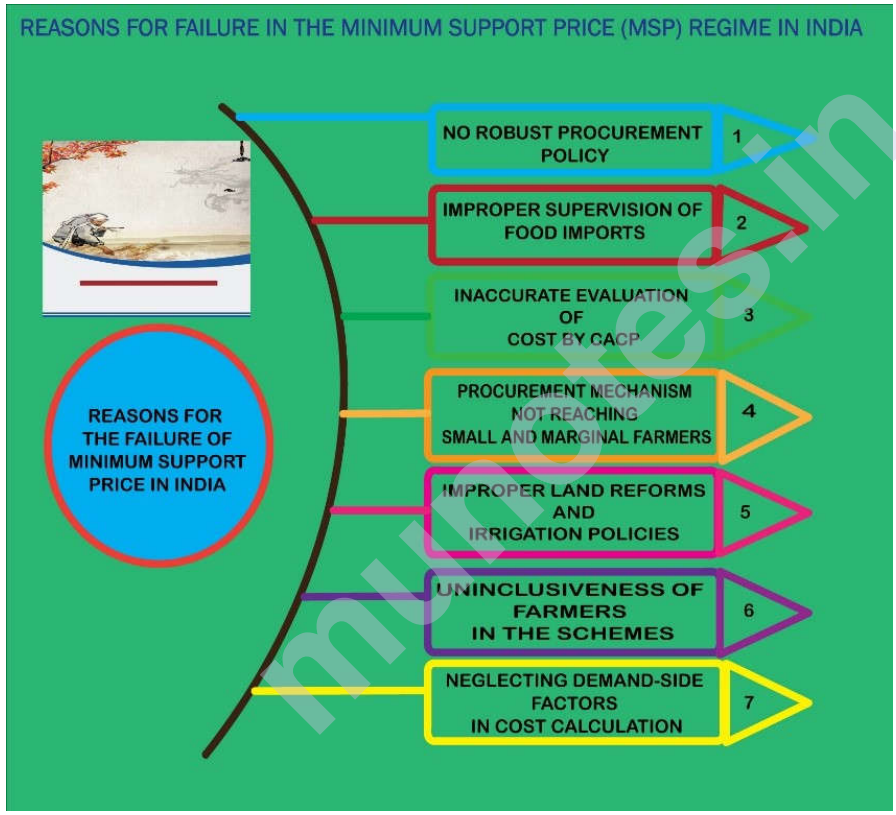
❖ **Crops getting Minimum Support Price**

As of now, 23 crops are being supported by the centre by fixing of MSP. They belong to the family of cereals (7), pulses (5), oilseeds (7) and commercial crops (4).

❖ **The crops are:**

1. Paddy
2. Jowar
3. Bajra
4. Maize
5. Ragi
6. Tur (Arhar)
7. Moong
8. Urad
9. Cotton
10. Groundnut
11. Sunflower seed
12. Soya bean
13. Sesamum

14. Niger seed
15. Wheat
16. Barley
17. Gram
18. Masur (Lentil)
19. Rapeseed and Mustard
20. Safflower
21. Toria
22. Jute
23. Coconut – Copra and De-Husked Coconut



Need for MSP:

- To safeguard farmers from the market price fluctuations.
- The prices of farm commodities are dependent on various factors such as good harvest season which leads to fall in prices.
- In such cases, farmers might not prefer to sow the aforesaid crop next season. MSPs would encourage farmers to sow these crops and thereby maintain a healthy supply.

2.6 ROLE AND OPTIMUM SIZE OF BUFFER STOCK

Buffer stock is reserving some quantity of a commodity that is used to offset price fluctuations and unforeseen emergencies. Buffer stock is generally kept for essential commodities and necessities like food grains, pulses etc. Due to market inefficiency i.e shortage of Onion in market NAFED is maintaining buffer stock of it and released some proportion of stock of Onion. In India, buffer stocking of food grains is conceptually seen as a **vehicle to deliver strategic food and agricultural domestic support** policies through which the government caters multiple objectives such as providing famine relief, ensuring food security to consumers and providing production incentives to farmers.

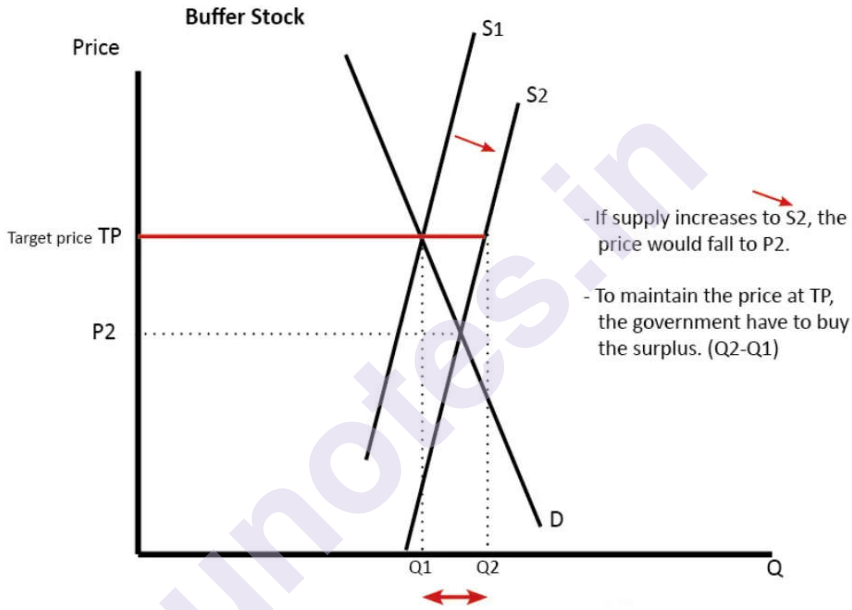


Figure No. 2.1

If there is a very good harvest and supply increases to S2, the market price would fall to P2.

This price is below the target price (TP)

To maintain the price at TP, the government will need to buy the surplus stocks (Q2-Q1) and store the goods. This reduces supply on the market and effectively keeps prices at the target price.

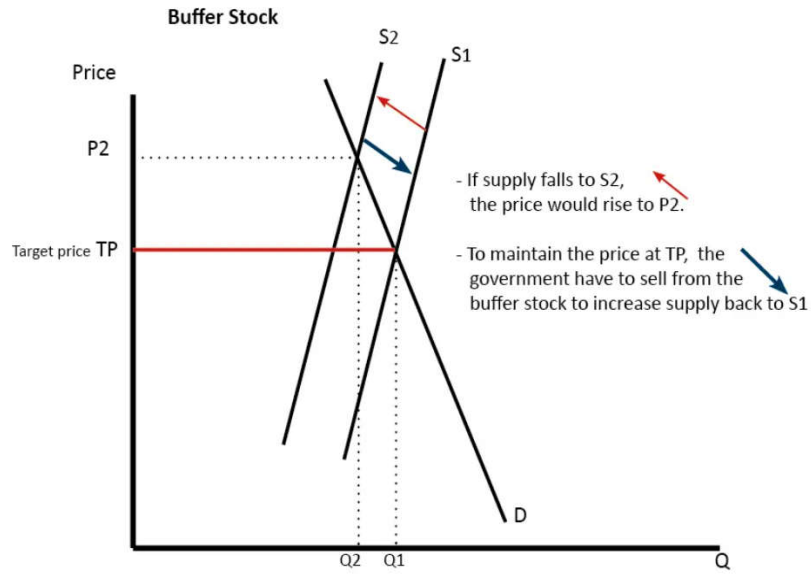


Figure No. 2.2

Buffer Stock with a shortage

In this case, there is a fall in supply. In a free market, the price would rise to P2 (above the target price)

To reduce prices back down to target price, the government need to sell goods from the buffer stock and effectively increase supply back to S1.

- The Government of India has given the task of procuring buffer stock to National Agricultural Cooperative Marketing Federation of India Limited (NAFED), Food Corporation of India (FCI) and Small Farmers Agri-business Consortium (SFAC)

Objective Of Practicing Buffer Stock

Buffer stock of food grains in the Central Pool is maintained by the Government of India (GOI) / Central Government for

- **Food Security:** Meeting the prescribed minimum buffer stock norms for food security,
- **Welfare Schemes:** Monthly release of food grains for supply through Targeted Public Distribution System (TPDS) and Other Welfare Schemes (OWS),
- **Emergency use:** Meeting emergency situations arising out of unexpected crop failure, natural disasters, etc., and
- **Price Stability:** Price stabilisation or market intervention to augment supply so as to help moderate the open market prices.

Basic Norms and Principles of Buffer Stock:

- The Cabinet Committee on Economic Affairs fixes the minimum buffer norms on quarterly basis: i.e as on 1st April, 1st July, 1st October and 1st January of every financial year.
- In addition to buffer norms, Government of India has prescribed a strategic reserve of 30 lakh tonnes of wheat w.e.f. 01.07.2008 and 20 lakh tonnes of rice w.e.f. 01.01.2009.
- At present, Government of India prefers to use the term – Foodgrain stocking norms – which refers to the level of stock in the Central Pool that is sufficient to meet the operational requirement of foodgrains and exigencies at any point of time. Earlier this concept was termed as Buffer Norms and Strategic Reserve.
- Presently, stocking norms fixed by Government of India on 22.01.2015 comprise of:

1. Operational stocks: for meeting monthly distributional requirement under TPDS and OWS.
2. Food security stocks/reserves: for meeting shortfall in procurement.

- While four months requirement of food grains for issue under TPDS and OWS are earmarked as operational stocks, the surplus over that is treated as buffer stock and physically both buffer and operational stocks are merged into one and are not distinguishable.
- According to the present practice, the GOI treats the food stock over and above the minimum norms as excess stock and liquidates them from time to time through exports, open market sales or additional allocations to states. The buffer stock figures are normally reviewed after every five years

Food Stock available in the central governments' pool is the stock held by:

1. State Government Agencies (SGAs)
2. States which are taking part in the Decentralised Procurement Scheme
3. Food Corporation of India(FCI)

As of now, the stocking norms for buffer stock decided by the GoI comprises of:

1. Operational Stocks

The stock required to meet the monthly requirements for welfare schemes.

2. Food Security Stocks

The reserves to meet the procurement shortfall. The food grains for issue under welfare schemes are considered as operational stock, whereas the surplus is considered as buffer stock and operational stock both. The stock

which is over the minimum stockpiling norms is treated as excess stock and it is exported from time to time, extra allocations for some states or through open market sales.

Importance/Need of Buffer Stock :

A. TO Stabilizing Prices:

The Stability in prices help maintain farmers incomes. A rapid drop in prices can make farmers go out of business, which leads to structural unemployment.

B. For the Enhancement of Investment:

BetterPrice stability condition will encourage more investment in agriculture.

C. It Reducing Inflation:

The determined andTarget prices help prevent excess prices for consumers and help reduce food inflation. Which might be important for households living in poverty, who may struggle to pay high prices during years of shortage.

D. IT brings out the Consistent Supply:

It helps to maintain food supplies and avoid shortages.

E. **Helps to Promote welfare schemes:** Helps welfare state to run welfare schemes through Public Distribution schemes in an effective manner.

Challeges/ Problem Faced in implementation of Buffer Stock:

A. **High Cost of Logistics and administration:** Due to majorfunds allocated for buying the buffer stocks, it becomes troublesome for the Agricultural ministry and FCI to frame and adjust the budget to make funds available for the efficient establishment and working of the storage units. This can be seen in the following ways:

1. **Dual Wastage:** Huge quantities of food stocks get spoiled due to unscientific storage methods and at the same time a large percentage of the population is dying of hunger in India.

2. **Warehousing Issues:** Lack of sufficient storage space and other storage infrastructure after the procurement.

3. **Wastage:** Open, outdoor storage, the food grains are often spoiled by rodents, frost, and rain, causing a huge financial loss for the government.

4. **Transportation issues:** The cost of transportation of the grains to and from the FCI godowns is huge. Spilling and spoilage at the time of transportation also increase the losses.

5. **Diversion and pilferage:** The Buffer stocks are sometimes diverted to black markets, liquor manufacturing units, Ghost beneficiaries. This way instead of the targetted population, others benefit from the buffer stocks of food grains, starving a great percentage of the population.

B. **The Trade Distortion practice:** IN Many developed countries of the West consider the government procurement of food grains and maintenance of the buffer stocks as a trade distortion practice. They drag India to the WTO regarding the same.

C. **The Skewed Cropping pattern:** Integration of the buffer stocks with MSP for food grains like rice and wheat leads to excessive production of these food grains. These are water-intensive crops and need the greater application of fertilizers for greater productivity. This not only affects the environment but also affects crop diversity, compromising the nutritional security of India. Farmers belonging to regions not favourable for the production of rice and wheat will also have an inclination for goring rice and wheat.

D. **Open-Ended Procurement:** in the absence of proper estimation of the overall buffer stock estimation for running the PDS and emergencies, the open-ended procurement of the food stocks further poses a challenge to proper storage and outtake of the buffer stocks.

2.7 QUESTIONS

Q1. What are the factors responsible for unstable price and income in agriculture sector?

Q2. Describe Minimum support price.

Q3. what do you understand by buffer stock?

Q4. Explain how government intervention bring out stability in price in agriculture market.

Q5. What are the factors responsible in failure of Minimum Support Price?

2.8 REFERENCES

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Module II

3

RURAL CREDIT MARKETS - I

Unit Structure

3.0 OBJECTIVES

- To make the students aware about the concept of Rural Credit Market.
- To understand features of rural credit market
- To know the difference between organised and unorganised sectors.
- To understand various theories of rural credit market
- To get the knowledge of lenders Risk Hypothesis.

3.1 INTRODUCTION

A rural area is an open band of land that has few homes or other buildings, and with very few people. A rural areas population density is very low. Many people live in a city, or urban area. Their homes and businesses are situated very close to one another. Though rural society is characterised by the implication of agricultural activities, rural development is broader than agricultural development. First, various non-agricultural economic activities take place in rural areas. Agricultural sector is vital player and at important position in the Indian economy. Agriculture till date is the major

occupation of the people living in the rural areas. Approximately 70% of India's population live in rural areas and their major activity is agriculture, and major productive asset land. For the rural population, it is the regulator and proprietorship of land that governs their wellbeing. It gives employment opportunities to about 65 percent of the working population of India.

The major challenges faced by the farmers are addressed with a sense of urgency. Agriculture as per the federal governing system of central state relation become the part of State subject, the majority of public investment in agriculture takes place at Agriculture Economy is the major concern area of state government.

Major Agricultural and allied products are cereals (mainly rice), tea, coffee, cashew, spices, tobacco and leather are important items of India's exports and hence foreign exchange earnings. Agriculture is also directly and indirectly influencing the performance of other sector in the economy.It is major source of raw material for agro-based industries including textiles, cigarettes, jute, sugar, paper, processed foodstuffs and vanaspati. Not only this but agricultural sector also provides market for capital goods (tractors, pump sets and other agricultural machinery), inputs (fertilisers, insecticides), and light consumer goods.

The advancement of the agricultural sector rest on, to a large extent, on such core industries as power, petroleum, fertilisers and machine tools. Thus, there is inter-dependence between agriculture and industry.

Two major workings of agricultural development strategy have been:

(a) subsidies on inputs and

(b) minimum support price for output.

But the problems of "rural indebtedness and the exploitative practices of the village moneylenders continue to create problem to the farmers. Loan which are taken for agricultural purposes or small home businesses across the rural areas in India is known as a Rural Credit. the objective of rural credit delivery was directed by the considerations of confirmingacceptable and timely availability of credit at reasonable rates of interest through the expansion of institutional framework.

3.1.1 Kinds of Rural Credit

There are Three different kinds of Rural Credit –

1. **SHORT TERM CREDIT –** These loans have a limited repayment tenure that can range up to one year at the most. Therefore, such credits can act as a brief business or private capital requirement for farmers and others in a rural setting.
2. **MEDIUM TERM LOAN –** Any loan that has a tenure ranging from two years to less than 10 years is classified as a medium-term loan. The credit amount available varies from one firm or individual to the next, depending on the credit rating and a host of other factors.

3. LONG TERM LOAN– These are considerable sums that farmers can avail for a tenure ranging between 5 years and 20 years. In agriculture, such a line of credit is useful in creating permanent assets. For example, with the help of such a loan, farmers can purchase tractors and other farming properties.

- Agriculture is the main source of income of individuals be located in in the rural regions across India. Every year, farmers and peasants need to invest a large amount of funds to ensure a healthy harvest. Thus, they often resort to borrowing money from moneylenders and financial institutions to fulfil their basic needs before harvest season arrives, and they can earn money by selling their crops. Hence any loan taken for agricultural purposes or small home businesses across the rural areas in India is known as a Rural Credit.

3.1.2 SOURCES OF RURAL CREDIT

Credit facility to farmers is provided in two different way i.e formally and informally depending upon the amount size urgency requirement and frequency of funding.

1. Land Development Banks :

These banks provide a substantial sum of money as a credit to farmers by using their land as collateral. This low-interest loan has a repayment tenure ranging between 15 and 20 years. Farmers are free to avail this loan to bear the cost of land development work, including the creation of wells or other irrigation related facilities.

Still, land development credits are underutilized since most farmers remain unaware of this source of funding.

2. Co-operative Credit Societies :

One of the most cost-effective sources of funding for farmers, co-operative credit enables credit to small- and medium-scale farmers. These short-term credits are extended by Primary Agricultural Credit societies or PACs. Nonetheless, these societies have not been able to minimize the influence of moneylenders on the Rural Credit market.

3. Regional Rural Banks :

Is Setby the government, regional rural banks or RRBs extend monetary assistance to marginal farmers, landless laborers and artisans.

4. Commercial Banks :

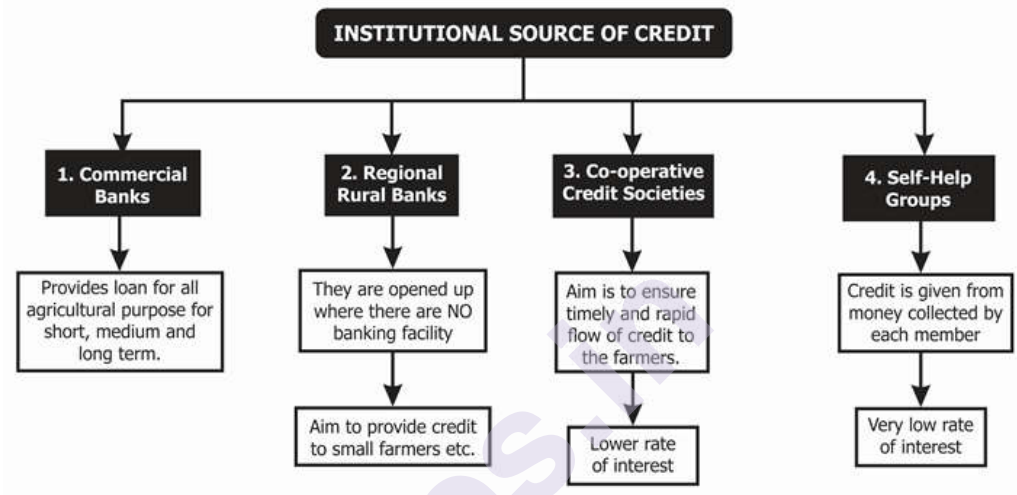
- Originally, commercial banks were hesitant to provide credit for agriculture due to the risks involved with such a move. However, today, these banks extend monetary help both directly and indirectly, to farmers.

Direct investment in agriculture refers to short and medium term loans to simplify farming activities. Indirect investment, on the other hand, refers

to the advances to farmers made through intermediary agencies or institutions.

5. Government :

- Also known as Taccavi loans, these are short-term credits extended by the Indian government to assist struggling farmers, especially in the aftermath of natural calamities, such as floods and droughts.



3.2 CHARACTERISTICS OF RURAL CREDIT MARKETS

1. **Formation**: Rural credit market evolution has taken place since 1952.

- Indian Rural credit market is divided in two segments i.e Informal and formal credit market.
- Informal credit market is the system of moneylenders, traders, and input suppliers.
- The formal credit market is organized segment constituted by cooperative banks, regional rural banks, commercial banks, and nonbanking financial companies.

2. **Structure**: Rural credit market in India need elaborate structure of rural financial institutions (RFIs).

- The apex institution in rural credit market is National Bank for Agriculture and Rural Development (NABARD).
- Key player in developmental functions for rural upliftment by introducing NABARD is the Reserve Bank of India, is the monetary authority.
- The Cooperative banks, scheduled commercial banks, and regional rural banks are the three major principal of rural financial agencies.

3. **Pattern of funding**:

In rural credit market Cooperative banks provide both short-term as well as long-term funding to the rural people.

- The short-term credit is offered in three different tier i.e through(i) State-level cooperative banks, or SCBs (numbering 30), at the apex(ii) District-level credit cooperative banks, or DCCBs (numbering 368) constituting the middle tier,(iii) Primary societies over 98,000 village-level.
- Each higher tier largely relies on the lower tier for credit dispersal and, to an extent, on deposit mobilization.
- State level and District-level cooperative institutions operate, to a limited extent, through their branches.
- Number of SCBs branches are 847 and over 12,000 branches of the DCCBs.

4. **Informational constraints**:

Fundamental feature that creates imperfections in credit market. Informational gaps occur at two basic levels:

1. There is lack of information regarding the use to which a loan will be put.

2. There is lack of information regarding the repayment decision.

- **Limited knowledge of:**
- Innate characteristics of the borrower that may be relevant in such a decision
- The defaulter's subsequent needs and activities, which place limits on his incentive to default.
- All the important features of credit markets can be understood as responses to one or the other of these informational problems.

5. **Segmentation:**

Many credit relationships are personalized and take time to build up.

- Usually, a rural moneylender serves a fixed clientele, to whom he lends to on a repeated basis
- He is extremely reluctant to lend outside this circle. Most often, a moneylender's clients are from within his village or from close by, so that the moneylender has close contact with them and is well informed about their activities and whereabouts.
- Repeat lending—a phenomenon in which a moneylender lends funds to individuals to whom he has lent before (or has otherwise close interactions with)—is very common.
- Hence rural credit markets exhibit a tendency towards segmentation

6. Interlinkage :

- An extension of segmentation: interlinked credit transactions. A majority of village moneylenders do not pursue usury as their sole occupation.
- Most of them are also wealthy landlords, shopkeepers, or traders dealing in the marketing of crops.
- Given market segmentation, landlords tend to give credit mostly to their tenants or farm workers
- traders favor lending to clients from whom they also purchase grain
- Thus segmentation often takes place along occupational lines The complementarity of some production relationship facilitates the credit relationship.
- Interlocking of markets— people conduct their business in different markets (land, labor, credit, etc.) with the same trading partners, and make the terms of transaction in one market depend on the terms and conditions in the other.

7. Interest Rate Variations :

- Segmentation has a natural corollary: informal interest rates on loans exhibit great variation, and the rates vary by geographical location, the source of funds, and the characteristics of the borrower.
- High interest rates are not necessarily the norm in informal credit transactions
- .Low or even zero-interest loans from traders are not uncommon.
- The absence of interest is deceptive: given the interlinked nature of many of these transactions, interest may be hidden in other features of the overall deal (such as the price at which a trader buys output from the farmer or the implicit wage at which a laborer is required to work off an ostensibly interest-free loan).
- The disparities in interest rates pose a puzzle: why don't clever and enterprising agents borrow from lenders who charge comparatively lower rates and lend that money to borrowers who are paying and are prepared to pay much more?
- Answer: segmentation and the informational variations that cause it.
- The personal characteristics of people matter and so does the nature or length of interaction between a borrower and a lender.
- The lender, before lending to a client, asks himself such questions as: Do I know him well? Is he from my village? Is he a good farmer? How much land does he possess? Does hehave a pump set to irrigate his land if rainfall is scarce?
- The lender's decision whether or not to advance a loan and, if he does, what the terms and conditions will be, crucially depend on the answers to these questions.
- Thus, arbitrage opportunities may be only a mirage: the rate at which a landlord lends to client A from village X may not be the same at which he is willing to lend to client B from village Y.

8. **Rationing :**
   - Rationing: upper limits on how much a borrower receives from a lender.
   - By rationing, we mean that at the going rate of interest, the borrower would like to borrow more but cannot.
   - In this sense credit rationing is a puzzle: if the borrower would like to borrow strictly more than what he gets, there is some surplus here that the moneylender can grab by simply raising the rate of interest.
   - This process should continue until the price (interest rate) is such that the borrower is borrowing just what he wants at that rate of interest.
   - So why does rationing in this sense persist?
   - Rationing includes the complete exclusion of some potential borrowers from credit transactions with some lenders.
   - That is, at the going terms offered by the lenders, some borrowers would like to borrow, but the lender does not lend to them.
   - In this sense rationing is intimately connected to the notion of segmentation.

9. **Exclusivity :**
   - Exclusive dealings.
   - Moneylenders typically dislike situations in which their borrowers are borrowing from more than a single source.
   - They insist that the borrower deal with them exclusively; that is, approach no other lender for supplementary loans.
   - Particular dealings are often (though not always) bilateral, and
   - Informational, locational, and historical advantages often tend to confer on lenders the blessings of a "local monopoly", which they exploit

3.3 CREDIT FRAGMENTATION

Credit fragmentation in corelated with land fragmentation .Land fragmentation is a major problem in rural credit absorption which unfavourably affects agriculture and rural development. The average land holding in India is 1.15 hectare per farmer, which was 2.1 hectare per farmer at the time of independence as per the statistics of RBI.

When rural credit absorption gets affected farmers do not show interest modern farming, use of advanced equipment etc, added Mudra.

Rural credit distribution imbalance is another problem which affects the rural development, said Mudra.

"In India, farmers who own more than 10-hectare land use 85% institutional credit. Landless farmers use only 15% of the institutional credit. So, despite strong rural credit figures there is lot of imbalances," he said.

"In India, farmers who own more than 10-hectare land use 85% institutional credit. Landless farmers use only 15% of the institutional credit. So, despite strong rural credit figures there is lot of imbalance

On important steps taken in the direction of rural and agriculture credit, Mundra said: "For the first time, in the priority sector guideline revision, small and marginal farmer have a separate 7% allocation for rural credit. This along with effective insurance scheme launched by the government will address the rural credit distribution imbalance."

Credit needs of the farmers can be fragmented in two different angles - (i) on the basis of time, and (ii) on the basis of purpose.

A. <u>On the basis of time</u>:

Agricultural credit needs of the farmers can be classified into three categories on the basis of time - **(i) short-term, (ii) medium-term, and (iii) long-term.**

Short-term loans are crucial for the purchase of seeds, fertilisers, pesticides, feeds and fodder of livestock, marketing of agricultural produce, payment of wages of hired labour, litigation, and a variety of consumption and idle purposes. The duration of such loans is less than 15 months. Main agencies for granting of short-term loans are the moneylenders and cooperative societies. Medium-term loans are generally gained for the purchase of cattle, small agricultural implements, repair and construction of wells, etc. The period of such loans extends from 15 months to 5 years. These loans are provided by moneylenders, relatives of farmers, cooperative societies and commercial banks. Long-term loans are required for effecting permanent improvements on land, digging tube wells, purchase of larger agricultural implements and machinery like tractors, harvesters, etc., and repayment of old debts. The period of such loans extends beyond 5 years. Such loans are normally taken from Primary Cooperative Agricultural and Rural Development Banks (PCARDBS).

B. <u>On the basis of purpose</u> :

Agricultural credit needs of the farmers can be classified on the basis of purpose the following categories - (i) productive, (ii) consumption needs, and (iii) unproductive.

In case of productive needs, we can include all credit requirements which directly affect agricultural productivity. Farmers need loans for the purchase of seeds, fertilisers, manures, agricultural implements, livestock, digging and repair of wells and tube wells, payment of wages, effecting permanent improvements on land, marketing of agricultural produce, etc. Repayment of these loans is generally not difficult because the very procedure of production generally creates the ability for repayment. Very Obvious that Farmers often require loans for consumption as well. Between the moment of marketing of agricultural produce and harvesting of the next crop there is a long interval of time and most of the farmers do not have enough of income to sustain them through this period. Therefore,

they have to take loans for meeting their consumption needs. In the period of droughts or floods, the crop is considerably damaged and farmers who otherwise avoid taking loans for consumption, have also to incur such loans. Institutional credit agencies do not provide loans for consumption purposes. Accordingly, farmers are involuntary to depend upon moneylenders and Mahajans to meet such requirements.

In addition to consumption, farmers also require loans for a diversity of other unproductive purposes such as litigation, performance of marriages, social ceremonies on the birth or death of a family member, religious functions, festivals, etc.

Since institutional agencies do not grant credit for such unproductive purposes, farmers have to seek assistance from moneylenders and Mahajans. It is often very difficult to repay such loans because they do not contribute to the productivity of farmer.

3.4 ORGANISED AND UNORGANIZED SECTOR

Rural credit market is comprised of two different sources these are firstly Organised or institutional source and secondly Unorganised or Non institutional source availability for rural credit.

- **Unorganized/ Non-institutional Sector :**

The non-institutional sources are -(i) moneylenders, (ii) relatives, (iii) traders, (iv) commission agents, and (v) landlords. This sector does not belong to the body which come under the control of RBI. The rate of interest charge by them are very high and thus exploitation prevails in such market. The practice of unorganised source of rural credit due to backwardness or existence of rural remote areas and also due to lack of development of Organised credit source.

- **Organised/ Institutional Sector**:

The organised sectors come under purview of RBI i.e Monetary authority. The institutional sources comprise the cooperatives, Scheduled Commercial Banks and Regional Rural Banks (RRBs). As far as cooperatives are concerned, the Primary Agricultural Credit Societies (PACSs) provide mainly short and medium-term loans and PCARDBS long-term loans to agriculture. The commercial banks, including RRBs, provide both short and medium-term loans for agriculture and allied activities. The National Bank for Agriculture and Rural Development (NABARD) is the apex institution at the national level for agricultural credit and provides refinance assistance to the agencies mentioned above. The Reserve Bank of India as the central bank of the country plays a vital role in this domain by giving overall way to rural credit and financial support to NABARD for its operations.

During the period of Independence, vital source of agricultural credit was the moneylenders. In 1951 (the year when planning was initiated in the country) moneylenders accounted for as much as 71.6 per cent of rural

credit. The major position of the moneylenders was due to the reason that there was no other source worth the name and the farmers were forced to borrow from them. This almost total requirement of the farmers on the moneylenders enabled the latter to dictate terms and exploit the former in a number of ways. For example, moneylenders charged exorbitant rates of interest ranging from 18 per cent to 50 per cent or even more. They often operated accounts to their advantage by not entering the money returned and interest paid into the account. They also forced farmers to sell the agricultural produce to them at low prices. Long-term loans were often advanced against the security of land and moneylenders often manipulated things in such a way as to grab the land. On account of this reason, they can be termed 'anti-social' elements.

The government thus undertaken various steps to regulate the activities of the moneylenders. For this purpose, various legislations were enacted. The basic objectives of these legislations were as follows:

1. To bring about an improvement in the terms on which private credit was made available to the agriculturists and place legal restrictions on the unreasonable exactions of the moneylenders

2. To enable the civil courts to do greater justice to both the lenders and the borrowers than was possible, under the ordinary Code of Civil Procedure.

3. To the first category belong such provisions as: (a) licensing and/or registration of moneylenders, (b) fixation of maximum rates of interest, and (c) maintenance of accounts by moneylenders, grant of regular receipts, etc.

4. To the second category belong such provisions as: (a) the empowering of the court to 'reopen' the closed transactions and go behind the written contract, (b) protection of certain forms of assets from attachment in execution of decrees, and (c) the empowering of the court to direct payment of decretal amount by instalments.

Trend and growth of institutional or organised Sector:

1. The first institution established and promoted was the institution of cooperative credit societies.

2. The Cooperative movement in this country was started as far back as 1904. However, its development was very slow.

3. Even in 1951, cooperatives provided only 3.1 per cent of total rural credit. Hence, the dominance of moneylenders in agricultural credit continued.

4. It was only with the nationalisation of 14 major banks in 1969 (followed by nationalisation of 6 more banks in 1980) that the hold of moneylenders on agricultural credit could be reduced.

5. In 1975, the government set up the third institution the institution of RRBs (Regional Rural Banks).

6. Thus, by the end of 1976, there emerged three separate institutions for providing rural credit, which is often described as the multi-agency approach.

7. In 1982, NABARD was set up.

8. India now has a wide network of rural finance institutions (RFIS).

9. There are more than 30,000 commercial bank branches, 14,000 regional rural banks, and about 1,00,000 rural credit Cooperatives.

10. This translates to about 4,700 people served by each RFI outlet.

11. As a result of the efforts undertaken by the government to develop the institutional sources of credit, the role of non-institutional sources like moneylenders in agricultural credit declined considerably.

12. The share of non-institutional sources in rural credit which was as high as 92.7 per cent in 1951 fell consistently to 68.3 per cent in 1971 and further to 30.6 per cent in 1991 (in 2002, it rose to 38.9 per cent).

13. More significantly, the share of moneylenders fell from 71.6 per cent in 1951 to merely 17.5 per cent in 1991 (though it rose to 26.8 per cent in 2002). The share of institutional sources in rural credit rose correspondingly from only 7.3 per cent in 1951 to 31.7 per cent in 1971 and further to 66.3 per cent in 1991 (in 2002, it fell to 61.1 per cent).

14. In year 1969, 14 major commercial banks were nationalised.

15. The share of institutional credit to agriculture through commercial bank increased from 38.4% in 1980 – 81 to 74.3% in 2010 – 11. The RRB contribution is about 8% to 10% of agricultural credit over the year as per the source collected by Rakesh Mohan, "Agricultural credit in India", Economic and Political weekly, March 18, 2006. Government of India – Economic Survey.

3.5 THEORIES OF INFORMAL CREDIT MARKET

Lender's Monopoly The lender in the rural area has exclusive monopoly power over his clients or we can say farmers and rural peasants and can therefore charge a considerable higher price for loans than his opportunity cost. There are two problems with this line of explanation.

1. **Empirical** - It is certainly true that the credit market is segmented, but this is not necessarily a justification for an assumption of complete monopoly. Pure monopoly is not out of the question in some situations,

but in today's rural civilizations, we can at best assume that lenders have "local monopoly" with limits.

2. **Theoretical** -The Monopoly power is not necessarily an explanation of high interest rates, at least of high explicit interest rates. From the point of view of efficient surplus generation, it is often better to pick up money lending profits in forms other than interest (interlinkages)

3.6 LENDER'S RISK HYPOTHESIS

This hypothesis sustains that lender earn no (ex ante) return on their money over and above their opportunity cost. However, there is considerable risk of default in rural credit markets: the borrower might default on interest payments and even part or all of the principal.

• This risk comes from many sources:

1. There is the risk of involuntary default: owing to sheer misfortune (crop failure, unemployment, disease, death, etc.), the borrower simply may not have enough money when the loan matures.

2. There is the possibility of voluntary or strategic default: the borrower may simply take the money and run, or stubbornly refuse to pay up.

3. In the simplest version of the theory, there is an exogenous probability of default on every dollar lent out. Competition between moneylenders drive the rural interest rate down to a point where each lender on the average earns zero expected profit (over and above the opportunity cost of funds to the lenders).Consider a typical village moneylender in a competitive market.

• Let L be the total amount of funds he lends out

- Let r be the opportunity cost of funds for every moneylender
- Let i be the interest rate charged in competitive equilibrium in the informal sector
- Because only a fraction p of loans will be repaid, the moneylender's expected profit is:

  $P(1 + i)L – (1+ r)L.$

• The zeroprofit condition implies that this value must be zero in equilibrium, that is:

$$P(1 + i)L – (1+ r)L = 0$$

$$i = \frac{1+r}{p} - 1$$

Note : when p = 1, which means, when there is no default risk, the entire loan is paid back, we have i = r:informal interest rates are the same as formal-sector rates.

- However, for p < 1, we have i> r: the informal rate is higher to cover the risk of default.
- For e.g. let the formal-sector rate to be 10% per annum and suppose that p = ½: i turns out to be a steep120% per annum!
- Clearly, even under competition, informal-sector rates are very sensitive to the default risk.
- The preceding simple story lays a finger on a very important aspect of the reality of rural credit markets - the risk of default.
- However, if we look at the data, the fact remains that actual rates of default in rural credit markets are very low indeed.
- Suggests that although potential default may be important, lenders manage to devise contracts and create incentives to circumvent the problem.

Default and Fixed Capital Loans:

It is assumed that the default probability is independent of the amount to be repaid. Larger amounts to be refunded may lead to a larger risk of default.

- Certain loans will not be given at all under any conditions, regardless of the interest rate premium, because the premium itself affects the chances of repayment.
- Large loans themselves advance the chances of default and will, therefore, not be made.
- The line of reasoning can be extended, not just to the size of the loan, but also to the kind of use to which the loan will be put.
- If the loan can be used by the borrower to permanently put himself in a situation in which he never has to borrow again, then such loans may not be forthcoming.
- In the presence of strategic default, the devastating provision of informal loans will be for working capital or consumption purposes, rather than for fixed investments that may permanently reduce the borrower's future need for credit.

3.7 DEFAULT AND COLLATERAL

The fear of default also generates a tendency to ask for collateral, whenever this is possible. Collateral may take many forms.

Fundamentally, collateral is of two types: both lender and borrower value the collateral highly. The borrower values the collateral highly, but the lender does not. From the point of view of strategic default, it is irrelevant whether the first or the second form of collateral is employed.

Collateral that is valuable to both parties have the added advantage that it shelters a lender against involuntary default as well. For these forms of collateral, credit may merely be a veil for acquiring collateral: alternative view of extortionate interest rates.

Suppose a loan of size L requires an interest rate i to be charged.

Say, VS (S for "small") be the (monetary) value that the borrower places on the collateral.

Let VB (B for "big") be the value that the moneylender attaches to the very same collateral. Hence the collateral is of value to both parties. Let the monetary value on the loss to the borrower from default, over and above the loss of his collateral be F.Such losses may comprise the fear of not receiving future loans etc.

When the time comes to return the loan, we can conceive of two possibilities:

(1) The borrower may be in a state of involuntary default: he simply does not hold the wherewithal to repay the money. In that case, he certainly loses the collateral, which passes into the hands of the moneylender.

(2) The borrower may anticipate default and take his chances with the landless labor market or even with migration to the city. The total loss to the borrower in this case is VS + F, whereas the gain is that he gets to keep the principal plus interest that he owed.

Thus the borrower will prefer to return the loan if

$$L(1+i) < V_s + F$$

The Lender will prefer his money back if: $L(1+i) > V_B$

loan repayment is in the interest of both parties only if $V_B < V_s + F$

the lender's valuation must not exceed the borrower's valuation by too much. In the special case where F = 0, so that collateral is the only way to force loan repayment, the lender's valuation of the collateral must be less than that of the borrower.

Suppose that VB > VS + F. In this case, it follows that whenever the borrower prefers to repay the loan, the lender actually wants him not to do so! The lender would actually like the credit transaction to be an excuse to acquire the collateral (cheap).Thus collateral that is of high value to both lender and borrower may (paradoxically) result in credit transactions with excessive rates of default. This sort of analysis works much better for consumption loans than production loans. With consumption loans (taken, say, for an illness in the family), the amount is often fixed and cannot vary with the rate of interest. With production loans, a high interest rate may be self-defeating because the borrower can scale back the amount of the loan by reducing the extent of his productive activity. This hints at a possible explanation of why interest rates may be high for some types of credit transactions but not for others.

3.8 DEFAULT AND CREDIT RATIONING

Credit rationing refers to a situation in which at the going rate of interest in the credit transaction, the would like to borrow more money, but is not permitted to by the lender.

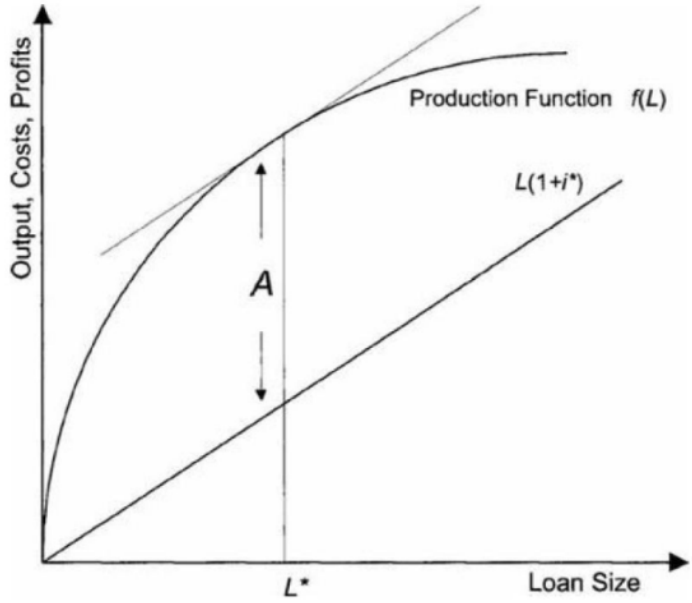


Figure No. 3.1

Maximising rate of interest i on a loan

So far there is no credit rationing. Now we show that the likelihood of default is closely associated with credit rationing. To do so we introduce the possibility of strategic default. Supposing that the farmer can keenly default on the loan. In the event of a strategic default, the moneylender will never lend to him again. However, the farmer can constantly go for his next best alternative and guarantee himself a profit of A from the next date onward.

To study the default problem, then, we have to justify for the importance that the debtor confers to future gains and losses. We consider the borrower's mental time horizon: the extent to which the future concerns him when he makes current decisions. Suppose that at each date, the farmer thinks N dates into the future and factors in the consequences of his current decisions on gains and losses in the coming N periods. Let f(L) be the value of the output for every loan size L. Thus f(L) is simply an expression that describes the production function: as L increases, so does the value f(L).

The Participation Constraint: the requirement that the farmer should want to participate at some interest rate i and some loan size L is just the statement that:

$$f(L) - L(1+i) \geq A$$

In the presence of potential default, a fresh constraint appears called the No Default Constraint. We look at what the farmer gets over his entire mental horizon of N dates. It is the amount per date, multiplied by N: $N[f(L) - L(1 + i)]$

What does he get if he decides to default? Well, today he will get all of f(L).

From tomorrow onward, he is excluded by our moneylender and so can get only A per period. Thus the total profit over the N period mental horizon is

$f(L) + (N - 1)A$

For default not to occur N is $f(L) - L(1+i) \geq f(L) + (N-1)A$

$$f(L) - \frac{N}{N-1} L(1+i) \geq A$$

This condition looks a bit like the participation constraint except for the term $N/(N - 1)$ that multiplies the cost line.

Because this term always exceeds 1, the new restriction is tighter than, and therefore effectively subsumes, the participation constraint.

The shorter the mental horizon, the more difficult it is to meet the no-default constraint. For instance, if N = 1, so that the farmer never contemplates the future consequences of his current actions, NDC can never be satisfied. The farmer will always default on the loan, so no loans will be advanced. On the other hand, if the farmer is very farsighted, then N is very large and the fraction

$N/(N - 1)$ has a value close to1: we are then effectively back to the old problem in which only the PC matters.

Thus we are interested in situations in which N is neither too large nor too small. When NDC holds, the original cost line gets multiplied by the factor N/(N-1).The rest of the analysis remains the same. We maximize vertical difference between the production function and the modified cost line such that it is no less than A.

To find this maximum, we set the marginal product of the production function equal to the slope of the modified cost line, which is $N/(N - 1)(1 + i)$.At interest rate i**, the maximized difference just equals A. If it is chosen any higher, then the NDC will fail. Thus the interest rate i** and the associated loan size L** represent the moneylender's optimal solution when default is possible

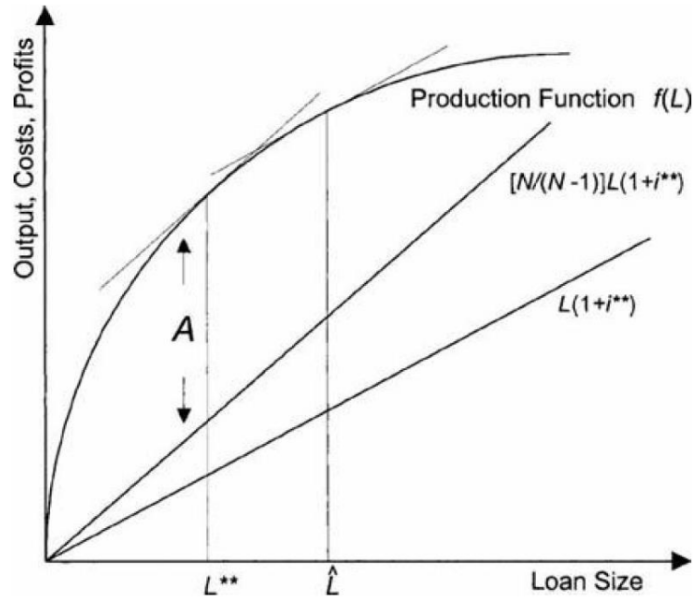


Figure No. 3.2

Loan Contracts when default is possible

At the optimum credit transaction, the moneylender will advance a loan of L**. The marginal product of the loan equals N/(N − 1)(1 + i**) and not the true marginal cost of the loan as faced by the borrower, which is 1 + i**.

It follows that we have credit rationing: if the borrower were asked in an interview if he would like to borrow more at the going interest rate i**, he would answer in the affirmative. The moneylender would not react to such a situation by simply raising the interest rate or advancing a larger loan at the going interest rate (or some combination of the two). The fear of sparking off a default prevents such actions by the moneylender. A higher loan increases the return to a defaulter by allowing him to pocket more money. A higher interest rate increases the return as well, by allowing the defaulter to save on the repayment of more interest. The moneylender's preferred contract therefore involves credit rationing. Credit rationing may stem from considerations other than default. In the next section, we take up this theme.

3.9 INFORMATIONAL ASYMMETRIES AND CREDIT RATIONING

Not all borrowers bear the identical amount of risk. Some are high-risk borrowers and some are low risk borrowers. Risk may be correlated with characteristics of the borrower that are observable to the lender (such as landholdings or access to irrigation). It may significantly be contingent on other qualities that are not observable (farming skills or mental insight in the face of a crisis, thrift, the quality of his land etc)

When the factors that make for risk are observable, the lender can select his clients or charge appropriately higher rates for the high-risk clients.

However, to the extent that clients bear different risks that cannot be discerned by the lender, an additional dimension is added to credit market transactions—the interest rate now affects the mix of clients that are attracted (and hence, the average probability of default)

This new dimension might give rise to a situation in which at prevailing rates, some people who want to obtain loans are unable to do so. Lenders are unwilling to capitalize on the excess demand and raise interest rates for fear that they will end up attracting too many high- risk customers. Considering a moneylender who faces two types of potential customers: call them the safe type and the risky type. Each type of borrower needs a loan of (the same) size L to invest in some project or activity. The borrower can repay only if the investment produces sufficient returns to cover the repayment. Suppose that the safe type is always able to obtain a secure return of R (R > L) from his investment. On the other hand, the risky type is an uncertain prospect; he can obtain a higher return R′ (where R′ > R), but only with probability p. With probability 1 − p, his investment backfires and he get a return of 0. The lender can freely set the interest rate without fear of losing his clients to competing lenders.

Let us suppose that the lender has enough funds to lend to just one applicant, and that there are two of them (one risky, one safe).

The highest interest rate i for which the safe borrower wants the loan. Because his net return is given by R − (1 + i)L, the highest acceptable rate for him is i1 = R/L – 1

For the second borrower, the expected return is p[R′ − (1 + i)L]; hence, the maximum rate he is willing to pay is i2 = R′/L − 1.

Clearly, because R′ > R, we have i2 > i1. The risky borrower is willing to pay a higher rate of interest than the safe borrower, and this interest rate is independent of his probability of success, p.

The reason is that bankruptcy yields zero, and in such a situation he defaults on the loan anyway, so his expected profits depends only on the success state. In this sense the risky borrower acts as if he does not care about failure. If the lender charges i1 or below, both borrowers will apply for the loan. If the lender cannot tell them apart, he has to give the loan randomly to one of them. On the other hand, if a rate slightly higher than i1 is charged, the first borrower drops out and excess demand for the loan disappears. The lender may then go all the way up to i2 without fear of losing the second customer. The lender's choice is then really between the two interest rates ii and i2.Suppose the lender charges i2. His expected profits are then given by

$\prod 2 = p(1+i2)L – L$

If the lender charges i1, he attracts each type of customer with probability 1/2. His expected profits are then given by

$$\prod 1 = \frac{1}{2} i1\ L + \frac{1}{2} [p\ (1+i1)\ L - L]$$

Under what condition will the lender be reluctant to charge the higher interest rate? This will happen when Π1> Π2.

$$P < \frac{R}{2R^{1} - R}$$

if the high-risk type is "sufficiently" risky (remember, a lower p means a higher chance of default), then the lender will not raise his interest rate to i2, thereby attracting the risky type. Instead, he will stick to the lower level i1 and take the 50–50 chance of getting a safe customer. This will lead to credit rationing in equilibrium: out of two customers demanding a single available loan, only one will get it; the other will be disappointed. The price is not raised even in the face of excess demand, but the reason is different. Raising the price would drive away the good borrower instead of the bad one, and the higher possible return cannot compensate for he lowered chance of repayment.

3.10 QUESTIONS

Q1. What do you understand by the term Rural credit Market?

Q2. Explain lenders risk hypothesis.

Q3. what is the term default collateral.

Q4. what are the features of rural credit market?

Q5. Distinguish between organised and unorganised sector.

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4

RURAL CREDIT MARKETS - II

Unit Structure

4.0 OBJECTIVES

1. To know the evolution of credit system in India

2. To understand various role and criticism of commercial banks

3. To know problems of Regional Rural Bank

4. to know functions of Nabard

5. To understand imperfections in Rural Credit Market

6. To understand rural co-operatives and credit institutions

4.1 INTRODUCTION

Being the backbone of the Indian economy, agriculture has all along been treated as a significance sector for the allocation of institutional credit. The insignificant growth rate of agriculture in the past few years has further strengthened the channels of credit flow to this sector.

Agricultural production in India rest on upon millions of small farmers. It is the concentration of their exertion and the efficiency of their technique that will help in raising yields per acre. Because of insufficient financial resources and non-appearance of timely credit facilities at reasonable rates, many of the farmers, even though otherwise willing, are unable to

go in for improved seeds and manures or to introduce better methods or techniques. It is, therefore, of the utmost importance that the financial necessities of the farmers are adequately met.

Provision of adequate and timely credit at fair rates of interest has, therefore, to be measured as an integral part of agricultural development. Aid rendered by way of credit has, however, to be related to specific items of productive work or of essential costs of cultivation. Following guidelines from the RBI, commercial banks are increasingly devoting attention to agricultural sector to meet its credit needs.

Agricultural growth is vital for alleviating rural poverty. Access to institutional credit to more farmers and suitable quantity and quality of agricultural credit are crucial for realising the full potential of agriculture as a profitable activity.

The Government has taken many policy initiatives for strengthening farm credit delivery system for providing credit at affordable rates of interest to support the resource requirements of the agricultural sector. The emphasis of these initiatives has been on providing timely and adequate credit support to farmers with particular focus on small and marginal farmers and weaker sections of society to enable them to adopt modern technology and better-quality agricultural performs for increasing agricultural production and productivity. The policy essentially lays emphasis on enlarging credit flow at the ground level through credit planning, implementation of region explicit strategies and justification of lending policies and procedures and carrying down the rate of interest on farm loan.

Need for agricultural credit arises because modern farm technology is expensive and the individual possessions of the farmers are insufficient. Establishment of agricultural credit, as an input, is essential for prevalent use of improved agricultural methods.

Sources of agricultural credit are grouped into two categories:

(a) institutional sources and

(b) non-institutional sources.

Institutional sources include co-operative societies, commercial banks and other government agencies. Non institutional sources comprise moneylenders, landlords, relatives etc. Emergence of Micro Finance

4.2 EVOLUTION OF CREDIT SYSTEM IN INDIA

Rural financial market expansion is a complex procedure. The formation of the formal credit structure for financial agriculture and other rural activities began in India in the initial part of this century with the introduction of co-operatives. It received a big push during the plan period. The All India Rural Credit Survey Committee (AIRCS) 1954, forms the organization for the policy towards the expansion of the

Institutional credit structures. The committee emphasized the terrible insufficiency in the supply of institutional credit to the rural sector and proposed an integrated scheme of restructuring many more committees and recommendations. Priority sector lending, lead bank scheme, services area approach, setting up of NABARD, are some of the outcomes of the repeated scrutiny of the system.

The Agriculture Credit Review Committee (ACRC) 1989, examined the existing rural credit system in detail. It highlighted the wide gap between income generated and costs incurred by rural credit institutions, necessitating external assistance. The committee suggested greater self-sufficiency for commercial banks; the weakness of RRBs were seen as endemic to the system with non-viability built into them. Co-operatives were sought to be reinforced through thrust on deposit deployment and lessening of political interference. The Narsimham Committee on Financial Sector Reforms 1991, among other things, recommended a redefinition of priority sector, gradual phasing out of directed credit programmes to 10% of aggregate bank credit and deregulation of interest rates.

The outcome of "an imposing superstructure of credit institutions has been built which one committee after another has kept reshuffling or adding to" (Dandekar, 1993). Commenting broadly on the exercise in developing countries (to which the India experience seems to be no exception), Braveman and Guasch, 1986, see most of the changes in institutional design as largely superficial, window dressing type rather than substantial. "the institutions have been perceived more like a welfare agency than a commercial undertaking. There seems to be little effort to integrate deposit taking activities or to generate saving mobilization-a vital activity for the long run success of a credit institution. No provisions were made to deal with non-compliance, or to implement a reasonable system of incentives to both lenders and borrowers to induce the desired objectives."

4.3 ROLE AND PERFORMANCE OF COMMERCIAL BANKS

In the history for long period of time the segment of commercial banks in rural credit was inadequate. For instance, it was only 0.9 per cent in 1951-52 and 0.7 per cent in 1961-62. The inappropriate contribution of commercial banks in rural credit in India is partly explained by the existence nature of agriculture and its unorganised, individualistic working. Moreover, the heavy requirement of agriculture on rains makes it an indeterminate and risky project. As in contradiction of this, the manufacturing sector is moderately more organised and less reliant on natural factors. Thus, the commercial banks tended to essence on the industrial sector and even abstracted the funds mobilised from rural areas to see the demand for credit of the industrial sector.

The Solution in the form of state of dealings that 14 major commercial banks were nationalised in 1969. This was followed by the nationalisation of 6 more banks in 1980. After nationalisation, the banks opened a large

number of branches in rural areas and have increased their advances to these areas significantly. In June 1969, out of the total of 8,262 branches of commercial banks in India, 1,832 (i.e., 22.2 per cent) were in rural areas. As at end June 2016, the number of total branches had report up to 1,39,406. Of this, 47,621 (i.e., 34.2 per cent) were in ruralareas. This shows that while the total number of branches increased by about seventeen times, the total number of rural branches increased by about twenty six times. The advances from banks to agriculture have also grown by leaps and bounds. In 2016-17, banks accounted for 75.0 per cent of institutional credit provided to agriculture (7,99,800 crore out of 10,65,800 crore).

Positive changes took place after nationalisation, the commercial banks have played significant role in provision of rural credit. This has empowered farmers to purchase agricultural inputs and adopt new agricultural technology on an increasing scale, expand activities in the non-farm sector in rural areas, and also accelerate the pace of private agricultural investment. Hence increase in number of banks has played a essential role in India's agricultural growth and modernisation in addition to liberating large number of rural people from the controls of the moneylenders. Under the Reserve Bank's Service Area Approach to rural lending in operation since April 1989, individual bank branches are expected to serve the credit needs of 15 to 25 villages each. After carrying out surveys and preparing village-wise economic profiles, bank branches have been preparing credit plans for the villages in their service areas. Block level bankers' committees or we can say groups have been established for coordination among credit institutions and developmental agencies and for monitoring the application of the credit plans. Each bank has also been preparing Special Agricultural Credit Plan (SACP), segregated into quarterly targets, which is monitored by the Reserve Bank of India.

An important disagreement in support of bank nationalisation was that commercial banks had kept themselves aloof from the problems of agriculture and had remained largely uninterested to the credit needs of farmers for agrarian processes and land improvement. When social control of banks was introduced in 1967, a rapid expansion in bank branches in rural areas was started. By July 1969, all commercial banks had over 1,860 branches in rural and semi-urban areas; this number had increased to over 30,585 by June 2006. There are now over 16 million agricultural borrowing accounts with commercial banks amounting to Rs. 63,080 crores, as compared to only (2 million accounts with total outstanding advances to the extent of about Rs. 160 crores in June 1969. A large number of village co-operatives are among the borrowers, some of them borrowing from other financial agencies as well.

4.3.1 Direct Finance by Commercial Banks :

At the time of bank nationalisation, it was clearly conceded that the commercial banks did not have the necessary experience or the personnel to deal with the farmers directly, while the co-operatives had been

specialising in rural credit since the beginning of the century. Even then, the nationalised banks were ex pected to go vigorously in support of the farmers in general and the small cultivators in particular. In the initial stages, for obvious reasons, the nationalised banks concentrated their attention on large cultivators and other special category farmers such as those en gaged in raising high-yielding varieties of food grains. At present short term crop loans account for nearly 42 to 45 per cent of the total loans disbursed by the

commercial banks to farmers. Term loans for varying periods for purchasing pump sets, tractors and other agricultural machinery, for construction of wells and tube-wells, for development of fruit and garden crops, or levelling and development of land for the purchase of plough animal, etc. are provided. These term loans account for about 35 to 37 per cent of the total loans disbursed by commercial banks.

Finally, commercial banks extend loans for such activities as dairying, poultry farming, piggery, bee keeping, fisheries and others-these loans account for 15 to 16 per cent. Region wise, Southern region accounts for the bulk of the credit disbursed by com mercial banks viz., 52 per cent of the total credit ex tended.

4.3.2 Commercial Banks and IRDP :

Since October 1980, the Government has prolonged the combined rural development programme (IRDP) to all development blocks in the country and has asked the commercial banks to finance IRDP. The leading banks have to prepare banking plans, and allot the concern of financing the recognized recipients among the participating banks. It has been found that commercial banks have not realized IRDP willingly. But commercial banks have valid reasons for their tepid attitude.

In the first place, commercial banks have been asked to finance all economically and backward people identified by government agencies. Commercial banks have found that most of the rich farmers have managed to get their names implanted in the recipients list through paying the Government officials or through using political pressure. In other words, all the prospective borrowers are not really economically backward and banks have the responsibility to find out the eligible beneficiaries.

Secondly, commercial banks have found that all the beneficiaries do not utilise the loans for which they are arranged. In many cases, the farmers may use the bank loans for fruitless purposes but may yield receipts of purchase of buffaloes through bogus seller (who may oblige for a commission). Commercial bank has to determine the reliability of sale-purchase transactions before disbursing loans.

Finally, small and marginal farmers are cheated petty government officials, veterinaries, local politicians and panchayat samiti members before they convert recipients of bank loans. Ultimately it is t banks which suffer due to heavy overdue. Accordingly, banks are reluctant to finance IRDP.

4.3.3. Credit to Priority Sectors :

The commercial banks are instructed to attain certain targets and sub-targets under priority sector lending. Forty per(40%) cent of the adjusted net bank credit (ANBC) is therefore essential to be channelled to recognized as priority sectors such as agriculture, small-scale industry, small business, etc. Direct finance to agriculture and allied activities is to reach a level of 18 per cent of net bank credit. Credit to priority sector by public sector banks, private banks and foreign banks in 2016-17 was 39.5 per cent, 42.5 per cent and 36.9 per cent respectively of ANBC.

In April 2016, priority sector lending certificates (PSLCs) scheme was implemented. The PSLC scheme is a mechanism to incentivise banks having surplus in lending to different types of the priority sector and thereby for the improvement of overall priority sector lending. PSLCs allow the market mechanism to drive priority sector lending by leveraging the comparative strength of different banks. This scheme allows a bank to assistance by selling over-achievement of its target in a particular sector through PSLCs to another bank, which can purchase it to meet its target in that sector, while selling its own over-achievement of the target in another sector to another bank and so on. A platform to enable trading in the certificates has been provided by the Reserve Bank through its core banking solution (CBS) portal (e-Kuber).

4.3.4 Financial Inclusion Plans (FIPS) :

The Commercial banks has been considered as the main vehicles of the efforts at financial inclusion. For this purpose, a phase-wise approach has been adopted for the expansion of banking facilities. The first phase covered the period 2010-13, the second phase covered the period 2013-16 and currently the third phase covering the period 2016-19 is in operation. Financial Inclusion Plans (FIPS) equipped by the domestic commercial banks offer a structured and planned approach to financial inclusion. The Plans capture self-set targets of the banks on limits such as the number of outlets (branches and Business Correspondents or BCs), Basic Savings Bank Deposit Accounts (BSBDAs) opened by bank branches and BCs, overdraft facilities availed in those accounts, transactions in Kisan Credit Card (KCC), General Credit Card (GCC) accounts and transactions through the BC-ICT channel (progress on these parameters is presented in the section on 'Financial Inclusion').

4.3.5 Operations of Commercial Banks: A Critical Review :

Despite the achievements of the commercial banks in the field of rural credit mentioned above, their performance and operations have invited a lot of criticisms. The main points of criticism are the following:

1. The fast rise in bank credit to rural areas after nationalisation has formed stresses in the system due to rapid expansion and diversification. One of the problems of such rapid expansion has been the weakening in the quality of scheme preparation, particularly under the antipoverty programmes. Deterioration in the quality of advancing is also due to heavy

workload of day-to-day housekeeping, without commensurate increase in the supporting staff.

2. The commercial banks have found approving and monitoring of a great number of small advances in their rural branches, time-consuming and manpower intensive and consequently a high cost proposition. Partly because of this, the banks have been found hesitant in posting sufficient supervisory and other staff in rural branches. Consequently, supervision of rural advances has come to be neglected. Also, the staff in rural branches of commercial banks lacks sufficient enthusiasm to work in rural areas for various reasons. Not only this, as pointed out by ACRC, there is a lack of adequate staff in rural branches of commercial banks.

3. Foundation of a large number of branches in rural areas which do not have suitable business potential, rise in establishment expenses, and increase in non-performing advances affected the profitability of the banks adversely. While the yield on advances has been declining, the average cost of credits and borrowings has increased, reducing the margins presented to the banks.

4. The recovery situation of the commercial banks is bad. In certain years, the level of overdues has been 30 per cent or even more. This is an upsetting situation and calls for corrective action. As warned by the Seventh Plan, "If this trend is not reversed and banks are reduced to institutions providing grants rather than recycling scarce resources to get the maximum benefits for the country as a whole, the banking system will be unable to provide more credit to meet the growing needs of the farmers.

5. For a extensive period of preparation, the commercial banks failed to fill the geographical gap in the availability of credit not covered by the cooperatives. The areas which is already developed with various banking facility more focus has been given in such aras whereas less developed rural backward areas are deprived of these services. Besides this in the absence of proper geographical spread of bank branches, it was found that more than one bank operated in the same area resulting in unhealthy competition between one commercial bank and another. The real need was to make available only one alternative source of institutional credit, whereas in reality, the multi-agency system tended to become multi-alternative credit system. However, according to Reserve Bank's Report on Trend and Progress of Banking in India 2016-17, in recent times, gaps across various geographical regions have declined on account of the efforts made towards expanding access to the formal financial system. Under-banked geographical regions such as the North-East as well as the Eastern and Central Regions have recorded noteworthy improvement in population per bank branch.

6. The credit-deposit ratio is an important indicator of the degree of involvement of banks in lending. The rural credit-deposit ratio declined from 1.58 per cent in 1991 to 0.73 per cent in 2001 which shows that deposits mobilised from rural India were being utilised elsewhere. In other words, rural India was financing the other sectors of the economy.

According to Tenth Five Year Plan, this decline in the rural credit-deposit ratio has a direct bearing on the decline of public sector capital formation in the rural sector.

7. Loan disbursal to small and marginal farmers decelerated sharply in the 1990s. The option provided to the commercial banks to meet priority sector lending targets by investing in RIDF (Rural Infrastructure Development Fund) and placing deposits with SIDBI (Small Industries Development Bank of India) reduced the rate of growth of direct finance to small and marginal farmers. As a result, the annual compound growth rate of direct finance (disbursement) to farmers with less than 2.5 acres (marginal farmers) declined from 18.1 per cent in 1980s to 13.0 per cent in 1990s. The annual compound growth rate of direct finance (disbursement) to small farmers (holdings between 2.5 acres to 5.0 acres) declined from 15.1 per cent to 11.0 per cent over the same period.[10]

8. The problem of coordination not only between one commercial bank and another but also between commercial banks and the cooperative credit structure, on the one hand, and between banks and the Government departments, on the other, has assumed serious dimensions. Though under the Lead Bank Scheme, there is a Lead Bank for each district, yet in many cases the number of branches belonging to the Lead Bank is less than the number of branches belonging to other commercial banks put together. If 50 or more branches owned by 10 to 15 banks are to be brought together to implement a common programme, it can well be imagined how difficult the task of coordination and implementation is under such a situation.

9. A study of the impact of banking sector reforms on agricultural credit by Gagan Bihari Sahu and D. Rajasekhar reveals certain disturbing facts as far as bank operations in the post-reform period (the period since 1991) are concerned:

(i) Because of increasing overdue and growing losses to rural bank branches, the banks were directed to shut down their loss making branches or merge them with other banks. As a result of this policy decision, there was a marginal deterioration in the number of rural branches during the era of 1990s;

(ii) The segment of those farmers, borrowing less than 25,000 deteriorated in both the total number of loan accounts and total loan amount during the transformation period;

(iii) Banks providing bigger quantum of funds to activities earning higher interest incomes. This trend was more projecting after the deregulating the lending rate to eventual borrowers;

(iv) The better off farmers amended their access to official credit as compared to marginal farmers; and

(v) Despite the increasing consensus to extend credit facility to agriculture in general, and small and marginal farmers in specific, banks were incapable to lend to those activities with high social return or those groups

of creditworthy borrowers who had been traditionally marginalised in the credit market.

4.4 CO-OPERATIVE CREDIT INSTITUTIONS

The rural cooperative credit institutions in India have been organised into short-term and long-term structures. The short-term cooperative credit structure is based on a three-tier structure, except the States in the north-east region. At the lowest tier are the Primary Agricultural Credit Societies (PACSS). These are organised at the village level. At the second tier are the District Central Cooperative Banks (DCCBS) organised at the district level. At the third and uppermost tier are the State Cooperative Banks (StCBs) organised at the State level. As far as the village level PACSs are concerned, they can be formed by any ten or more than ten persons. These societies generally advance loans only for productive purposes. The repaying capacity of the individual is taken into account while advancing such loans. The DCCBS are of two types cooperative banking union and mixed central cooperative banks. Membership of the former is open only to cooperative societies, while membership of the latter is open to both, individuals and Cooperative societies. The chief task of the District Central Cooperative Banks is to advance loans to the PACSs in times of need so that they in turn, advances loans to the DCCBs in order to augment can fulfil the requirements of farmers. The StCB_ capacity to provide loans to the village level PACSs. It also coordinates and regulates the working of DCCBs. I also provides the link between the Reserve Bank of India and the money market on the one hand and lower levels of cooperative structure on the other. In addition to their short-term credit requirements, farmers also require long-term credit for: (1) effecting permanent improvements in land (for example, making wasteland fit for cultivation, digging of wells or tubewells etc.); (ii) purchasing agricultural implements; and (ii) repaying old debts. To cater to these requirements, long-term credit cooperatives have been set up. These are organised at two levels. These differ from State to State and may be categorised into four types as: (i) the unitary structure in which State Cooperative Agricultural and Rural Development Banks (SCARDBs) operate at the State level through their branches and have direct membership of individuals; (ii) the federal structure in which Primary Cooperative Agricultural and Rural Development Banks (PCARDBS) operate as independent units at the primary level and federate themselves into SCARDBs at the State level: (i) the mixed structure wherein both the unitary and federal types operate in one form or another; and (iv) the integrated structure wherein no separate Agricultural and Rural Development Banks exist and the long-term credit business is undertaken by the long-term section of the StCBs concerned. The rural credit cooperative structure in India is a huge institutional structure comprising 33 StCBs, 370 DCCBs and 93,367 PACSS at the grass root level in the short-term credit structure and 13 SCARDB and 601 PCARDBs in the long-term credit structure as at end-March 2017

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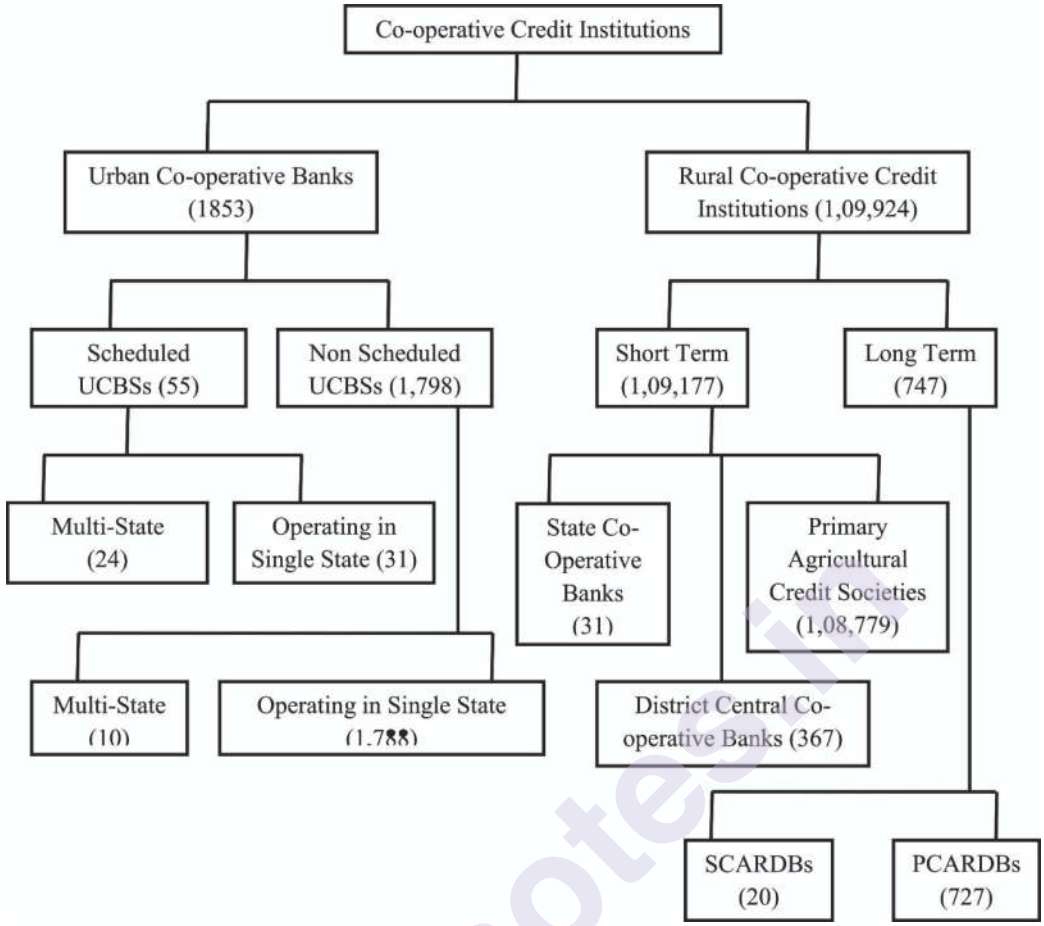
4.4.1 Structure of cooperative credit Institutions



Source: RBI Publication

The Above Chart represent the structure of cooperative credit institution for the era of 2006.

4.4.2 Growing Trend in Cooperatives and Rural Credit:

Although the cooperative movement was initiated in India as far back as in 1904, the role of cooperative credit societies in providing credit was almost negligible in the pre-Independence period. Even after half a century of operations, cooperatives provided only 3.1 per cent of total rural credit in 1951-52. However, progress after Independence has been quite rapid. For instance, the Cooperatives provided 15.5 per cent and 22.7 per cent of total rural credit in 1961-62 and 1970-71 respectively. The amount of short-term and medium-term credit advanced by these societies increased from 23 crore in 1951-52 to 203 crore in 1961-62 and further to 1,425 crore in 1979-80. This shows that over a period of nineteen years (1960-61 to 1979-80) the short and medium term loans increased by more than seven times. There was an impressive expansion in rural credit provided through cooperatives in the Sixth and Seventh Plans. By the time the Eighth Plan started (in 1992-93), the rural credit provided through cooperatives had touched the level of 6,484 crore (which was 53.4 per cent of the total direct institutional credit made available to agriculture).

However, thereafter, while absolute amount of rural credit provided by cooperatives increased, their percentage share in total institutional credit declined.

In 2016-17, cooperatives accounted for 13.4 per cent of institutional credit provided to agriculture (1,42,800 crore out of 10,65,800 crore).

Each and every Committee/Working Group which has reported on the rural credit system in India since the Royal Commission on Agriculture (1928) has reaffirmed that from the point of view of structural appropriateness, there is no alternative to cooperatives at the village level for provision of rural credit. The Rural Credit Survey Committee (1954) eloquently expressed this view in the oft-quoted statement, "cooperation has failed, but cooperation must succeed". Even the All India Rural Credit Review Committee (1969) which recommended the entry of commercial banksinto the rural credit system stated clearly that this was being done to 'supplement' and not 'supplant the cooperative credit structure. In fact, there has been an extensive expansion, both in the coverage and operations, of cooperative credit societies in the post-Independence period. The performance in the issue of loans is also commendable. However, the rural cooperative institutions are beset with many problems ranging from low resource base, high dependence on refinancing agencies, lack of diversification, huge accumulated losses, persistent NPAs (non-performing assets), low recovery levels and various other types of organisational weaknesses. Many institutions have continued to make losses over the years.

4.4.3 Deficiencies in the working of the cooperative societies are as follows:

1. The essence or basic features of cooperative banking system must be a larger reliance on resources mobilised locally and a lesser and lesser dependence on higher credit institutions. However, many PACSS are at present dependent on DCCBs and have failed miserably in mobilising rural savings. Heavy dependence on outside funds has, on the one hand, made the members less vigilant, not treating these funds as their own and on the other led to greater outside interference and control. Overall, this has made the cooperatives a "mediocre, inefficient and static system"

.2. The cooperative credit institutions are plagued by the problem of high level of overdues. These overdues have blocked the process of credit reprocessing since they have substantially reduced the capacity of cooperatives to grant loans. Overdues have also impaired the eligibility of the cooperatives for availing of refinance facilities from NABARD. Not only this, mounting overdues result in increasing the transaction cost for effecting recovery.

3. The rural cooperative institutions have a high level of NPAs (non-performing assets). For instance, as at end-March 2016, the aggregate NPAs of StCBs were estimated at 56 billion which was 4.5 per cent of the total outstanding loans and advances. For DCCBs, on the same date, gross NPAs were at 227 billion, which was equivalent to 9.3 per cent of their

outstanding loans and advances. Gross NPAs of SCARDBS and PCARDBS (as percentage of loans outstanding) were 16.6 per cent and 37.0 per cent respectively as on March 31, 2016.5 This high level of NPAs have seriously impacted the overall 'health' of the cooperative institutions and adversely affected their viability.

4. A large number of rural cooperative credit institutions have incurred substantial losses. As on March 31, 2016, 5 out of 33 StCBs, 51 out of 370 DCCBs, 36,695 out of 93,367 PACSS, 4 out of 13 reporting SCARDBS and 295 out of 601 reporting PCARDBS incurred losses,

5. PACS is the most important link in the short-term cooperative credit structure. However, most of them are too small in size to be economical and viable. Besides, several of them are also dormant while some are defunct

6. PACSS extend credit only to their members. Therefore, a useful indicator for both access to and demand for credit from PACSS is the borrower-to-member ratio. This ratio has generally remained below 50 per cent suggesting that less than half the PACS members access credit from the institutions themselves.

7. Because of their strong socio-economic position and grip over the rural economy, large landowners have cornered greater benefits from cooperatives. This is the opposite of what the planners intended. Farmers having holdings less than 2 hectares in size have received about one-third of total loans advanced by the PACSS while the share of tenants, share-croppers and landless labourers (who are the poorest and, therefore, the most needy) has hovered around only 7 per cent. The restricted access of small farmers to cooperative credit is further highlighted by the fact that only 30 per cent of the farmers holding less than 1 hectare are members of PACSs, whereas almost all the farmers holding above 4 hectares are members of PACSs.

8. There are considerable regional disparities in the distribution of credit by cooperative societies with the six States (Gujarat, Maharashtra, Karnataka, Kerala, Haryana and Tamil Nadu) accounting for more than 60 per cent of the short-term loans to agriculture for a considerable period of planning.

In addition to the above problems, many cooperatives suffer from poor management and lack of enthusiasm and dedication among members resulting in a great deal of inefficiency and poor service to the members. Moreover, affairs of most of the cooperative societies are managed by the large farmers to their advantage in connivance and collusion with government officials while the small and marginal farmers and other poor members generally have no say. This dampens the spirit of the latter and their faith in 'cooperation' is badly shaken. This is a serious threat to the long-run sustainability of the cooperative movement.

4.5 REGIONAL RURAL BANKS (RRB)

The important points of the 20-point economic programme of Mrs Indira Gandhi during Emergency was the liquidation of rural indebtedness by stages and provide institutional credit to farmers and artisans in rural areas. It was in pursuance of this aspect of the New Economic Programme that the Government of India setup regional rural banks (RRB)

The main objective of the RRBs is to provide credit and other facilities particularly to the small and marginal farmers, agricultural labourers, artisans and small entrepreneurs so as to develop agriculture. trade, commerce, industry and other productive activist ties in the rural areas.

"Regional rural banks (RRBs) were considered as institutions that combine the local feel and understanding of cooperatives and the business organisation ability of the commercial banks. In a multi-agency approach for Agricultural and rural credit in India, RRBs have a special place"

Initially, five regional rural banks were set up on October 2, 1975 at Moradabad and Gorakhpur in Uttar Pradesh, Bhiwani in Haryana, Jaipur in Rajasthan and Malda in West Bengal. Each regional rural bank had an authorised capital of Rs. 1 crore, and issued and paid-up capital of Rs. 25 lakhs. The share capital was subscribed by the Central Government (50%), the State Government concerned (15%), and the sponsoring commercial bank (35%). The RRBs though basically scheduled commercial banks, differ from the latter in certain respects:

(a) The area of RRBs is limited to a specified region containing one or more districts of a State

(b) The RRBs grant direct loans and advance mainly to small and marginal farmers, rural artisans, agricultural labourers and others of small means productive purposes.

(c) The lending rates of RRBs should not higher than the prevailing lending rates of co-operative societies in any particular State. The sponsoring and the Reserve Bank of India provide many subsidies and concessions to RRBs to enable the function effectively.

4.5.1 RRBs and NABARD

National Bank has the responsibility to lay policies for RRBs, to oversee their operations, look refinance services and attend to difficulties led by them. The National Bank undertakes all work relating to the establishment of RRBs, administration of refinance scheme, preparation of suitable working policies, monitor their performance, and keep liaison with the Reserve Bank in regard to branch expansion and the statutory inspection of RRBs.

4.5.2 Progress of RRBs: An Evaluation

RRBs have a significant role to play in our rural economy as they have to act as alternative agencies to provide institutional credit in rural areas. In

course of time, they are proposed to eradicate money-lenders altogether. However, they were not set up to replace co-operative credit societies but to complement them. In the last 30 years, RRBs have been active participants in programmes designed to provide credit assistance to identified beneficiaries under the new 20-point programme, IRDP and other special programmes for scheduled castes and tribes. They are also applying discrepancy rate of interest (DRI) schemes for the weaker sections, physically handicapped persons who are usefully employed, can secure finance from RRBS for purchase of artificial limbs, hearing aids. Wheel chairs etc. subject to a maximum of Rs.2,500 per borrower. The RBI conducted a field study in April 1981 on all qualitative features of advancing by RRBs. This study established clearly that, by and large,

(a) RRBs had followed instructions given by RBI and the Government of India regarding loan policies, procedures, etc.

(b) The basic aim of setting up RRBs viz, developing the rural economy by providing credit for the development of agriculture, trade, commerce industry and other productive activities in rural areas was being fulfilled;

(c) RRBs had successfully maintained their image as a small man's bank by confining their credit facilities to the target groups viz., small, marginal farmers, agricultural labourers, artisans and small enterprises for productive activities; and

(d) the recovery position was not satisfactory.

4.5.3 Evaluation of RRBs

According to Reserve Bank of India, "The RRBs have fared well in achieving the objective of providing access to the weaker sections of the civilization to institutional credit but the retrieval position on the whole is not satisfactory"?

At the time they were set up, RRBs were expected to revolutionise rural banking by bringing in all the advantages of commercial banks to the door steps of the small and marginal farmer and the rural artisan They were expected to be concerned with the credit needs of the rural poor. RBI has officially lauded the work of RRBs.

The Narasimham Committee on the Financial System (1991) evaluated the working of RRBs. They were established to provide a low cost alternative to the operation of commercial bank branches but the function ing of the RRBs has given much cause for concem. According to the Committee, there were three basic problems:

(a) On account of the many restrictions placed on the business they could undertake, RRBs had low earning capacity:

(b) the wage and salary scales of RRBs have been rising and, in fact, with the recent award of a tribunal, their scales would approximate those of commercial banks; with the increase in salary scales, an important rationale for the setting up of RRBs had stopped to exist; and

(c) the sponsoring banks were also running their own rural branches in the very area of operations of the RRBs; this had given rise to certain irregularities and to avoidable expenditure on controls and administration.

In the opinion of the Narasimham Committee, the problem was one of improving the viability of RRBs without sacrificing the basic objectives for which they were originally set up. The Government should help in evolving a rural banking structure which could combine effectively the advantages of the local character of RRBS with the financial strength and organisational and managerial skills of the commercial banks.

The Narasimham Committee recommended that commercial banks should segregate the operations of their rural branches through the formation of one or more subsidiaries. Each rural subsidiary should have a compact area of operations so as to facilitate recruitment and deployment of manpower apart from providing the needed thrust in business operations and effective improvements in the control and supervision and information systems.

The Narasimham Committee also recommended that banks should have the freedom to swap rural branches-banks with fewer rural branches in certain areas should be in favour of those banks which have a greater presence.

The rural subsidiaries should be treated at par with RRBs in regard to cash reserves and statutory liquidity requirements (SLR) and refinance facilities from NABARD. All concessions in lending to agriculture and small industry should be phased out, and the would be saving in costs of administration bog through the process of rationalisation. According the rural subsidiaries would become more viable and eventually profitable. The Narasimham Committee left the option to RRBS and their sponsoring banks as to whether the former should retain their identity or whether they should be merged on a voluntary basis with the sponsor banks rural subsidiaries. Such mergers should be considered mainly on commercial and development consideration

In case RRBs retain their identity and continue to function, they should be permitted to engage in a types of banking business. Their focus should be t continue to lend to the target groups but they should not be forced to restrict lending operations to the targe groups alone.

Finally, NABARD should help RRBs to earn higher level of interest income for their surplus cash balances and for their funds presently invested in government securities or in government guaranteed securities for SLR compliance. These measures would help to improve the viability of RRBs.

4.5.4 Khusro Committee on RRBs

The Agricultural Credit Review Committee under the chairmanship of Dr. A.M. Khusroobservat that the weaknesses of RRBs were endemic and non viability was built into their structure. The RRBs d accumulated huge

losses; and in a few cases, the losses had eroded even a part of their deposits. There was thus a strong case for winding up such an insolvent institution. Besides, the RRBs were able to serve the interests of the largest groups in the manner expected of them According to the Khusro Committee, therefore, there was no place for RRBs in the country's rural credit system in the near future and that they should be merged with sponsor banks.

The Government of India considered the recommendations of Narasimhan and Khurso committees The Government was of the view that RRBs, together with Commercial banks and cooperatives have a critical role to play in multi-agency approach to delivery of agriculture and rural credit. In 2004, the Finance Minister announced the Government's intention to double the flow of credit by banks to the agricultural sector in three years. Under this policy the Government took series of steps to improve the strength and functioning of RRBs and thereby enable them to meet their primary objectives.

4.5.5 Restructuring of RRBs

The Reserve Bank of India appointed the M. C. Bhandari Committee to suggest measures for restructuring RRBs. Most of the sanctions of the Bhandari Committee are being applied. The issued share capital of RRBs has been enhanced- - from Rs. 75 lakh to Rs. 1 crore. NABARD monitors the working of RRBs as regards productivity, cash management, advances portfolio and recovery performance. NABARD has planned a package of short-term measures for RRBs:

(a) RRBs are freed from their service area obligations.

(b) They are allowed to increase their non-target group financing from 40 per cent to 60 per cent.

(c) They are e permitted to relocate some of their loss-making branches at agricultural produce centres, yards, mandis, etc.

(d) They are given freedom to open extension counters.

(e) They are allowed to give loans for non-priority sector purposes like loans for consumer durables etc. and

(f) They are allowed to upgrade and deepen the range of their activities to cover non-fund activities.

To implement its 2004 policy, the Government entrusted the task of restructuring the RRBs to RBI and NABARD. The recommendations Prof. V.S. Vyas "Ad vising committee on Flow of credit to Agriculture and Related Activities to restructure RRBs in order to improve their operational vitality and to take advantage of the economies of scale was accepted. After consultation with all concerned parties, state Governments and commercial banks, the Government of India amalgamated 147 RRBs into 46 new RRBs in September 2005. These new banks are sponsored by

19 banks in 17 states. The total number of RRBs have now declined from 196 to 95 (as on September 2007).

The role and financial performance of RRBs have been evolving in response to policy initiatives and changing business environment. Their net loan advances to the agricultural and rural sector have amounted to

March 31, 2006 Rs. 38,520 crores March 31, 2007 Rs. 47,330 crores This was a smart increase of 2.3 percent a year

4.6 NABARD

4.6.1 Meaning and Introduction of NABARD:

NABARD is a Development Bank with a directive for providing and adaptable credit and other facilities for the promotion and development of agriculture, small-scale industries, cottage and village industries, handicrafts and other rural crafts and other allied economic activities in rural areas with a view to promoting

The full form of NABARD is the National Bank for Agriculture and Rural Development. NABARD accomplishes any credit-related concerns for agricultural and rural activities such as their policy, planning, and operations. In general, NABARD handles the funding of any agricultural activities with respect to rural development in India as the institution's primary goal is the nationwide growth of India's rural community. There are three areas NABARD works around: **development, supervision, and finance**. Since its beginning, RBI had shown keen interest agricultural credit and maintained a separate department for this purpose. RBI extended short-term seasonal credit as well as medium-term and long-term credit to agriculture through State level co-operative banks and land development banks.

At the same time, RBI had also set up the Agri cultural Refinance Development Corporation (ARDC) to provide refinance support to the banks to promote programmes of agricultural development, particularly those requiring term credit. The wider role of bank credit from "agricultural development" to "rural development" the Government proposed to have a more broad-based organisation at the apex level to extend support and give guidance to credit institutions in matters relating to the formulation and implementation of rural development programmes. A National Bank for Agriculture and Rural Development (NA BARD) or the National Bank, for short, was, therefore, set up in July 1982 by an Act of Parliament to take over the functions of ARDC and the refinancing functions of RBI in relation to co-operative banks an RRBS.

4.6.2 Resources of NABARD

The authorised share capital of NABARD was Rs. 500 crores and its paid-up capital was Rs.100 crores, contributed equally by the Central Government and the Reserve Bank. The paid-up capital of NABARD was raised from Rs. 100 crores to Rs.500 crores and thtn to Rs. 2,000 crores by

the year 1999. The resources of the National Agricultural (long term operations and stabilisation) funds were transferred to NABARD. World Bank and IDA have also been providing funds to NABARD for implementation of the projects financed by them. The most important source of NABARD's funds are now RIDF deposits, closely followed by market borrowings.

In recent years, there has been considerable improvement in the resource position of NABARD mainly due to:

(a) Significant rise in the deposits under the Rural Infrastructure Development Fund (RIDF) by commercial banks,

(b) use of tax-free bonds through the issue of capital gains bonds and priority sector bonds.

(c) acceptance of priority sector deposits from private banks.

NABARD cannot accept short-term public deposits and, therefore, it has depended on the general line of credit (GLC) from RBI from its inception in 1982 NABARD's dependence on GLC from RBI is quite large and NABARD uses this source to meet short-term credit and working capital requirements. When it comes to aiding rural communities financially, NABARD plays a few distinct roles. They are as follows:

- The NABARD scheme aims to provide funds for India's rural infrastructure to enable long term irrigation practices.
- Generally offering financial services and aid for the development and improvement of rural India.
- Planning, implementing and managing any funding programs for farming and agricultural activities.
- Providing all kinds of funding services for developing and growing food processing units and food parks in designated areas.
- Offers both long term refinance and short-term refinance servicing to its customers. Simultaneously, it provides any direct refinance services to Indian cooperative banks.
- Offering lending services, cold chain, and storage infrastructure to rural warehouses.
- Marketing federations can receive credit facilities from the NABARD scheme.
- Creating new policies for India's rural financial institutions

4.6.3 Features of NABARD Scheme

- It offers support for funding or refinancing.
- The growth of infrastructure of rural communities in India.

- It Creating credit plans available at a district level for these communities.
- It also Offers guidance and support to the banking sector so the latter can achieve their own credit targets for the year.
- This also play vital role in Carrying out the supervision of cooperative banks and Regional Rural Banks (RRBs) in India.
- Devising new projects that aid in rural development of the country.
- Putting into place any of the government's developmental schemes aimed at helping the growth of rural areas.
- Offering training services for handicraft artisans.
- The following loans are available under the NABARD scheme

4.6.4 Types of NABARD Loans

1. Short Term Loans

These are crop-oriented NABARD loans offered by several financial institutions to farmers to refinance crop production. This loan offers farmers and their neighbouring rural communities the assurance of food security. When agro-operations are seasonal, as of FY17–18, the NABARD scheme has sanctioned □55,000 Crores to a host of financial institutions as the short-term credit loan amount.

2. Long Term Loans

These loans are offered by multiple financial institutions for either farm or non-farm activities. Their tenure is much longer than short term loans and ranges from 18 months to a maximum of 5 years. As of FY17–18, NABARD refinanced close to ₹65,240 Crores to financial institutions, covering any concessional refinancing of ₹15,000 Crores to Indian Regional Rural Banks (RRBs) and Cooperative Banks.

3. RIDF or 'Rural Infrastructure Development Fund.'

RBI introduced the RIDF as part of the NABARD scheme as they noticed a shortfall in lending to priority sectors that need support for their rural development. With the main focus being rural infrastructure development, a total loan amount of ₹ 24,993 Crores was disbursed in FY17–18.

4. LTIF or 'Long-Term Irrigation Fund.'

This was introduced as part of the NABARD loans to provide funding for a total of 99 irrigation projects with the disbursal of a loan amount of ₹ 20,000 Crores.

5. PMAY-G or 'Pradhan Mantri Awaas Yojana -Gramin'

Under this financial scheme, NRIDA or the 'National Rural Infrastructure Development Agency' was given a loan amount of ₹9000 Crores to carry out its project of building pukka houses with all essential amenities to needy households 2022.

6. NIDA or 'NABARD Infrastructure Development Assistance.'

NIDA is a sub-program under the NABARD scheme, and it specializes in providing credit to any financially well-to-do institutions or corporations that are state-owned. Hence, NABARD also refinances non-private schemes with the help of this program.

7. Warehouse Infrastructure Fund

Warehouse Infrastructure Fund provides scientific warehousing infrastructure for agricultural commodities. Initial loan of the amount Rs. 5000 was provided by NABARD in the FY 2013–14. As of 31st March 2018, the amount disbursed is Rs. 4778 cr.

8. Food Processing Fund

Under the food processing fund of NABARD, the Indian government has a loan commitment of ₹541 Crores to be disbursed to 11 large scale food park projects, 1 integrated food park project, and 3 rural food processing units in India.

9. Direct Lending

The NABARD scheme has specially sanctioned a loan amount of ₹4849 Crores for cooperative banks, which will assist four state-owned cooperative banks and 58 Co-operative Commercial Banks (CCBs) spread across the country.

10. CFF or 'Credit Facility to Marketing Federations'

This category of NABARD loans promotes the marketing of farm activities by financially strengthening marketing federations. The amount disbursed to such federations as of 2018 was ₹25,436 Crores in total.

11. PACS or 'Primary Agriculture Credit Societies'

NABARD has also launched a unique 'Producer Organizations Development Fund' or PODF for short. The goal is to provide financial support to PACS that mainly operate as 'Multi Service'.

4.6.5 Functions of NABARD

NABARD has a dual role to play: (a) as an apex institution and (b) as a refinance institution. NABARD has inbred its apex role from RBI i.e. it is performance all the functions formerly performed by RBI with respect to agricultural credit. At the same time, NABARD has taken over the

functions of ARDC and thus provides refinance facilities to all banks and financial institutions lending to agriculture and rural development.

(1) NABARD services as a refinancing institution for all kinds of production and investment credit to agriculture, small-scale industries, cottage and village industries, handicrafts and rural crafts and real artisans and other allied economic activities with a view to encouraging integrated rural development;

(ii) it provides short-term, medium-term and long-term credits to State Co-operative Banks (SCR) RRBS, LDBS and other financial institution approved by RBI;

(iii) NABARD gives long-term loans (up to 20 years) to State Governments to enable them to subscribe to the share capital of co-operative credit societies;

(iv) NABARD gives long-term loans to any organization permitted by the Central Government or contribute to the share capital or invests in securities of any institution concerned with agriculture and rural development:

(v) NABARD has the responsibility of co ordinating the activities of Central and State Governments, the Planning Commission and other all India and State level institutions entrusted with the development of smallscale industries, village and cottage industries, rural crafts, industries in the tiny and decentralised sectors, etc.

(vi) It has the responsibility to inspect RRBs and co-operative banks, other than primary co-operative societies; and

(vii) It maintains a Research and Development Fund to promote research in agriculture and rural development, to formulate and design projects and programmes to suit the requirements of different areas and to cover special activities.

4.6.6 NABARD and Rural Credit

1. Credit extended by NABARD : NABARD providesshort-term credit facilities to StCBs for financing Seasonal Agricultural Operations (SAO); marketing of crops; pisciculture activities; production/procurement and marketing activities of cooperative weavers' societies; purchase and sale of yarn by apex/regional societies; production and marketing activities of industrial cooperatives; financing of individual rural artisans through PACS; purchase and distribution of fertilisers and allied activities; and marketing activities. Medium-term facilities are provided to StCBs and RRBs for converting short-term loans for financing SAO to medium-term (conversion) loans and for approved agricultural purposes. Long-term loans are provided to the State Governments for contributing to share capital of cooperative credit institutions. NABARD's refinance policy on short-term SAO (Seasonal Agricultural Operations) for cooperative banks and RRBs lays emphasis on augmentation of the ground level credit flow

through adoption of region-specific strategies and rationalisation of lending policies and procedures.

2. Rural Infrastructure Development Fund : RIDF-I was established in 1995-96 with the major objective of providing funds to State governments and State-owned corporations to enable them to complete various types of tural infrastructure projects. RIDF has been continued on an annual basis. The annual allocation of funds under the RIDF has gradually increased from 2,000 crore in 1995-96 (RIDF-1) to 20,000 crore in 2012-13 (RIDF-XVIII). Aggregate allocations over the period reached 1,72,500crore. In addition, a separate window was introduced in 2006-07 for funding the rural roads component of the Bharat Nirman Programme. Budget allocation for RIDF for the year 2015-16 was kept at 25,000 crore. Loans under RIDF are given for various purposes like irrigation projects, watershed management, construction of rural roads and bridges, etc. The projects, however, have shown considerable time overruns. According to NABARD, the reasons for this are: (1) mismatch between physical and financial disbursements; (ii) the implementing departments (of governments) were not adequately funded by the State governments; (iii) the projects faced problems of land acquisition, forest and environmental clearance; (iv) inadequate monitoring and inability to take corrective action by government officers; and (v) lack of transparency among the key functionaries.

3. Microfinance Innovations : The access to credit for the poor from conventional banking is often constrained by lack of collaterals, information asymmetry and high transaction costs associated with small borrowal accounts. Microfinance has emerged as a viable alternative to reach the hitherto unreached for their social and economic empowerment through social and financial intermediation. It involves provision of thrift, credit and other financial services and products of very small amounts to the poor for enabling them to raise their income levels and thereby improve living standards. In operational terms, micro credit involves small loans, up to 25,000, extended to the poor without any collateral for undertaking self-employment projects. Such loans are provided through microfinance institutions (MFIs). One of the most popular models of MFI has been the Grameen Bank model, developed originally in Bangladesh and replicated in various parts of the world. Under this model, non-government organisations (NGOs) form and develop self-help groups (SHGs) and provide credit to them. Microfinance schemes in India have emerged as major avenues for bringing the poor within the purview of the organised financial sector. In this context, NABARD has played a key role in the development and promotion of SHGS and other microfinance institutions and in providing refinance at special rates. SHG-bank linkage programme has now emerged as a major microfinance initiative. Alongside SBLP (SHG-bank linkage programme), microfinance institutions (MFIs) formed by non-government institutions (NGOs) and non-banking finance companies (NBFCs) are also playing an important role in providing microfinance. Joint liability groups (JLGs) too have emerged as successful non-collateralised credit instruments for financing livelihood activities for small farmers in general and tenant cultivators in

particular. During 2016-17, there were about 1.9 million SHGS credit linked with bank financing of 38,800 crore. The number of MFIs in this year was 2,314 and loans disbursed by them amounted to 19,300 crore. As far as JLGS are concerned, they number 0.7 million in 2016-17 and loans disbursed by them stood at 9,500 crore.

4. Kisan Credit Card Scheme : The Kisan Credit Cards (KCCs) scheme was introduced in 1998-99 to facilitate short-term credit to farmers. Commercial banks, cooperative banks and RRBs are implementing this scheme. Each farmer is provided with a Kisan Credit Card and a passbook for providing revolving cash credit facilities. NABARD has accelerated the pace of issue of KCCs. However, the progress of the scheme is not uniform across States, and is dismal in the north-east. This is attributed to low level of loans issued to farmers availing of crop loans from banks; poor financial position of the cooperatives and RRBs in the region; lack of infrastructure facilities which are a hurdle in he way of augmenting credit facilities, etc.

5. Credit Monitoring Arrangement : With a view to providing cooperative banks with more freedom and discretion to operate in an increasingly liberalised and competitive banking environment, NABARD, in consultation with the Reserve Bank, decided to replace the Credit Authorisation Scheme (CAS) with the Credit Monitoring Arrangement (CMA) with effect from the year 2000-01. The banks will, however, have to follow prudence and exposure norms and have to satisfy themselves about the technical feasibility and financial viability of the proposals, creditworthiness of borrowers, risk management, margin, security requirements, etc.

6. Refinance under SGSY : NABARD has issued operational instructions to RRBs and cooperative banks with regard to implementation of Swarnajayanti Gram Swarozgar Yojana (SGSY) on similar lines as was issued by the Reserve Bank for commercial banks. Policy guidelines for refinance support under SGSY were also issued to all financing banks. Banks have been, inter alia, advised to evolve suitable norms for grading of SGSY groups at different stages of financing on the illustrative parameters indicated by NABARD.

7. Cooperative Development Fund : NABARD set up the Cooperative Development Fund (CDF) in 1993 with the objective of strengthening the cooperative credit institutions in the areas of organisational structure, human resource development, resource mobilisation, recovery position, etc. The assistance is provided to StCBs/SCARDBS/ CCBS/PCARDBS by way of a grant or a soft loan or both.

8. Supervision : NABARD is the supervisory authority for StCBs, CCBs and certain other State level co-operative institutions such as SCARDBs. Accordingly, NABARD undertakes periodic on-site inspection of these organisations and since 1998-99 this has been supplemented by a system of off-site investigation. The three main functions of NABARD are e refinancing, institutional development and inspection of client banks.

4.7 MICRO CREDIT THROUGH SHG IN INDIA

4.7.1 Introduction :

Micro credit has emerged as a noticeable credit channel to the poor as their access to conventional credit channels is constrained by the prerequisite of collateral and high contract cost. Micro finance is routed through self-help groups (SHGs). Over the years, SHG-Bank Association Programme which contains commercial banks, regional rural banks and co-operative banks-has emerged as the major micro finance programme in the country. The focus under SHG-Bank Linkage Programme is largely on those rural poor who have no supportable access to the formal banking system. The target groups, therefore, largely comprise small and marginal farmers, agricultural and non-agricultural labourers, artisans and craftsmen and other poor engaged in small businesses like vending, and hawking. The programme has been providing the rural poor access to the formal banking system and has attained several indicators in terms of gender sensitisation, empowerment and poverty alleviation. The programme provides thrift linked credit support to the members of SHGs. While the programme directly benefits the members, it also helps banks in reducing their transaction costs as well as risk in delivering small loans. The programme has now presumed the form of a micro finance movement in many parts of the country and has started making inroads in the resource poor regions of the country as well.

4.7.2 Growth of SHG :

SHG-BLP and MFIs. The most important initiatives for financial inclusion are the SHG-BLP (Self-Help Group Rank Linkage Programme) and MFIs (microfinance jestitutions). The SHG-BLP of NABARD started as a pilot project in 1992. There are now more than 70 lakh SHOs under this programme, comprising a large number of poor households, who are accessing credit through commercial and cooperative banks. NABARD has recently initiated the process of repositioning the SHG-BLP as SHG2. This approach is basically aimed at encouraging the poor to save. It includes SHGS introducing voluntary savings in groups or banks encouraging SHG members to open individual bank accounts for depositing their surpluses. This approach s also aimed at preparing the low literacy and low-income clients to progressively move from community banking endeavours to individual banking. Following the RBI guidelines in 2000, commercial banks including RRBs have been providing funds to MFIs for online lending to poor clients. Though initially only a handful of NGOs were into financial intermediation using a variety of delivery methods, their numbers have increased considerably. MFIs have been playing an important role in substituting moneylenders and reducing the burden of formal financial institutions. However, in 2010-11, this sector ran into difficulty with reports of unfair practices by MFIs to recover loans and a number of farmer suicides attributed to these practices. Accordingly, the Reserve Bank of India set up a committee headed by Y.H. Malegam to study and advise on the microfinance sector. Based on the recommendations of the Malegam Committee Report, the Reserve Bank of

India announced the creation of a separate category of Non-Banking Financial Company - Micro Finance Institution (NBFC-MFI) in a circular issued on December 2, 2011.

4.7.3 Operational Function of SHG :

SHG-Bank Linkage Programme was officially launched in the year 1992 as a flagship programme by National Bank for Agriculture and Rural Development (NABARD) and aptly supported by the RBI through its policy support. The objective is to encounter the financial needs of the poor by linking SHGs with the formal credit agencies. The programme envisions organisation of the rural poor into SHGS for building their dimensions to manage their own finances and then transfer bank credit on commercial terms. The poor are stimulated to voluntarily come together to save small amounts regularly and extend micro loans between themselves. Once the group accomplishes required maturity of management larger resources, the bank credit follows. A self-help group is a group of about 15 to 20 people from a homogenous class who join together to address mutual issues. They include voluntary carefulness activities on a regular basis, and use of the collective resource to make interest-bearing loans to the members of the group. In the progression of this process, they imbibe the fundamentals of financial intermediate-n and also the basics of account keeping. The members also learn to grip resources of size, much beyond their distinct capacities. They begin to appreciate the fact that the resources are limited and have a cost.

Once the group is stabilised, and shows established financial behaviour, which generally takes up to six months, it is considered for linking to banks. Banks are encouraged to provide loans to SHGS in certain multiples of the accumulated savings of the SHGs. Loans are given without any collateral and at interest rates as decided by banks. Banks find it easy to lend money to the groups as the members have already attained some financial correction through their carefulness and internal lending activities. The groups choose the terms and conditions of loan to their own members. The peer pressure in the group ensures timely repayment and becomes social collateral for the bank loans.

The SHG-Bank linkage programme, conceptualised and launched by NABARD in 1992, attempts to link the poor in large numbers to the formal banking sector in a sustainable and cost-effective manner. The programme rekindled the basic human trait of self-worth of every member in a group. By handling savings and internal lending, the groups mature to acquire credit worthiness for themselves and earn self-assurance of banks for loans by providing trust as collateral. This has emerged as the prime micro finance model in the country and is now a proven method of financial inclusion, providing unbanked rural clientele access to formal financial services from the existing banking system. This SHG- Bank linkage model has emerged as the largest and fastest micro finance outreach programme in a cost effective manner in the world.

The social intermediation in forming and nurturing the self-help groups is handled by a large number of non-governmental organisations, voluntary agencies, community based organisations like farmers' club, local bodies, field level functionaries of government agencies, socially committed individuals and bodies and banks themselves. Commercial banks followed by RRBs and co-operative banks also play an important role in credit linking the SHGS. NABARD provides grant assistance to various partner agencies in promoting and nurturing of SHGs and extends refinance support to banks against their loans to SHGS. NABARD also takes lead in providing financial and other support for capacity building, sensitising and aiming the personnel of all the partner agencies including banks.

With the success of the SHG-Bank linkage programme, linkage of Micro Finance Institutions (MFls) with the banking sector was promoted by NABARD to enable on-lending by MFIs to SHGS and individuals.

4.8 IMPERFECTION IN RURAL CREDIT MARKET IN INDIA

1. It has not produced desired results in terms of the direction, quantum and quality of the flow of credit.

2. It is distressed by disturbing high overdue, bad debts, loan defaults, unviability, low profitability, overburdening of staff, declining control and deteriorating customer services. It is projected that the over dues of credit institutions have increased from Rs. 2,818 crores to Rs. 9,661 crores during 1983-93.

3.The complex tiering of funds through RBI-NABARD-Commercial Banks-State Cooperative Banks (SCBs)-District Co-operative Banks (DCBs)-Primary Agricultural Credit Societies (PACS), has tended to unduly increase the cost of banking.

4. Structures of rural credit markets in developing countries may be understood as responses to the problems of adverse selection, moral hazard and enforcement. Imperfect information in this sense creates problems from the viewpoint of controlled Pareto efficiency. In Indian case too, information inadequacies have contributed to inefficiencies like high transaction costs and low recycling of credit.

5. From the institutional viewpoint, role of an appropriate institution as an enforcer and source of incentives and promoter and persuader of saving is essential for development. The institutional design should serve to promote and facilitate functioning at the levels of both the leaders and borrowers. This factor seems to have been largely overlooked in the Indian case. Motivating to perform has not been given due importance.

6.Directed credit programmes and subsidized lending have badly affected viable operative of credit troubling units. The entire workout has largely come to be considered by tier up of funds from above to borrowers who often tale as a gift that need not be returned.

4.9 QUESTIONS

Q1. Explain the restructuring of RRB.

Q2. What are various functions performed by NABARD?

Q3. What are the criticism of Commercial banking with respect to Rural Credit?

Q4. How does Micro credit operate?

Q5. Explain in detail about rural cooperative credit system.

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Module III

5

LABOUR MARKETS – I

Unit Structure:

5.0 OBJECTIVES

- To study the Concept of work, skill & productivity.
- To understand the Methods of measurement of employment and unemployment.
- To study the meaning of FREE & UNFREE labour.

5.1 CONCEPT OF WORK, SKILL AND PRODUCTIVITY

'Work' is defined as engagement in economic activity i.e. any activity resulting in production of goods and services that add value to the National Product. As per United Nations System of National Accounts (UNSNA) 1993, all production of goods irrespective of whether it is used entirely for self consumption, by the producer, household or it is partly or fully sold in the market and irrespective of its production and distribution is legal or illegal fall within the production boundary.

However, in case of services, only those services that are at least partly marketed; fall within production boundary. Consistent with the India system of National Accounts (INSNA), engagement in production of goods entirely for market by the producer / household is considered in primary sector. Further, processing of primary products entirely for self consumption is also not covered in the ambit of economic activity. However, own account construction (building of house for one's own use) is included in economic activity for employment and unemployment surveys. Thus, we understand that by now, definition of work in NSS (National Sample Survey Employment & Unemployment surveys) is not fully synchronized with the 1993 UNSNA.

It may be noted that speed of work controls the quantity of labour. One labour who works at a double speed completes the supply of other labour.

This speed depends upon various factors such as education, health, climate and skill having impact on tendency of work.

Skill of work is related to the proficiency of the labourer. Skill is related with the kind of work that how much wastage is done, how many accidents are committed and many other factors are considered to know the efficiency of work. Augmenting the skill endowments of labour force is essential for improving productivity and output. Traditionally, the skills are obtained or skills come from, 'Learning by doing' or practice makes man perfect. However, recent trend prices that focused training improve the capabilities of labour. Much of workforce is illiterate, which fails to understand the processes, system and standards and therefore basic education upto secondary schooling is at least must in improving skills. The skilled labour force improves the quality of employment and the productivity of labour.

Productivity may be defined as the ratio of the output of goods and services to the in parts human as well as others used in production process.

i) Labour productivity, the best known measure of factor productivity reflects the influence of various factors (such as capital quality of labour technological change and organisation of production) that affect the productivity.

Based on inputs to production, labour productivity can be decomposed into two components:

a) Productivity due to capital deepening (i.e. improvements in physical capital available per labour unit, and ;

b) Multi factor productivity (TFP) or Total Factor Productivity (TFP) : It is the contribution other than that emanating from the increased use of inputs (capital and labour). TFP than measures the increase in efficiency with which resources are being used through innovations and improved management techniques to increase the output from a given contribution of capital and labour.

Following are seven determinants of productivity growth:

1) The rate of technological progress.

2) Investment in physical capital such as machinery, equipment and structures.

3) The Quality of the workforce.

4) Size and quality of the natural resource base.

5) Industrial structure and intersectoral shifts.

6) The macro economic environment or aggregate demand conditions.

7) The micro-economic policy environment.

Harris had identified three proximate drivers (The Big Three) of productivity growth.

1) Investment in machinery and equipment

2) Education, training and human capital

3) Openness to trade and investment.

While the proximate drivers may not be exhaustive, they do point to the critical elements of an enabling public policy for enhancing productivity and employment.

The ICT can have a positive impact on growth not only through a surge in ICT investment, strong productivity effects from the ICT-producing industries but also through a more productive use of the ICT in the rest of the economy. The ICT equipments enable new organizational models and other innovations in the production process as well as the production of new goods andervices. Thus, even if the ICT investment goods are standard products, they enable firms to innovate and accumulate firmspecific capital with positive spillovers on production.

Most of the empirical studies on productivity in India have focused on the growth in the TFP in the manufacturing sector. These studies suggest a decline in the total factor productivity growth (TFPG) till 1970s, with a turnaround taking place in mid – 1980s persuent to the reoriented trade and industrial policies and improved infrastructure performance.

The transition to high-growth phase occurred ground 1980 a full decade before economic liberalization due to pro-business policies that started being adopted during the 1980s. Various incremental reforms in the industrial sector during the 1980s appear to have had a positive impact on the productivity during the 1980s. The trends in productivity in past reform period show significant increases in productivity. At the sectoral level, there is evidence of improved TFPG for the exporting sectors vis-à-vis the non exporting ones. (Dholakia and Kapur, 2001; Unel, 2003). More recently, Kato (2005) finds that the smaller the market share of a firm, the higher is its productivity growth.

Recently Virmani has attempted to measure the TFPG for the Indian economy as a whole. His estimates suggest that the TFPG has followed a V-shaped pattern since independence, with near flattening from the late 1980s. Growth in the TFP decelerated since early 1950s, when it was about 2.5 percent till mid-1970s when it fell to less than 0.5 percent. Subsequently the TFPG recovered and peaked at about 2.6 percent in 1988-89 and has broadly remained around these levels since then.

5.2 METHODS OF MEASUREMENT OF EMPLOYMENT AND UNEMPLOYMENT

Accelerating growth and expanding employment opportunities are the goals of economic policy. To provide productive employment for the

continuing increase in the labour force is an integral part of our objective of inclusive growth. Higher growth leads to enhanced employment. However, the question that arises is at what rate? Employment elasticity with respect to output measures the percentage increase in employment due to the percentage increase in output. The overall employment elasticity of an economy is the combined effect of the sectoral employment elasticities and the composition of output. It is also true that as an economy grows, employment elasticity may fall which is in part a reflection of the improved productivity of labour. Improved productivity of labour is necessary in order to sustain high G.D.P.

A development programme aimed at expanding opportunities must focus on three factors; growth productivity of labour and relative price of labour and capital. The structural changes that occur in the process of growth have also an impact on employment trends. In India, we find two important features of these trends.

1) Structural transformation in India followed the typical pattern of agriculture yielding to industry and industry to services. However, the share of services sector exceeding 60% of GDP shows that, economic development has shown 'jump' to the third stage of development.

2) The structural change in India shows another significant change. In the pattern of sectoral shares of employment. While the share of agriculture in GDP has declined significantly from 52% in 1951 to 21% in 2001, the share of employment has declined only marginally from 65% in 1951 to 57% in 2001.

Conversely, even though services sector account for nearly 51% of output in 2001, its share in employment was only 22%. The pace of employment shift has lagged behind the pace of sectoral shift in output. This is particularly striking because services sector employment elasticity is higher than employment elasticity in agriculture. V.K.R.V. Rao called this as 'Structural Retrogression' of economy.

5.3 FREE AND UNFREE LABOUR

'Free labour' implies voluntary entry of a labourer into employer employee relationship as per his choices at the selected and accepted terms and conditions of payment and work. On the other hand, unfree labour denotes the conditions of involuntary entry by compulsion; may be f economic or social condition learning no choice to the labour for term and conditions of work and place. Unfree labour is also called as 'Forced labour'. The conditions of unfree labour are precisian and the living is quite vulnerable. Often the unforced labour results into situation like 'Bonded' system or 'Slavery' system and it is a bane on humanity.

Unfree labour has received an unusual amount of official attention during the last few years. the continued existence of slavery and slavery-like practices has also received renewed official attention, including that of the UN Commission for Human Rights and its Working Group on contemporary Forms of Slavery. Most notable among UN Organisations

is, however, the International Labour Organisation (ILO), which has launched a campaign against 'Forced labour', and , as part of this, has ventured an estimate of the extent of forced labour world-wide.

The recent ILO report 'A global alliance against forced labour' (ILO 2005a) represents the most coherent and most empirically informative international report on forced labour.

The International Labour Organisation is the UN agency responsible for international labour standards, and is the only international organisation pursuing labour rights issues at the international level. Its approach to labour issues is, by definition, consensual. Not only is it a UN organisation, it also has a tripartite set up, encompassing governments, employees and labourers; a set up which is unique within the UN system.

The ILO fight back took place through a reformulation and refocusing of its efforts, centered on the 1998 ILO 'Declaration on Fundamental Principles and Rights at work', following which the main ILO objective become 'decent work for all'. This has been pursued through a campaign for a 'fair globalisation', internationally, regionally, sector specifically. Central to this were four 'core labour standards', namely : freedom of association and the right to collective bargaining; elimination of all forms of forced or compulsory labour; effective abolition of child labour and the elimination of discrimination in respect to employment and occupation. An ILO special Action Programme to combat Force Labour exists, and has published several survey-based reports within the field of forced labour.

The ILO defines forced labour as work or service extracted from any person under the menace of any penalty and for which the said person has not offered himself Voluntarily.

In other words, forced labour involves involuntary entry to the labour relation, and coercion to remain within it, this is the internationally, legally accepted definition of forced labour types of forced labour, including slavery, serfdom and debt bondage. 2005 report 'A Global Alliance Against Forced Labour (ILO 2005a) seeks to create public awareness about the phenomenon of forced labour, through quantifying it.

The 2005 report calculated that a minimum of 12.3 million people in the world work as forced labour. This is the first official estimate of the magnitude of forced labour world wide, and it is emphasized that this is a minimum estimate. The main region for forced labour by far is Asia and the Pacific, with more than three quarters of all forced labourers and with the highest incidence of forced.

Following are the different forms of forced labour.

1) Private Economic Exploitation : It is most commonly found and nearly ⅔ rd of all forced labour belongs to this type. This includes unfree labour of bonded labour type, forced domestic work or forced labour in agriculture and remote rural areas.

2) Forced Labour Imposed by the state : This includes compulsory recruitment of citimen in defense or any other government led activities learning little freedom of choice of acceptance to them.

3) Forced labour for Commercial, sexual exploitation : Regional patterns are observed all over the world about these types of unfree labour.

It is very difficult to quantify the unfree labour. According to Bales (1999) the estimate of forced labour globally is more than twice the size of that of ILO minimum estimate (27.9 million against 12.3 million). Within the unfree labour category debt bonded labour dominates in many regions of South Asia and Latin America. In Sub-Saharan Africa, previous Master-slave relations have been modernized but not been replaced with free labour relations in some regions, whilst in – conflict and post. Conflict areas, abductions followed by slave-like relations or enrolment as child soldiers are the main forms of forced labour.

The ILO analysis of forced labour is however restricted. Trafficking of unfree labour is labelled as, 'the underside of globalization'. Commodity chain links between global retailers, suppliers and labour contractors, leading to employment of forced labour at the end of global chains so as to compete on cheap and stable production are noted. It is stated that, in order to compete on the world market, employees in transition countries may make use of unfree labour : and it is pointed out that deregulation of labour markets, downsizing of labour inspection.

In the main ILO report on unfree labour, little is done to link unfree labour to present day capitalist development and to the general ILO strategy for decent work in this context. The strategy of the ILO is to isolate the 'worst forms of "un-decent labour"', so that these incidents can be dealt with in isolation, without challenging the overall system that created the conditions for their occurrence in the first place. The focus is on dealing with what is seen as 'exploitation', namely unfree labour, child labour etc. standard 'free' labour relations on the other hand, are not seen as exploitative. This means that the ILO Report depoliticizes unfree labour issues, isolates them as an 'unnatural' element of capitalism.

THEORETICAL DEBATE ABOUT UNFREE / FORCED LABOUR

The discussion regarding forced labour and capitalism is observed around existing debates between Tom and Jairus Banaji. There are important similarities between Brass, Rao and Banaji. They all locate their work in relation to that of Marx, and distance themselves from liberal views that argue that labour relations such as bonded labour are free and equal, since they are freely entered, contractual relations. They all share the basic Marxist understanding that the sheen of equality provided by contracts covers the fact that all labourers are exploited through their production of surplus value. Exploitation is not something reserved for forced labour, and free labour does not exchange equal values through the exchange of their surplus value producing labour power for wages as liberal economists and the ILO among others would have it.

Regarding the relationship between forced labour and capitalism, for Marx, commodification of labour power and thus, free labour were essential to capitalism. The commodification is based on labour being doubly free: freed, or dispossessed, from the means of production, and free to sell his / her labour power to any capitalist who wishes to buy it. It is axiomatic for Marx that labour will be commodified and hence doubly free, in the above sense under capitalism.

In the debate on Free/ unfree labour, Brass proposes that unfree labour and capitalism are compatible. He argues that the creation of unfree labour is an essential part of modern capitalism. It represents class struggle from above, as labour is displined through being robbed of / losing the control of the sale of its own labour power, and labour power is thus cheapened.

Brass theory provides a general and seemingly progressive framework for understanding present – day unfree labour relations. Empirically, he focuses mainly on debt bondage relations, where the labourer mortgages his / her future labour power against a loan from a creditor employer. It enables him to argue that debt based labour relations are unfree, irrespective of duration and ideological dressing. This enables him to conceptualize new forms of seasonal labour relations in capitalist agriculture in India as being unfree, as the relations involve the mortgaging of future labour power against loans. This is discussed in detail in the next section 'employer – employee relationship'.

5.4 QUESTIONS

Q1. Define and explain the concepts of work, skill and productivity.

Q2. Explain how employment and unemployment can be measured.

Q3. Differentiate between Free and Unfree Labour.

6

LABOUR MARKETS – II

Unit Structure:

6.0 OBJECTIVES

- To study the types of Employer – employee relationship
- To study the Determinants of wage rates
- To study the Labour market segmentation
- To study Gender-Based Discrimination and Wage Differentials
- To study the contract labourers in India

6.1 TYPES OF EMPLOYER-EMPLOYEE RELATIONSHIP

The employer-employee relationships have undergone changes over a period of time. Many factors determine this relationship. Production methods, land reforms, alternate occupation increased political power of lower castes are some other factors.

1) During colonial times, bonded labour shed the vestiges of patron – client relations which used to include certain modest benefits for the labouers.

2) In the later part of colonial period it was replaced by hand nosed modern economic relations more exploitative than those previously existed.

3) After independence most classical bonded labour relations ceased to exist, rural employers turned to new, more effective labour relations often

involving migrant labour instead of employing the ex-bonded laboure as free labour.

4) In many parts of rural India, more or less free labour relations have been developed within agricultural. As methods of production have moved away from labour intensive economic activities bondage have been modernized into a relation called as, 'neobondage'.

1) Neobondage involves the tying in of prospective labourers through loans / advances given during the lean season before the start of seasonal employment relation. Labour here is seasonal migrant. The migrant labour force tends to be more effectively exploited through longer working hours, lower wages and less labour unrest. During employment period, he may only be paid a minimum allowance while the overall payment is settled at the end of the seasonal employment. This compels the labourers to stay in employment after advance has been paid off. This kind of relationship is identified in agriculture especially in sugarcane, rice mills, construction, family bondage is also common, caste relations are also an issue. The vast majority of bonded labourers continue to belong to the lowest, ex-touchables caste groups and tribes. Due to economic compulsions, men enter into neobondage female bonded labourers and children may or may not enter the relationship voluntarily.

However, it needs to be understood that advances are common place even if free employment relations, due to poor economic position and also because such advances provide an incentive for employer to keep the labourers in employment. In the recent research it is found that labourers viewed an advance from an employer as the preferred option, compared to other types of loans as such, relation offered a chance to pay off the debt.

2) Jobber / Contractor labour relation: Many a times, a bonded labour relation is organised through jobbers/contractors, who will provide the advance, organize the migration and be the manager at the work place. The jobbers would be working for one ore more employers or for a main jobber, who would provide the advances and rely on them to deliver the labour. The labourers are in the long term debt relationship with the jobbler& not with the end destination employer. As the poor labourers have debt bondage.

3) Contract labour: The official classification of work under taken through jobbers or labour contractors is contract labour. Contract labour is wide spread. An estimated 10.7 million labourers in construction alone are contract workers, comprising 83% of all construction workers. Contract work is widespread in unorganized sector activities such as stone quarrying, beedi rolling, rice shelling and construction.

4) Long term debts and Casual labour relations: The poorer the labourer is less alternative opportunities of employment, he will have. This condition makes him enter into long term debt bondge. Recently, if has been found that labourers manage to avoid the long term debt bondge with more alternative job opportunities. The long term debts and casual labour relations are seen in Tamilnadu and they also are seen alternate over time

even in Andhra Pradesh. Here, the jobbers tend to be from the area of the origin of the migrant labour and form part of power relations built into the local social order. This enables them to enforce loan or advance based labour relations over several years. Long term debt bonded labourers compare themselves to the traditional bonded farm servants and they are free to change the jobber fairly and regularly.

5) Debt bondage without jobber: There are causes of debt bondage which do not involve debt jobbers. This is particularly the case where no migration is involved, i.e. where employers are in a position to enforce debt related employment pledges through local power relations. The old style debt bonded yearly relationship in agriculture is of this kind.

6) Other forms : Milder forms of unfree relations are also found, such as share cropper conditioned on the acceptance by the share cropper of labour service duties, performance of some unpaid labour throughout year in order to be given work during the harvest season, free labour service in exchange of grazing land etc. Some involve the actual confinement of the labourers in the work location or sometimes under the armed guard.

The above description about the various types of relationship between labour and employer points towards the degree of freedom or unfreedom and inequality over and above what normally102 called as standard free labour relation. The distinction between milder and harsher forms of bonded labour points towards a continuum from more or less free relations to fully unfree relations i.e. the degrees of unfreedom and / or inequality unlying the labour relation. The catagorisation of such type reflects the character of labour relations.

It is difficult to say if the 'low route' of development in India has involved an increase or decrease in bonded labour relations. What is certain is that while the old style, year – round, intergenerational bondage relations have lost their overall importance, the development of new bonded labour relations, and other labour relations involving degree of unfreedom, compatible with capitalism has been facilitated.

6.2 DETERMINANTS OF WAGE RATES

Determination of wage rate is a basic problem of an organisation. The central point of all the labour problems in an organisation is the wages and salaries. This question determines the capacity of the production, the rate of productivity, efficiency of labour cost of production, sale price of commodity, profits of the organisation, and industrial peace in the country. Wages can broadly be divided into three categories – Living Wages, Minimum Wages and fair wages.

1) Living Wages : Living wages means the wages that may be sufficient to provide for the bare necessities as well as certain amenities for the employees. It means the level of wages that may be sufficient to provide for the bare necessities and such amenities that are considered necessary for the well-being of the employee and his family members in accordance with his social status.

Article 43 of the constitution of India states that. The state shall endevour to secure by suitable legislation or economic organisation or in any other way to all workers, agricultural, industrial or otherwise work, a living wage, conditions of work ensuring decent standard of life and full enjoyment of leisure and social and cultural opportunities.

The term Living Wages has been defined as under : The Fair Wage Committee Report, "The living wage should enable the male earner to provide himself and his family not merely the base essentials of food, clothing and shelter but a measure of frugal comfort including education for the children, protection against ill health, requirements of essential social needs and measures of insurance against the more important misfortunes against old age".

Thus, Living Wage must provide not only for the bare necessities, such as food, clothes and shelter, but also for some conforts and amenities by current human standards such as – traveling, health, education of children, social needs, old age and recreation etc.

2) Minimum wages: According to Fair Wages Committee, "Minimum Wages should provide not only for the bare necessities of a worker. It should also provide for the maintenance of efficiency of the worker. From this point of view, minimum wages must be sufficient to provide for all requirements of education, health and other essential amenities".

Minimum Wages means the minimum payment to worker so that he may be able in providing for basic needs for himself and his family members and to maintain his working efficiency only some other scholars are of the new that minimum wages should also provide for minimum education, medical facilities and other amenities. According to them, minimum wages should ensure a minimum standard of living considering the health, efficiency and well being of the worker.

Objectives of Minimum Wages:

1) To maintain the efficiency of workers, particularly in the industries where the workers do not get fair wages.

2) To discourage the strikes, lock-outs and industrial disturbances so that industrial peace maybe maintained.

3) To check the unhealthy competition among entrepreneurs.

4) To protect the interests of workers, particularly when the workers are not organised.

5) To strengthen the labour unions.

6) To check the exploitation of workers by the entrepreneurs.

7) To increase the efficiency of workers.

8) To help the workers in maintaining and increasing their standard of living.

9) To provide economic and social justice to the workers.

10) To check the unhealthy competition among the workers.

11) To improve the management system.

12) To improve the productivity of workers.

Methods of minimum wages:

There are two methods to determine the Minimum Wages. These methods are as under :

1) Indirect Method : The Government determines minimum wages keeping in view the following provisions of Minimum Wages Act.

a) Government determines minimum wages for the workers working in government departments. Following the wages so determined by the government, the minimum wages in the private sector industries is also determined.

b) While working on contract, the government imposes a condition of minimum wages in contract deed.

2) Direct Method : For the determination of Minimum Wags, the Government may take following steps :

a) To Appoint Wages Boards : State government may also appoint wage boards for the determination of minimum wages. These boards may be of two types

i) Wages boards appointed for the purpose of advising government on the issue of minimum wages. It is important to know that these boards are responsible to give their advice only.

ii) Wages boards that are appointed to determine the minimum wages after considering the circumstances of the industry. Representatives of both the workers and employers take part in these boards.

b) To Determine Minimum Wages : Under this method of wages determination, the state Government may determine minimum wages for the workers working in different industries.

After determining such wages the Government issues orders to the enterprise to pay these wages to the workers working in their industries. This method is widely adopted in India.

Principles of Determination of Minimum Wages :

Following are the principles that should be followed while determining minimum wages.

1) Principle of Paying Capacity of the Industry : While determining the minimum wages for the workers, paying capacity of the industry should

also be considered because the wages to be paid should not prove a burden upon the industry.

2) Principle of Equality : According to this principle, all the workers doing same work and having equal ability and experience, must be paid equal wages. This principle does not man equal wags for all. It only means that all the workers in the same industry having equal efficiency and experience should get equal wages.

3) Principle of Standard of Living : While determining minimum wages, the principle of standard of living, should also be followed. The wages should be enough to provide for the bare necessities and essential amenities to the workers. From this point of view, different wages may be determined for different places and different industries. In addition to this, rates of wages should be modified from time to time.

3) Fair Wages : It is very difficult to give a precise definition of Fair Wages because it varies from country to country and from time to time. Therefore, it is possible that an amount of wages that is fair for one country at one time may not be fair for another country or for next time. Therefore, fair wages can be determined only after considering the specific circumstances of the industry for which the wages are to be determined. The term 'Fair Wages' has been defined as under.

Prof. Marshall, "Rate of wages in a particular industry can be regarded as fair wages only when it is almost equal to the wages which is paid in other industries for the works which are of the same caliber and equally difficult and require almost equal efficiency and training".

Prof. Pigou, "Fair wages is the wages which is paid at the rate which is being paid to the workers of same status in the enterprises of the same type and of near-by areas".

On the basis of analytical study of above definitions, it can be concluded that Fair Wages is the amount of wages that may provide the basic needs and amenities to the workers according to their social status.

Fair Wage is more than minimum wages. Fair Wage is determined after considering several factors such as the wages paid for similar work in other trades and industries requiring same amount of ability and adjustment, productivity of the labour and paying capacity of the industry. Fair Wage is determined between the lower and upper limits. The lower limit of wage is the minimum wage and the upper limit is the capacity of the industry to pay.

Determination of Fair Wages:

The rules and the problems in the process of determination of Fair Wages are as follows :

1) Determination on the Basis of Paying Capacity of the industry : According to this technique, fair wages should depend upon the paying capacity of the industry. Generally, the paying capacity of on industry

estimated on the basis of net profits of the enterprise but following are the difficulties in adopting this method as the base of determination of fair wages.

i) The amount of profits may be substantially reduced by increasing the provision for depreciation and other provisions and reserves.

ii) Similarly, the amount of profits may be increased or decreased by increasing or decreasing the expenses.

Considering these difficulties, Fair Wages Committee has suggested that the paying capacity of an enterprise must be related with the current rate of wages which depends upon,i) Purchase Price ii) Quantity of Production iii) Profit of the Enterprise iv) Unemployment.

2) Difficulty in the Execution of Fair Wages:

i) As all the employees work with the same efficiency and ability

ii) It is necessary that the working conditions of all the workers getting equal rate of wages must be similar.

3) Determination on the Basis of Productivity of the industry :

Rate of Wages is closely related with the productivity of the labour. Productivity of the labour does not depend upon the efficiency of labour only. It depends upon many other factors also, such as – managerial capacity, financial management and technical facilities etc.

Therefore, these factors must also be considered while determining the rate of wage on the basis of productivity and labour.

6.3 LABOUR MARKET SEGMENTATION&GENDER-BASED DISCRIMINATION

Labor market in India is heterogeneous and fragmented. Entry in some of the segments is restricted. The important causes of segmentation are discrimination, supply side factors and modernization of productive activities. Indian economy is a dualistic economy with the modern and traditional sectors operating side by side. The modern formal sector is concentrated in the cities whereas the traditional informal sector is concentrated in ruralareas. While the formal labor market is protected by social security legislation and is largely unionized, the traditional labor market is not unionized and also lacks legal protection. Wage rates and incomes vary widely between the formal and informal labor markets.

6.3.1 Urban Labor Market

According to LK Deshpande, based on his study of labor market in Mumbai (Segmentation of Labor Market: A Case Study of Bombay, 1985), there are basically three segments. These are the factory sector, small establishments sector and the casual labor sector. Labor market segmentation is carried over from the rural areas to the urban areas and the

urban labor force in India is largely a migrant labor force whose roots are found in the rural areas. The labor force can be distinguished on the basis of ownership of their assets. Those who do not own or own less physical and human capital find employment in the peripheral market as marginal workers. Others who are better off in terms of ownership of assets enter into the better sections of the urban labor market. Lack of occupational and inter-sectoral mobility keeps the majority of the poor in the peripheral labor market. The real earnings of the factor labor are the highest followed by the earnings of the labor in the small establishment sector. The real earnings of the casual labor are very low. Garry Rodgers in his work "Creation of Employment in Segmented Labor Markets; A General Problem and Implications in India", 1993 has classified the urban labor market in seven categories:

1. Protected regular wage work

2. Unprotected long term wage work

3. Unprotected regular short term wage work

4. Unprotected irregular wage work

5. Independent wage work

6. Small capital owning self employed

7. Marginal self employed without capital

According to Rodgers, the more there are dividing lines within society, the easier it is for the labor market to fragment and scarcer income earning opportunities the greater the intensity of segmentation. John Harris (Character of an Urban Economy, Small Scale Production and Labor Markets in Coimbatore, WPW, June 12, 1982) has classified workers into five categories: permanent wage workers, short term wage workers, disguised wage workers, dependent workers and self employed workers. Permanent wage workers have the job security and are employed in larger factories. Wages of these workers are higher. Permanent workers have land owning background. They belong to upper castes, are better educated and usually come from more distant places. Short termwage workers work in smaller factories or other establishments. They do not enjoy job security. Their wages are low. Short term wage workers belong to low castes and do not have land owning background. Disguised wage workers, dependent workers and self employed workers are all casual workers. They usually belong to lower castes and their earnings are low.

6.3.2 Rural Labor Markets

The rural labor market is the largest segment with 56.6% of the labor force working in the agricultural sector. Asset distribution in the form of land ownership and caste hierarchy are important considerations in the rural labor market. The control of the employer in the rural labor market on the workers continues to be strong. The welfare of labor in rural areas depends on the ability to bargain with the employer and his capability to influence

public entitlements. Seasonally migrant labor move from place to place for work and perform unskilled work. They are known as outsiders in the rural labor market and do not have stable relations with their employers. The bulk of the rural labor force is not unionized.

6.3.3 Primary and Secondary Labor Markets in India

The segmented labor market approach makes distinction between primary and secondary labor markets. The primary sector is sub-divided into primary independent and primary subordinate. Workers in the primary sector enjoy the benefits of formal labor market whereas workers in the secondary sector do not enjoy any kind of social security. In India, primary labor market workers working in both the public and private sectors enjoy high wages, employment security, good working conditions, career advancement and legal protection. In the secondary labor market, wages are low, working conditions are poor and there is no scope for career advancement. Labor is exploited in the secondary market. Workers in the secondary labor market have a higher turnover rate, higher incidence of absenteeism and higher rate of insubordination. The secondary labor market is not homogenous. Labor market for small scale industrial units is a part of the secondary market. Despite lack of career advancement opportunities, poor wages and low job security, workers consider employment in small industrial units better to casual work in the informal sector.

6.3.4 Urban Informal Labor Market in India

The urban informal labor market is a part of the secondary labor market. The participants in urban informal labor market have the following characteristics:

1. Participants are unprotected and insecure.

2. Participations are unregulated and labor is free to respond to market forces.

3. Most workers have low skill and poor asset ownership and therefore their freedom to respond to market forces is limited.

The urban informal labor market is used by the rural migrant labor as a transitory employment option that provides meager and uncertain income.

6.3.5 Caste Based Discrimination

Segmentation within the labor market takes place due to differences in caste, race and gender. In India, racial discrimination is not an issue. However, caste and gender are the big issues in terms of discrimination. In India, scheduled castes and tribes have been historically discriminated and hence workers belonging to scheduled castes and tribes have to seek employment in the secondary market. The employers in the primary market are prejudiced against the members of scheduled castes and tribes and do not hire their services. Caste based discrimination leads to wage discrimination, job discrimination and discrimination in service security.

The members of the scheduled castes and tribes are also discriminated in the field of education, health and access to market. They are employed in low paid jobs. This type of occupational discrimination is called occupational segregation. In informal sector, it is found that employers hire SC/ST labor on the condition that they accept lower wages in comparison to wages of non SC/ST labor.

6.3.6 Gender Based Discrimination

Gender based discrimination means that women are paid less and their service conditions are poor in spite of good skills, qualifications and productivity. According to Sociologists, the subordination of women in the patriarchal system leads to their subordination in the labor market. There is a clear segmentation in industrial labor market in cities like Mumbai and Coimbatore. Women are prevented from having access to all kinds of jobs. Women workers in handloom, power looms and other small scale industries sector suffer far greater discrimination than in the large factory sector. Being illiterate and having not trade union support they are involved in low paid jobs with no career advancement prospects. A segmented labor market does not allow entry into the primary labor market by those who are socially, economically discriminated against.

6.4 WAGE DIFFERENTIALS

One of the important characteristics of labour market is that the wages between different occupations are not equal or wages in the market differ across the demographic groups. (For example, men may be paid more wages than the women for similar kinds of jobs). It is also found that many jobs are done exclusively by men or by women. Some textile jobs, nursing may be done exclusivelyby the women whereas some jobs in dock-yards, shipping, etc may be exclusively done by men. Such labour market discrimination is said to exist if individual workers, who have identical productive characteristics are treated differently because of demographic groups they belong or occupations to which they belong.

6.4.1 Inter- sectoral or occupational wage differentials

Since J.S. Mill, economic theorists have tended to explain occupational wage differentials by differences in costs of training or other obstacles to supply of labour. This however accounts for a long-run wage differentials. In the short run, the number of persons in an occupation is fixed and earnings are affected by the changes in demand and wage rigidities. The wages basically vary between one occupation and other because there is no single labour market. There are many labour markets depending upon different types of labour. For example, there may be deficiency of supply of labour in the market for doctors but there may be surplus in the market for engineers. Hence the wage rate in both these markets will differ. In the short-run, supply of labour of a particular kind (say doctors) cannot be raised as special, rigourous training may be required, special aptitude is required which may not be possibly accomplished in the short run. Hence,

the first and foremost reason for wage differential is lack of occupational mobility.

6.4.2 Male – female wage Differentials

There are two prominent forms of male-female or gender discrimination in labour market. Firstly, the employers may pay less to women than men with the same experience and to work under same conditions in the same occupations. Secondly, women with same education and productive characteristics may be placed in lower paying occupations or with lower responsibility jobs as compared to men. Thus, the labour market differential is said to be present when wages paid by the employers to men and women with equal productive characteristics are not equal, even in the same occupations. This trend may be due to many reasons. To mention a few of them: -

1. Many of the women are married and hence they are not entirely dependent on their own earnings. This may make them accept lower wages.

2. The average wages of men are higher because the proportion of skill is greater among men than women.

3. Much larger proportion of men tend to work harder than women because they have dependents to maintain.

4. The absentee rate out of sickness is less among the men as compared to women.

5. Turnover or job-changing is more among the women than the men due to many reasons like marriage, children, etc.

Royal Commission on Equal Pay (1946) published a Majority and Minority Reports. Majority Report favoured wage differentials between men and women on the ground that men possess greater physical strength and are generally more efficient than women, that the sickness rate was higher among women, that they are more likely than men t absent themselves from work for trivial reasons, and that were generally less ambitious than men and in crises showed less initiative. The Minority Report admitted that where physical strength was concerned, men were more capable than women, but it was claimed that with this exception women were equally as efficient as men, the fact that in the past women had been promoted to few posts of responsibility being ascribed to the prejudice of employers and the jealousy of employees. (A Textbook of Economics – J. L .Hanson page 322).

6.4.3 Wage differentials in India

According to D.R. Gadgil, wage differentials in India are the characteristic of unorganised labour market and personal differentials are because of job-selling, individual bargaining and wage discrimination. Wage differentials by sex have also been very common in India. But the tendency appears to have reduced on account of government interference

through the fixation of minimum wages, appointments of wage boards and pressures from the unions. Inter-industry and inter – state differentials are also on a continuous decline over years.

One of the Directive Principles of Indian Constitution is "Equal Pay for Equal Work". The Fair Wages Committee and other wage fixing authorities in India have always recommended equal pay to equal work for men and women workers. But the things are difficult to implement because even though conditions, processes and products are standardised for the purpose of wage calculations, workpeople cannot be standardised. That is, the workers may differ on the basis of their experience, efficiency and hence the wages also may differ.

6.5 CONTRACT LABOURERS IN INDIA

Contract labor is not recorded on the payroll. It is not directly paid by the employer. The principal employer is not directly responsible for the payment of wages or any other matter arising out of employment of contract labor. The benefit of contract labor to the principal employer is in terms of cheap labor and avoidance of other attendant costs that may arise out of regular employment such as provision of welfare facilities, paid leave, social security, bonus, administrative costs, installation of plant and machinery which otherwise is provided by the contractor etc. Contract labor can be divided into two categories, namely; persons employed in job contracts and labor contracts. Big firms offer job contracts or certain operations, for example, loading and unloading of material to contractors. In this case, the contractor employs his own labor and also pays them.

In case of labor contracts, the contractor supplies only labor to the principal employer for employment in various categories of work. The contractor is responsible for payment of wages as determined by him to the workers. Contract labor is employed as unskilled and skilled labor. Unskilled laborinclude categories such as loaders, cleaners, sweepers, helpers etc and skilled labor include categories such as turners, fitters, electricians, gas cutters, carpenters, blacksmiths etc. Contract labor is generally found in industries such as engineering, textile, carpet weaving, building constructions, irrigation projects, road construction etc. Out of these, mining and building industries are found to be the major employers of contract labor.

Contract labor was one of the most exploited forms of labor. Both the contractor as well as the principal employer did not bother about contract labor. The Government of India therefore passed the Contract Labor Act to prevent the exploitation of contract labor. The Contract Labor (Regulation and Abolition) Act, 1970 provides for the regulation of the conditions of work, health and safety, wages and other amenities for the welfare of contract labor. A contractor is required to provide canteens, rest rooms, latrines, urinals, drinking water, washing facilities and first aid boxes for the use of contract labor. If a contractor fails to provide the amenities or to make payment of wages, the principal employer will be liable to provide the amenities or to make payment of wages to the

contract labor and the principal employer can recover such expenses from the contractor.

The objective of the Act is to prohibit the employment of contract labor and wherever it is not possible to prohibit, conditions of work of contract labor is sought to be improved. The Act is applicable to every establishment employing twenty or more workmen as contract labor and to every contractor employing twenty or more workmen. The Act further empowers the Central and State governments to apply the provisions of the Act to any establishment or contractor employing less than twenty workmen. The Central Government has prohibited employment of contract labor in categories of work in coal, iron ore, limestone, dolomite, manganese, chromite, magnesite, gypsum, mica and fire clay mines, building industry, and railways. Contract labor is prohibited in the Central Food Corporation of India godowns and Port Trust.

6.6 QUESTIONS

Q1. Write a note contract labor.

Q2. Describe various types of employer-employee relationships.

Q3. What are the various categories of wages and discuss how they can be determined.

Q4. Discuss in detail the concept of Labour Market Segmentation.

Q5. Explain the essence of Labour Market Dualism.

Q6. Differentiate between the Formal Sector Labour Market and Informal Sector Labour Market.

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Module IV

7

LAND AND LEASE MARKETS - I

Unit Structure

7.0 OBJECTIVES

In this module students will study the case of land and lease market. The objective is to know and understand the typical features of land market in a less developed country like India and the types of farming in India, along with the crop sharing practices in India. Along with this we will also throw some light on the concepts of lend holdings, interlocking and inter linkages, contract farming etc.

7.1 INTRODUCTION

India is still an agrarian country of the world, though there is a fast growth of industry and more of service sector, as a large number of people even today depend on agriculture and live in rural areas. Agriculture in our country still faces many problems which needs proper institutional solutions. Land is the most important and the basic factor of production in agriculture. So it is very much essential to throw light on the issues related to the land market and tenancy and cropping patterns.

7.2 DEFINITION OF LAND

Theterm 'land' generally refers to the surface of the earth. But in economics, it includes all that, which is available free of cost from 'nature' as a gift to human beings. Land stands for all nature, living and non-living which are used by man in production. All the natural resources found on, above and under the surface of the earth.

Land has been defined by various scholars, as:

To Marshall, "By land is meant not merely land in the strict sense of the word, but whole of the materials and forces which nature gives freely for man's aid in land, water, in air and light and heat."

Thus, we can say, land includes:

i. Surface of the earth like plains, plateaus, mountains, etc.

ii. Sea, rivers, ponds, etc.

iii. Air, light, etc.

iv. Oil, coal, natural gas, etc.

v. Silver, gold and other metals and minerals.

Even though land is passive factor and it does not possess any ability to produce on its own, it is an important agent of production. Modern economists consider land as a specific factor of production, which can be put, not only to a specific purpose but to several other uses.

7.3 FEATURES OF LAND

1. Free Gift of Nature:

Basically, land is available free of cost from the nature. In the initial stages, man paid no price for the land acquired by him. However, to improve the usefulness or fertility of land or to make some improvements over land, some expenditure is to be incurred, but as such, it is available at no cost from nature. Man has to make efforts in order to acquire other factors of production.

But to acquire land no human efforts are needed. Land is not the outcome of human labor. Rather, it existed even long before the evolution of man.

2. Supply of Land is Fixed (Perfectly Inelastic):

Supply of land is fixed in quantity. It means supply of land cannot be increased or decreased like other factors of production. Although for an individual, supply of land may be flexible, but at macro level, the overall supply of land is fixed. However, only effective supply of land can be increased by making an intensive use of land.

3. Difference in Fertility:

All lands are not equally fertile. Different patches of land have different degrees of fertility. Some locations are very fertile and have very good agricultural productivity, whereas some patches are totally barren and nothing can be grown there. Similarly, the degree of richness of mineral wealth varies from place to place, making the land more useful or less useful from economic point of view

4. Indestructibility of Land (Permanent Factor):

Land is an indestructible factor of production. Man can change only the shape of a particular location and composition of its elements, but as such land cannot be destroyed. It can either be converted into a garden or to a forest or to an artificial lake. However, some parts of land get eroded due to natural factors, but that is immaterial because overall availability of land does not change.

5. Immobility:

Unlike other factors, land is not physically mobile. It is an immobile factor of production, as it cannot be shifted from one place to another. It lacks geographical mobility. Some economists, however, describe land as a mobile factor on the argument that it can be put to several uses.

6. Land is a Primary Factor of Production:

In any kind of production process, we have to start with land. For example, in industries it helps to provide raw materials, and in agriculture, crops are produced on land.

7. Passive Factor of Production:

Land is a passive factor of production, because it cannot produce anything on its own. It is not an active factor of production. Human element and capital inputs are required to be combined in an appropriate manner with land in order to obtain yields from it.

8. Effect of Laws of Returns:

Since land is a fixed factor of production, the laws of returns are more effectively applicable on it. Increased use of capital and labour on a particular plot of land leads to an increase in crop production at a diminishing rate. Thus, land is subject to Law of Diminishing Returns.

9. Alternative Uses of Land:

Land can be put to several uses. Land is used for alternative purposes like cultivation, dairy or poultry farms, sheep rearing, building, etc. The use of land for any particular purpose depends not only on the return from that particular use, but also the returns from alternative uses.

10. Land is Heterogeneous:

Land like other factors of production differs from another in respect of location, fertility, nature and productivity. Two pieces of land are not exactly the same. Some plots of land are more fertile, some are less fertile, some plots are even unproductive.

7.4 LAND MARKET

Land is one of the important factors of production along with labour, capital and entrepreneur. It is the basic factors of production though it is passive in nature (as land cannot produce anything on its own).

We come across different markets like product market, money market etc. Similarly, we come across market for the factors of production like land market, labour market etc. Here we will discuss some issues related to Land Market.

Land markets are mechanisms that, provided there are appropriate institutional checks and. balances, allocate ownership and use rights in a manner that allows land and its associated. assets to be used in the most economic way. The efficiency of the land market varies across the world together with its openness to public scrutiny and support for the concepts of sustainable development. In less economically developed societies, and in particular where informal settlements exist, it has not always been possible to develop an effective land market and this leads to under-capitalisation. Land markets are generally regulated through land tenure and land administration systems. Key elements in any land tenure system include the extent to which land can be bought or sold; whether it can be used as collateral and if so who then takes over a property if any loans on the land cannot be repaid; who has rights of access to or passage through the land; the rules governing inheritance; and the extent of additional use rights and obligations.

There are certain inherent problems with land because of its peculiar characteristics, which impede the natural emergence of a well-functioning market. The legal and regulatory framework can potentially overcome these problems.

1. In India, despite some reform efforts, the land market continues to be highly distorted and inefficient.

2. Land records are inaccurate, outdated, and incomprehensive.

3. There are widespread uncertainties relating to land titles, which have hurt the market.

4. Transaction costs are significantly high by international standards, which have discouraged formal land transactions.

5. Initiatives which could have made the market function better have not been taken; while some regulations have been introduced which have introduced or magnified the distortions in the market.

6. A major negative consequence of this underdeveloped and distorted market is that promoters of industrial and infrastructure projects have

eschewed market negotiations for land acquisition and have favored the use of eminent domain powers.

7. While reforms have begun in many areas, an area that has been left untouched relates to regulatory restraints on land use.

8. The most notable has been the requirement of NAC. Because the clearance is typically given after land is transferred from one party to another, there is a significant transfer of wealth from farmers to project proponents, which has been the source of a great deal of social discontent. The elimination of this restriction on land use would go a long way towards making the land market a great deal more efficient than it is now.

9. Morris and Pandey (2009) have already highlighted the major distorting factors regarding the land market scenario of India among which multiple layered land administration system is a serious impediment to the smooth functioning of the land markets.

10. The land market in LDCs is typically thin. This thinness can be traced among other reasons to poor land records, and a slow moving legal-justice system.

11. The high land acquisition costs and the lengthy process make it a critical barrier for designing land use transport policies. A significant part of the infrastructure development is delayed due to this reason The land markets are heavily distorted due to zoning and development.

Well-functioning land market can in principle contribute to broad based rural development in several ways.

First, where the ownership distribution of land differs from the optimal operational structure, land markets can transfer land from less to more productive producers and thus increase productivity.

Second, transferable land rights make it less costly to rural residents to take jobs in the nonfarm economy, something that is likely to boost the off-farm sector.

Third, transferability of land increases investment incentives because those who make such an investment can enjoy the benefits even if they are no longer able to personally use the land.

Finally, the ability to transfer land at low cost will reduce the transactions cost of accessing credit and can, if there is effective demand for credit, increase credit supply.

7.5 TYPES OF FARMING

Farming Systems in India are strategically utilized, according to the locations where they are most suitable. The farming systems that significantly contribute to the agriculture of India are subsistence farming, organic farming, industrial farming. Regions throughout India differ in types of farming they use; some are based on horticulture, ley farming, agro forestry, and many more. Due to India's geographical location, certain parts experience different climates, thus affecting each region's agricultural productivity differently. India is very dependent on its monsoon cycle for large crop yields.

Each region in India has a specific soil and climate that is only suitable for certain types of farming. Many regions on the western side of India experience less than 50 cm of rain annually, so the farming systems are restricted to cultivate crops that can withstand drought conditions and farmers are usually restricted to single cropping. The farming systems that significantly contribute to the agriculture of India are subsistence farming, organic farming and commercial farming. Regions throughout India differ in types of farming they use, some are based on horticulture, ley farming, agro forestry, and many more. Due to India's geographical location, certain parts experience different climates, thus affecting each region's agricultural productivity differently. India is very dependent on its monsoon cycle for large crop yields. Based primarily on nature of land, climatic characteristics and available irrigational facilities, the farmers in India practise different types of farming.

From Subsistence to Commercial, from mixed to terrace. Understand everything about types of farming in India.. Farming is an important activity for any country. It includes growing crops, vegetables, fruits, flowers. The economy of any country only depends on farming. Farming depends upon the geographical condition, the demand for a product, labor, and level of technology.

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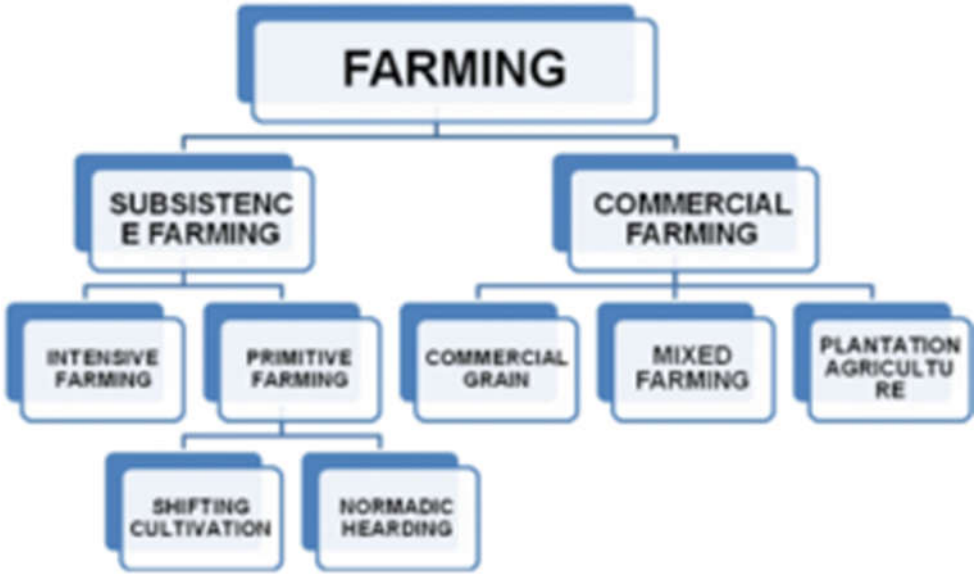


A. SUBSISTENCE FARMING

Subsistence farming is described as family farming because it meets the needs of the farmer's family. Most of the yield is consumed by the family with very little surplus for the family

This type of farming is practiced to meet the needs of the farmer's family. The whole family works on the farm

Traditionally, low levels of technology and household labour were used to produce on small output. It is characterised by small and scattered land holdings and use of primitive tools. It required a low level of technology and household labour.

Majority of farmers in the country practise subsistence farming.

As the farmers are poor, they do not use fertilisers and high yielding variety of seeds in their fields to the extent they should do.

Facilities like electricity and irrigation are generally not available to them.

These types of farming produce small output. They do not use high yielding varieties of old seeds and fertilizer. Yield is not very high

Facilities like electricity and irrigation are not available for them. Most subsistence farming is done manually.

Subsistence farming can be further classified as intensive subsistence and primitive subsistence farming.

1.Intensive Subsistence Agriculture

In intensive subsistence agriculture the farmer cultivates a small plot of land using simple tools and more labour. Thus ,it includes a small plot of land and for growing crops, simple and low-cost tools, and more labour. The word intensive means hard work, so it means it requires more labour.

Climate with a large number of days with sunshine and fertile soils permit growing of more than one crop annually on the same plot of land.

Rice is the main crop. Other crops include wheat, maize, pulses and oilseeds.

Intensive subsistence agriculture/farming is practiced in the thickly populated areas of the monsoon regions. These regions are of south, southeast and east Asia.

2. Primitive Subsistence Agriculture

i) Shifting Cultivation:

Shifting cultivation is practiced in the thickly forested areas of Amazon basin, tropical Africa, parts of Southeast Asia and Northeast India. These are the areas of heavy rainfall and quick regeneration of vegetation.

A plot of land is cleared by felling the trees and burning them. The ashes are then mixed with the soil and crops like maize, yam, potatoes and cassava are grown. When soil loses its fertility, the land is abandoned and the cultivator moves to a new plot.

It is a quick regeneration of vegetation

The farmers move to the other land to repeat this process. Shifting cultivation is also known as 'slash and burn' agriculture.

The process of shifting cultivation is that first of all the land is cleared by falling trees and burning them. Then the ash of the trees is mixed with the land soil.
This cultivation farming is grown on crops like maize, yam, potatoes, and cassava. Crops are grown in this land for 2 or 3 years. Then the land left out because fertilizer of the soil decreases.

Shifting cultivation is known by different names in different parts of the world –

- ✓ Jhumming North East India
- ✓ Milpa Mexico
- ✓ Roca brazil
- ✓ Ladang Malaysia
- ✓ Ray in Vietnam.
- ▪ Nomadic Herding:

Nomadic herding is practiced in the semi-arid and arid regions of Sahara, Central Asia and some parts of India, like Rajasthan and Jammu and Kashmir.

In this type of farming, Herder does not grow any fodder but move from one place to another with their animals for fodder and water, along defined routes.

Sheep, Camel, Yak and Goats are most commonly reared. They provide milk, meat, wool and other products to the herders and their families

ii) Nomadic Herding:

This type of farming is done on the semi-dry area and dry area. Like central Asia, some parts of India like Rajasthan and Jammu and Kashmir.

The process of this farming is that the herdsmen move one place to another place for feed and water, along defined routes.

The most used animals in this farming are sheep, camel, yak, and goats.

The product of this farming is milk, meat, and other to the herdsman and their families.

B) **Commercial Farming**

In this farming, crops are growing for sale in the market. The main purpose of this farming is to do business.

It required large areas and a high level of technology.

It's done with the high cost of tools.

Commercial farming is 3 types.

i) Commercial grain farming:-

This farming is done for grains.

This farming is done in the winter season.

In this farming, only a single crop can be grown at one time.

This farming spread in North America, Europe, and Asia.

These areas are populated with large farmers.

ii) Commercial mixed farming:-

This type of farming is done for growing foods, fodders crops.

In this farming, one or more crops are grown together.

It has good rainfall and irrigation.

The crops are cared for carefully.

The crops are done almost at the same duration.

This farming is most used in Europe, eastern USA Argentina, southeast Australia, New Zealand and South Africa.

iii) Commercial plantation farming:-

This farming required a large amount of labour and large areas.

It used simple crops like tea, coffee, cotton, rubber, banana, and sugarcane.

The products are processed in the farm itself of nearby factories.

These products do not directly go to the sale. After growing these products, the leaves are roasted in the factories or farms. These are all tree crops.

This farming required large transportation because the products of this farming are transported to one area to another area.

7.6 MECHANISM OF LAND TRANSFER

7.6.1 Transfer of Property Act,1882 :

A transfer refers to a conversion of a thing from one person to another person. Property may be defined as anything physical or a virtual entity owned by an individual or a group of people. A property can be transferred from one person to another person by transferring rights, or interest, or ownership, or possession the party can satisfy either or all the ingredients.

The transfer of property can be made in the two following ways:

First: act of the parties;

Second: by law.

Transfer of property is defined under Section 5 of the Transfer of Property Act, 1882. It refers to an act done by a living person conveying property to one or more person or by himself or by one or more living persons in the present or the future. Living people include a company, an association, or body of individuals whether incorporated or not.

7.6.2 Important concepts highlighted in the Act :

- **Immovable property:** According to the General Clauses Act, 1897 immovable property includes land, benefits arising out of the land, things that are attached to the land. Under transfer of property, the immovable property can be defined as all property are immovable property other than standing timber, growing crops, or grass.
- **Mortgage debt:** After the amendment of 1900 mortgage debt was excluded from actionable claims.
- **Instrument:** According to the transfer of property Act, 1882 instrument refers to a non-testamentary instrument. It acts as evidence of the transfer of property between living parties. According to the legal dictionary, an instrument refers to a formal legal document.

- **Attested:** It refers to a formal document signed by a witness. The transferors of the property are known as the executant. The amendment act was introduced in 1926 which mentioned that there must be two or more witnesses who must sign the document in presence of the executant not necessarily at the same time but they shouldn't be the party to the transfer.

- **Registered:** According to the transfer of property Act, 1882 registered refers to any property registered where the act is operative. One must comply with various procedures of registration.

The description of the property should be mentioned.

Avoid fraud.

Deeds should be presented by a competent person.

The property must be registered in the same territory where the registered office is situated.

- **Actionable claims:** A claim to any debt, other than the debt secured by mortgage of immovable property or by hypothecation or pledge of movable property or to any beneficial interest in a movable property or to any beneficial interest in movable property not in the possession, either actual, or constructive possession of the claimant which the civil courts recognize as affording grounded of relief, whether such debt or beneficial interest be existent, accusing, conditional or contingent.

- **Notice:** Notice refers to knowledge of the fact. The person has knowledge of facts about various circumstances. According to the Transfer of Property Act, 1882 it prescribed two kinds of notices

Actual or implied notice: The person having actual knowledge about a particular fact.

Constructive notice: The knowledge of the fact is obtained through circumstances.

7.6.3 Essential elements of the Transfer of Property Act, 1882 :

- **To be a living or juristic person:** For a transfer of property, there must be a transfer between living or a juristic person..

- **Transfer through Conveyance:** Conveyance of property can be either done in the present or in the future. It is necessary to ensure nothing is transferred before the title.

- **The Property must be transferable:** According to Section 6 of transfer of property Act, 1882 there are properties which cannot be transferred:

The chance of an heir-apparent succeeding to an estate, the chance of a relation obtaining a legacy on the death of a kinsman, or any other mere possibility of a like nature cannot be transferred.

The mere right to re-entry for breach of a condition subsequent cannot be transferred to anyone except the owner.

The easement right cannot be transferred.

The interest of the property restricted in its enjoyment to the owner cannot be transferred.

Political pensions, public office, the salary of the public officer cannot be transferred.

The right to sue cannot be transferred.

Stipends to military, navy or the airforce, political pensioners, and civil pensioners cannot be transferred.

No transfer cannot be made as opposed to the natural interest or if the object or the consideration is unlawful then the transfer cannot be held valid.

The right to future maintenance cannot be transferred.

Tenants having an untransferable right to occupancy, the farmer of an estate in respect of which default has been made in paying revenue or lessee of an estate under the management of the court of wards, to assign his interest as the tenant, farmer, or lessee.

- **Transfer of property must be done by a competent person:** For a valid transfer, it is necessary that the property transferred should be of a sound mind, should not be intoxicated, must be a major or he is not a person disqualified by law cannot enter into a contract of transfer of property with another person.
- **The transfer should be made in a prescribed form:** The transfer of property need not be made in writing however certain property to transfer then it must be in writing:

Sale of movable property value more than a hundred rupees.

Sale of intangible must be in a written format.

All mortgages which are more than a hundred rupees should be transferred in a written form.

The transfer of actionable claims must be in a written form.

A gift in a form of immovable property.

Lease of immovable property exceeding more than one year.

- **The rule against perpetually:** It is necessary that the property must be transferred during the lifetime of an individual perpetuity rule should not be followed during the time of transfer of property.

- **Property cannot be transferred to an unborn child:** A property cannot be transferred to an unborn child necessary to consider that while transferring the interest of the property person should be above the age of 18 years.

- **Conditional transfer of property:** Under Section 25 of the transfer of property Act, 1882, the property can be transferred complying to the condition mentioned. If the condition becomes impossible, forbidden by law, opposed to public policy, or is immoral the transfer would be held void.

7.6.4 Kinds of transfer under the Transfer of Property Act, 1882 :

1. **Sale of immovable property:** There is a transfer of ownership from the buyer to the seller in exchange for the price. Delivery of tangible property from the seller to the buyer.

2. **Mortgage of immovable property:** The property gets transferred from the buyer to the seller in the form of a mortgage where the immovable property is mortgaged to secure a loan. The mortgagor has to pay the principal loan along with the interest to release the immovable property from the mortgage.

3. **Leases of immovable property:** The possession of the property is being transferred from one person to another person for a fixed price in this scenario there is no transfer of ownership.

4. **Exchange of immovable property:** When two persons mutually decide to transfer immovable property it would be referred to as an exchange of property.

5. **Gift of immovable property:** According to the transfer of property Act, 1882, gift refers to a transfer of movable or immovable property violently or without the consideration, by one person that is donee, to donor transfer is accepted by and on

7.7 LEASE MARKET

Historically, ownership rights over land resources in India had been severely limited. Different regions followed different proprietorship and revenue collection models. On the whole, a few people flourished at the cost of many, characterizing the unjust nature of these systems.India inherited such a flawed framework of land rights upon its independence. The monopolistic control of a few over land resources seemed untenable in an independent India. Consequently, in the decades following independence in 1947, most provinces and states adopted land reforms to reduce the gross inequity in the distribution and management of land resources.

Among the many land reform measures initiated, tenancy reforms had the potential for the greatest positive impact on the living conditions of the farming community, since a large number of them were tenants. Broadly,

the process of land leasing (tenancy) can be understood as an agreement between the lessor and the lessee of the land where the lessee acquires the right to use the land from the lessor in return for a payment of a pre-agreed rent. After independence, most states either streamlined their existing laws or enacted new laws to regulate different aspects of land leasing. Nevertheless, there remained significant variations in the regulatory framework of land leasing among states.

Tenancy reforms aimed to provide security of tenure and safeguard the vulnerable communities (Scheduled Tribes and Scheduled Castes) from being unfairly treated by the landholding community. To achieve this goal, tenancy laws imposed strong to severe restrictions on various aspects of land leasing. Restrictions varied regarding the class of people who were permitted to lease out their land, the procedure, and limitations on the resumption of the leased-out land; the incidence of the burden of acquisition of ownership rights; and the rate and mode of interest permissible, among others. However, the restrictive nature of land leasing regulations proved counterproductive. Ironically, the land leasing regulation created such skewed incentives that it led to further informalization of the rural economy.

The tenants faced strict scrutiny over formal leasing as landlords feared the loss of ownership rights through the application of the principle of adverse possession. The concept of deemed ownership is common in most of the agricultural land leasing laws. Under the provisions of deemed ownership, near-ownership rights are conferred on persons who are agricultural tenants as of a particular date. This provision, coupled with provisions that restricted leasing out agricultural land, created extremely adverse incentives against leasing out land and the formalization of tenancies. In fact, a 2016 survey by the National Bank for Agricultural and Rural Development found that only 2 percent of the surveyed households reported to have leased out land, while about 12 percent of the households reported to have leased in land.

An ideal land leasing framework should incentivize formal land leasing while protecting the interests of both the landowners and the tenants. Speedy contract enforcement at the least cost with respect to finance and time is a must for the efficient functioning of land leasing markets. Given the wide prevalence of absentee landlordism in India, vesting of ownership rights through the principle of adverse possession is a grave concern for landowners, and the law must have relevant checks and balances to ensure its minimal misuse by the tenant class.

Land leasing remained an idle subject for a long time, but with a push for a capital-intensive model of agriculture, increasing economic growth, changes in the rural economy, and urbanization, land leasing has gained renewed prominence in the land governance activity.

A lease by definition is the transfer of possession and use of a physical asset for a time less than its expected useful life in return for economic consideration . From an economic perspective, the terms lease and rent

have many similar features, including having a duration less than the useful life of the asset and transferring the residual rights associated with the asset to the renter. However, technically they are quite different; rental refers to the short-term rights to use assets and is not regarded as transferring possession of the asset to the renter, but instead conveys only a temporary license. Leasing is an instrument of investment finance through which the legal ownership of the good is dissociated from its economic ownership.

Lease performs an essential economic function of allowing a person or legal entity to acquire an asset at lower cost than what they would have to pay to own the asset .A rural lease according to de Almeida and Buainain is "an agrarian contract by which a person (lessor) is bound to allow another (lessee), for a fixed or undetermined period of time, the use of land or rural property, part or parts thereof, including or excluding other goods, improvements made and/or facilities, in order to exercise farming, cattle raising, agro-industrial, extractive or a combination of activities, via compensation or rent. The lessor takes back possession of the land or rural property after the lease expires while the lessee is entitled to use the land or rural property free of interference from the lessor during the lease provided the lessee pays the rent and performs the other obligations of the lease .Specifically, in the case of land, the lease agreement, which may be written or oral, transfers parts of the bundle of property rights from the landowner to the tenant in exchange for either a fixed rental payment every period (a fixed rent contract) or a predetermined share of the output (share-cropping contract) .

Land leasing contracts are regulated by a lease agreement which sets out the obligations of the parties involved during the period of the lease and so provides useful legal protection to everyone concerned .The legally required elements are usually minimal which allows the parties greater flexibility in structuring the other aspects of their relationship using specific lease provisions tailored to their individual needs and circumstances .

The leasing is undertaken under a different set of conditions and level of protection for the lessee with different combinations of three groups of rights—user rights, occupancy rights, and owner rights .

Land leasing is an important tool for economic development and its growing use can be explained by its effects on generating liquidity, releasing equity capital and improving accounting ratios .

From a rural development point of view, land leasing performs social functions by enabling people who do not own land or possess only limited capital and income to access it, thereby providing conditions for entrepreneurship in the field of agriculture. For the lessee, the leasing of land serves as a medium to obtain income from farming without having to commit a lot of money to the purchase of land. Whereas, for the lessor, land lease serves as a great opportunity to obtain incomes without cultivating the land .

Land leasing also functions to minimise the risk of owning land, by transferring the residual rights from the owner to the lessee for the duration of the lease, allowing the lessee to try out the use of the land without having to purchase the land with debt financing . With this, both the lessor and the lessee bear less risk than if they held the land alone. Reducing risk is a benefit, for which the party who achieves the greatest reduction in risk will have to compensate the other. Leases provide a ready mechanism to do this through adjustments in rent.

Leasing land also comes with greater managerial flexibility, while meeting environmental restrictions, off-farm work obligations and can accommodate different forms of contracts. The flexibility allows it to serve as an important means of developing the required economies of scale for modern agriculture. For example, Some studies among dairy farmers in Ireland showed that those farmers who rent land have higher outputs and are more profitable compared to those farmers who do not rent land. Some studies also showed that farmers with a higher proportion of rented land are more productive, are more prone to invest in machinery and use more variable inputs than farmers who only farmed their owned land. Similarly also found that farms in Sweden with more leased land produced food more intensively compared to farms with a greater portion of owned land. In these studies, it is argued that the direct costs incurred in the form of land rentals creates stronger incentives for the farmers who rent land to work on the land more intensively, relative to the opportunity costs borne by owned fields. Similar conclusions were also reached by . The choice of contract duration is an important component of contract design in agricultural land leases. According to some studies long-term land leases are chosen when the costs of transferring tenant assets attached to the land are high, or if the depreciation of assets beyond the contract period are difficult to assess and therefore difficult to price for transfer to the landowner. On the other hand, short-term contracts reduce the costs of enforcing contract stipulations and the costs of renegotiation or tenant dismissal in the face of market uncertainties, poor tenant performance, or disputes over poorly defined rights to assets. When the tenant's land-specific assets are exhausted within the contract period or if the landowner provides the land-specific permanent assets, then short-term contracts become Land more viable]. However, it is often not the case that land-specific assets are exhausted within the contract period in modern agricultural production systems, particularly in developed countries where agricultural production requires the use of cutting-edge capital equipment and land management techniques to ensure increased productivity and the sustainable management of land. Fixed inputs used in agricultural production are provided directly by either the landowner or tenant and are often not readily shared. The extent to which the tenant or landowner becomes the residual claimant of the input productivity depends on the length of the lease term ,in particular, if the productive life of the inputs extends beyond the contract period and if the post-contract transfer of asset rights is difficult .The incentives of tenants to provide durable site-specific inputs are weakest for short-term contracts and stronger for longer contracts because the variable for investment incentives is the expectation

of being able to appropriate future. For instance, maintaining soil fertility to increase production requires investment in land management in the form of applying appropriate levels of fertilizer, but the effect of such an investment goes beyond the period in which the investment is undertaken. Tenants will choose the optimal level of investment if they anticipate that they will benefit from increased productivity in the future. Incentives to invest in land improvement can be provided by establishing contracts that are long enough to allow tenants to benefit from future potential productivity gains .

Land leasing is a commercial agreement in which the user or lesse acquires the right to use the land in lieu of certain amount of payment. Agriculture land leasing at present in India can be classified into following categories:

- Kerala and J&K have complete ban over leasing.
- In Uttar Pradsh, Himachal Pradesh, Bihar etc. land leasing is allowed in certain cases like where owner is widowed women, children, defence personnel etc.
- Punjab, Haryana, Gujarat, Maharasthra and Assam the tenant gets the right to purchase leased land after a certain period.
- In Tamilnadu, Rajasthan and West Bengal liberlised land lease exist.

As a result of this the land leasing activity is very less in India or if exists it is underground or unregulated. Therefore there is a need for reform in land leasing.

Why there is need for reform in land leasing in India ?

India's march on the path of inclusive, sustainable and faster growth needs disentangling from some legacy issues. Land leasing is one such area which needs reforms. There are various factors which favor this and some of them are:

- **Fragmented landholdings:** The average landholding size in India is 2.8 acres. The miniscule returns farmers get from this small landholding prevents mechanization and investments in agriculture and its profitability.
- **Low investment in agriculture:** In the fear of losing land and in the absence of long term tenancy laws the agriculture land lease are limited to one year. The tenant is not sure of regaining tenancy next year. Therefore there is no incentive for capital investment in agriculture.
- **Changes in the occupational structure in rural areas and increasing cases of fallow land:** Occupational structure in India has gone significant changes and there has been migration from rural areas to urban areas. This has resulted into the emergence of informal and underground land lease market. This creates a need for regulation.

- **Providing benefits to tenants:** The presence of informal tenancy puts tenants at the risk of exploitation because of no legal security and high rents. Along with these risks the tenants didn't get benefits of various government initiatives related to credit, insurance and subsidies like Kisan Credit Card, fertilizer subsidy.

- **Problems of land acquisition:** With the passage of new land acquisition law in 2013, the process has been more comprehensive and lengthy. The cost of acquisition has also increased. This creates an opportunity and necessity for exploring long term lease as the option for industrialization. This will reduce farmer's unrest and may solve the associated problems of loss of means of livelihood etc.

What will be the benefits?

- Benefits in the form of enhanced investments, economies of scale in use of capital, machines and other inputs.

- Enhanced social mobility as non farmland owning groups or castes can benefit by taking land on lease can generate more income. Those with small landholding can lease out their lands and migrate to other occupations and therefore will reduce the burden on agriculture land.

- Will help corporate farming under which corporates can take large chunks of land on lease and do cultivation. This will completely professionalize the agriculture activity.

- Benefits to industries in the form of reduced costs of land acquisition. They can take land on lease and after certain period of time lease agreement can again be negotiated. This will also reduce farmer's unrest who agitate against loss of land titles.

What are the concerns?

- Future government led redistribution in the favour of tenants as was done after independence.

- Will prevent redistribution of land through transfer ownership as people living outside the area will prefer leasing instead of selling. Otherwise land distribution through selling was an important means of redistribution and consolidation of land. Land leasing will promote absentee landlords.

- It may led to situation where individuals with big pockets will control agriculture by taking large chunks of land on lease.

What else is needed?

Land leasing alone is not the solution to the problems faced by agriculture. This has to be complemented by a number of other steps which are:

- Modernization and digitization of land records so that each and every owner has proper titles of his land. This will also reduce litigation related to the land leasing.

- Established of independent regulator for the sector to resolve the disputes legalization and operationalisation of land leasing will bring in people who will take lease at large scales. The standardization of lease agreements and dispute resolution mechanisms should be developed. Otherwise litigations will clog the already burdened courts.
- Modernization of the agriculture marketing so that informed decisions regarding leasing can be made so that informed lease agreement are concluded with proper knowledge of future market rates.
- Enhancing credit and insurance facilities for agriculture
- Providing improved technical inputs in the form of soil health card, laboratory facilities etc.
- Transformation of agriculture as a business - cum - livelihood activity so that investments are planned based on long term strategies and hedged from market and environmental risks.
- Proper awareness and education among the rural folk about the benefits that land leasing can bring to their household income and life. They must be taught about the benefits of land leasing.

Overall land leasing will be of great help to Indian agriculture which is reeling under stress because of continuous droughts and neglect by governments.

Recently government has formed the 'Haque committee' to frame model land leasing act and many states have requested government for prospective implementation of tenancy laws so that existing tenants are not affected.

7.8 MODEL AGRICULTURE LAND LEASING ACT 2016

7.8.1 Background :

The fear of losing right, title and ownership over one's own land by leasing out, discourages the land owners even when they are themselves unable to cultivate to lease out their parcels of land. This is the cause behind substantive extent of land remaining fallow. The State Revenue laws provide for right to ownership by proving adverse possession for a certain period as prescribed by the actual tiller. The census 2011 reveals, that the extent of lease in the country is around 6 per cent. In the absence of a legal provision back-stopping such leasing, most of it is oral and therefore does not entitle the lessee to claim the status of a farmer and access various benefits available from the government and credit institutions.

It is further known, that a lot of land remains fallow for many do not opt to offer their piece of land on oral lease. It is, therefore, necessary that lease is legally recognised by enacting a suitable law. However, it should explicitly and emphatically protect the interests of the land owner, in supersession of any other provision of law that may be in force.

The Model Land Lease Act, 2016 prepared and approved by the NITI Aayog offers an appropriate template for the states and UTs to draft their own piece of legislations, in consonance with the local requirements and adopt an enabling Act.

7.8.2 Statement of Objects and Reasons :

An Act to permit and facilitate leasing of agricultural land, to improve agricultural efficiency and equity, access to land by the landless and semi - landless poor, marginal farmers, occupational diversity and for accelerated rural growth and transformation; provide recognition to farmers cultivating agricultural land on lease for enabling them to access loans through credit institutions, insurance, disaster relief and other support services provided by Government, while protecting fully the land rights of the owners; and matters connected therewith or incidental thereto. It also provides for recognition of farmers cultivating on leased land to enable them to access loans through institutional credit.

Whereas, the prohibitions and restrictions under existing state laws governing agricultural land leasing forced the landowners and lessee cultivators to have informal agreements only for cultivating the land and thereby depriving the lessee cultivators of the benefits which are normally due to them, the existing laws also create insecurity among landowners to lease - out agricultural land which reduces the access to land by the landless poor, small and marginal farmers and others by way of leasing.

7.8.3 Main Features of Act :

1. Legalise land leasing to promote agricultural efficiency, equity and power reduction. This will also help in much needed productivity improvement in agriculture as well as occupational mobility of the people and rapid rural change.

2. This is very important step for land reforms through which needs of landlord as well as lease holder have been taken care.

3. Through this act, the landlord can legally lease the land with mutual consent for agriculture and allied activities. In this act, it has been taken care that in any circumstances the leased holders' claim on land will not be valid.

4. Lease holder may receive institutional loan, insurance and disaster relief so that he may invest more and more in agriculture.

5. Allow automatic resumption of land after the agreed lease period without requiring any minimum area of land to be left with the tenant even after termination of tenancy, as laws of some states require.

6. Incentivise tenants to make investment in land improvement and also entitle them to get back the unused value of investment at the time of termination of tenancy.

7. In order to resolve the dispute between the landlord and lease holder, the provision of "Special Land Tribunal" has been made in the Civil Court.

7.8.4 Challenges Associated with the Model land Leasing Act, 2016 :

1. **Absence of tamper-proof land records:** The biggest challenge to the Model Land Leasing Act is the lack of tamper-proof land records with the revenue department. This is one of the reasons why landowners fear leasing out their farms.

2. **Diversion of land from crop cultivation to commercial use:** Model Land Leasing agreement Act (2016) may encourage the diversion of agricultural land from crop cultivation to commercial use because it allows leasing of agricultural land for activities like animal husbandry, plantation crops etc.in addition to crop cultivation.

3. **Absentee Landlordism:** Model land leasing act will prevent redistribution of land through transfer ownership as people living outside the area will prefer leasing instead of selling.Otherwise, land distribution through selling was an important means of redistribution and consolidation of land. Land leasing will promote absentee landlords.

4. **Lack of Uniformity:** Since agriculture is a state subject, the disparity and abundance of laws create confusion, and lack of uniformity, which may prevent the formation of a healthy leasing ecosystem.

5. The act is also silent on whether a land already under lease agreement can be mortgaged or not, keeping in view that the lessee might be interested in availing crop loans or term loans in case of allied activities.

6. **Exploitation of small and marginal farmers:** The model Land Leasing Act doesn't specify the rent on leased land and the period of lease and has rightly left it to the concerned parties in the land lease market which could lead to exploitation of small and marginal farmers.

7. **Food security:** Leasing out land to activities other than agriculture might endanger the food security of the country in the long run.

7.8.5 Measures to be taken to protect the interest of small and marginal farmers

It has been noted that an estimated 36% of India's tenant farmers were completely landless, around 86% owned less than two hectare and 56% owned less than one hectare of land. Therefore, the small and marginal farmers deserve special attention.

- The strict restrictions must be removed from the Act so that small and marginal farmers are able to lease land easily without hesitation.

- Proper awareness and education among the farmers about the benefits that land leasing can bring to their household income and life.

- They must be taught about the benefits of land leasing and also about the rules and regulations so that they are not fooled by industrialists and large landowners.

- Since most of the small and marginal farmers are dependent on cattle, the grazing lands must not be leased out in the name of fallow land.

- Farmer activists have strongly advocated that agricultural land must not be used for industrial purposes.

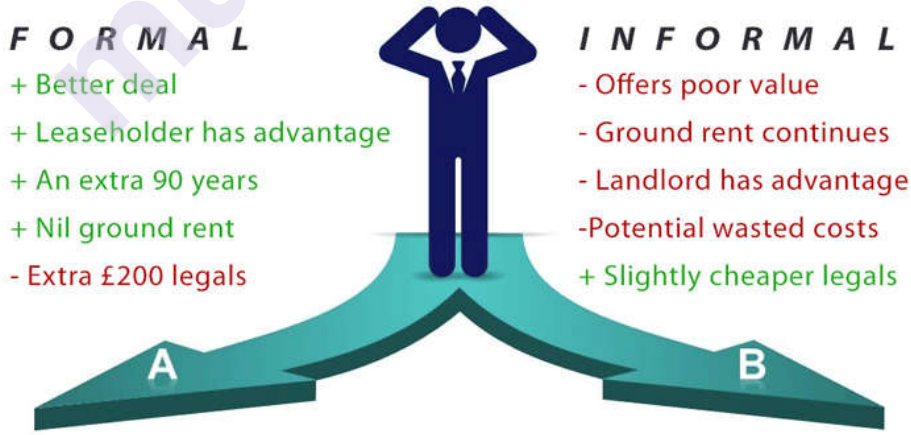
- Moreover, agricultural land should not be given to corporate houses in the name of poor farmers. There should be a viable ceiling on land to be given on lease and it should also be given to landless, agriculture labourers or unemployed youths at the household level.

7.8.6 Conclusion

Overall, the Model land leasing Act if implemented properly in the right spirit will be of great help to Indian agriculture which is reeling under stress because of lack of agricultural efficiency and productivity.

7.9 FORMAL VS. INFORMAL LEASE EXTENSIONS

There are two routes a leaseholder can take to extend their residential lease. Each route has it's own advantages and disadvantages, but the general consensus is that the formal (statutory route) is the preferred option. However this is not always the case, as the best route for each scenario is very subjective.



7.9.1 Differences Between Formal and Informal Lease Extensions

With **formal lease extensions**, the leaseholder serves a notice on the landlord putting forward an offer to extend their lease by the statutory 90 years with no future ground rent. After negotiations, the leaseholder and

tenant reach an agreement on the premium (amount payable to the landlord).

With **informal lease extensions**, the leaseholder normally approaches the landlord on an informal basis and agrees a premium without serving a statutory notice. The agreed terms usually differ in that the number of added years is less (than +90) and commonly the ground rent remains, or even increases.

7.9.2 Formal Lease Extension Advantages

- You are guaranteed +90 years and no further ground rent.
- The agreed premium is usually better value for money
- The term remaining on the lease is 'frozen' immediately upon commencing the formal route, meaning that the premium no longer increases as the term decreases. Each day counts.
- A landlord may insist only on proceeding with a formal statutory notice.

7.9.3 Informal Lease Extension Advantages

- You are not required to own the property for at least two years.
- Legal fees will be slightly cheaper (albeit only the cost of serving a section 42 notice - £220 on average)
- If a formal lease extension is unaffordable then accepting a lower additional term (for example +40 years rather than +90) and keeping the ground rent in place, will result in a lower premium. However there's a catch - the lease will need to be extended again sooner - the lower premium won't usually make up for this, nor continued ground rent payments.
- When approaching a landlord on an informal basis - the most likely scenario is that the landlord will request a payment to cover admintistration and valuation costs to enable the landlord to instruct a professional to calculate the premiumm. It is highly likely that the landlord's offered premium will be substantially inflated, resulting in the leaseholder having no alternative but to commence the formal route from scratch.

7.9.4 Which Route Is Best?

If you have owned the property for a period of at least two years, **we strongly recommend that you commence matters through the formal route**. Always instruct a professional to carry out a valuation and serve the notice. Once you have commenced the formal route, it is still possible to reach an informal agreement (deviating from the standard +90 years and nil ground rent) at any stage of the process. By serving the notice,

If you have not owned the property for at least two years AND the remaining term is less than 82 years - the informal approach would be preferable.

7.10 QUESTIONS

Q1. What the meaning of Land? What are the features of Land?

Q2. Explain the various types of farming.

Q3. Explain the 'Transfer of Property Act, 2016'.

Q4. Explain the 'Model Agriculture Land Leasing Act, 2016'.

Q5.What is the meaning and advantages of formal lease extension?

Q6. What is the meaning and advantages of informal lease extension?

❖❖❖❖

8

LAND AND LEASE MARKETS - II

Unit Structure

8.0 OBJECTIVES

After studying this units you will be able to –

- Understand the meaning of Share tenancy.
- Understand inequity in distribution of holding.
- Understand the concept of crop sharing in Indian Economy.
- Understand the interlocking of Indian Agriculture Market.
- Know the concept of contract farming.

8.1 SHARE TENANCY

Share tenancy as used in this Code means the relationship which exists whenever two persons agree on a joint undertaking for agricultural production wherein one party furnishes the land and the other his labor, with either or both contributing any one or several of the items of production, the tenant cultivating the land personally with the aid of labor available from members of his immediate farm household, and the produce thereof to be divided between the landholder and the tenant.There are mainly two types of tenant system which are commonly used by the landowner and the farmersin south and south-east Asian countries. They are “Lease Tenancy and Share Tenancy”.

Lease Tenancy:

A contract where farmers pay a fixed rent to the owner of the land for a particular period of time. The output is not shared by the land owner and neither the inputs.Example: 250 USD per hectare of rice field for one year period of time.

Share Tenancy:

A contract where output is shared with no corresponding sharing of all inputs,i.e., the share in appropriation is different from the share in provision of some of the inputs(purchased inputs are usually shared through profit sharing). Example: 35% of rice will be taken by the landowner whereas farmer will get 65% of the total rice production.

Share Tenancy has more advantage in terms of agricultural development over the Lease Tenancy. In share tenancy, the output or the profit is shared by both the landowner and the tenant in a certain proportion. Thus if there is any uncertainty or natural calamities (like flood, cyclone, typhoon etc.) hampers the production, the total loss is covered by both the parties. Which release the pressure on the farmers shoulder to some extent. On the other hand, under the lease tenancy the landowner does not share any loss of the production. So, the total losses are born by the farmers if some uncertainties happen in production. **Small and resource poor farmers are always risk averse.** Thus, they try to avoid the risk and uncertainty. Under share tenancy system small and poor farmer can share the risk of crop failure and so, this system is better over the lease tenant system for the poor and marginal farmers.

There are some arguments that "Share Tenancy is inefficient." But Keijiro Otsuka And Hayamishowed in his "Theories of Share Tenancy: A critical Survey" that Share Tenancy is efficient if the landowner bear the transaction cost. By transaction cost he mentioned about the monitoring and supervision.

Share tenancy improves the overall efficiency of the farm and thus the productivity. Tenants are better supervisors; landowners are better managers. Thus, under the share tenancy both the landowner and the farmers give equal attention (supervision and management) where asunder the lease tenancy only the tenant gives his supervision to the production. But due to lack of adequate management, farm reduces the efficiency.

Imperfect Labour Markets also support the Share Tenancy over the lease tenancy.

Landowners can't always find sufficient labour at bottleneck periods whereas Tenants can't always find work when they want it.

Share cropping resolves both of these issues by providing sufficient labour to the landowner and by managing work for the farmers when they want it.A recent study in Bangladesh (Mahmuda Nasrin and M Taj Uddin, 2011) showed that Lease Tenant farmers earned more profit than the Share

Tenant farmers but this picture is true only forthe high value crops (e.g. hybrid rice, Banana, Pineapple etc.). For the other crops (non-highvalue crops) farmers still prefer the share tenancy system. From the above arguments we can say that Share Tenancy is better than the Lease Tenancy for the overall agricultural development.

The Theory of Share Tenancy by Steven Cheung, first published as a PhD thesis 50 years ago, was an important watershed study on the economics of contracts. It contained the first formal demonstration of the Coase Theorem, linked the concepts of property rights and transaction costs, laid early foundations for the future economics of contracts, and can even lay claim to originating the idea of a risk/incentive trade off in contract design. This essay examines Cheung's key contributions in Share Tenancy, and considers reasons for its somewhat limited legacy outside of China.

In 1967, Ng-Sheong Cheung defended his thesis at UCLA entitled The Theory of Share Tenancy — with Special Application to the First Phase of Taiwan Land Reform. The thesis' one chapter was also called "The Theory of Share Tenancy," and contained all of the key theoretical insights of the thesis. Cheung said that his interest in share tenancy started from reading the literature on Taiwanese land reforms, and that he did not originally think of working on something so broadly applicable.

Major Insights in "The Theory of Share Tenancy"

Although Share Tenancy was a study of agricultural contracting, its key theoretical and methodological insights are much broader. Cheung carefully modelled a share contract under the assumption of "zero contracting costs," "private property," and "free markets." He considered the problem from the landowner's point of view, rather than the tenant (as was traditionally done). He also — and this was critical — considered the share tenancy arrangement as a contract subject to constraints; share tenancy in Cheung's eyes was not an exogenous cultural tradition.

Cheung recognized that a share tenancy contract had several key terms: the share percent, the size of the land plot, and the amount of non-land inputs; and these terms were also constrained by the alternative earnings of the tenant and the market rental value of the land. Given the assumption of wealth maximization, the terms were simultaneously chosen and mutually agreed upon to maximize the joint wealth of the parties. Under these conditions, Cheung showed that in equilibrium the use of resources was identical to all forms of private ownership: owner-operator farming, cash renting, or wage farming. Competition among landowners and farmers meant that each asset owner must receive their competitive rent in all contract forms, and this forced the optimal contract choice — otherwise losses would accrue to some party in the share tenancy arrangement.

Cheung showed that when contracts are modelled correctly and when there were no transaction costs, the allocation of resources was driven by the assumption of wealth maximization, and the contract terms adjust to make certain that this outcome was achieved. As a result, the inputs used,

the crop output, and the distribution of asset earnings were identical across different types of contracts. The crop share contract provides exactly the same outcome as a cash rent or wage contract.

Cheung's survey of the share cropping literature prior to 1960 stands alone for its thoroughness, and quite understandably no one has ever produced a second survey of this early literature on crop sharing. Cheung notes that since Adam Smith the general treatment was to consider the share as equivalent to an ad valorem tax. Such a "tax equivalence" approach, however, ignored the contractual reality of the tenancy arrangement. It constrained the economist to not consider that land or other inputs could be adjusted in response to changes in the rental share; that the share was determined endogenously by contracting parties; and that there were competitive pressures to maximize the wealth of the parties involved in the lease. Such an approach could only lead to a false conclusion: namely, that sharing was inefficient because tenant effort was suboptimal.

The tax equivalence approach had a number of implications. First, it implied that share tenants earned rents — returns above their opportunity costs — and therefore they should have competed to work on such farms. Second, land operated under share tenancy should have used smaller labor to land ratios compared to owner-operated or cash-rented land. Third, if the land was constrained under sharing, the land rents and land values should be lower for shared land. Finally, over time, inefficient sharing should die out as a practice/custom.

Cheung took care to point out the implications of the traditional tax approach. Furthermore, he highlighted a number of findings from China and Taiwan that suggested the traditional approach was wrong. He also wisely noted that sharing had not gone anywhere, and in fact, it existed in "retail stores, beauty salons, gasoline stations, amusement park rentals, and even the much-regulated oil and fishery industries". He gave the idea that share tenancy was a type of contract.

From beginning to end there was a powerful methodological point made throughout The Theory of Share Tenancy. If wealth maximizing landowners got together with wealth maximizing tenant farmers, and contracted over various terms in order that the tenant farmer might use the owner's land, then the contractual outcome and subsequent resource allocation must be wealth maximizing — as a matter of logic.

Cheung argued that any constrained equilibrium must be efficient, and therefore, efficiency was a redundant term lacking any sort of normative or welfare content. To say that an outcome was efficient, was only to say that the individuals maximized. The most important idea found in The Theory of Share Tenancy was also the most subtle: the relationship between property rights and transaction costs. Although it would take another twenty years before all of the details would be worked out, Cheung pioneered bringing the concepts of transaction costs and property rights together in a manner unlike earlier scholars.

In the 1967 thesis, the term "transaction cost" appears eight times. The term was never explicitly defined, and in only three instances can a meaning be implied. Consider the following two examples: Eg.1[share contracting] obviously involves a higher transaction (contracting) cost for the landowner to enforce a share contract than a ground rent contract: stipulations are in greater detail, and efforts must be made to investigate agricultural output so as to guard against fraud by the tenant ... Eg.2it seems that in general the transaction cost of a wage contract is also higher than a ground rent contract due to the cost of labor management. In both of these cases Cheung clearly understood that transaction costs result from enforcing and maintaining property rights. In the first case the landowner must enforce rights over the rent, and must monitor the incentive of the tenant to underreport the crop. In the second case, a landowner has to manage workers to prevent shirking, a type of theft.

Cheung's Theory of Share Tenancy—different explanation

- The agricultural landowner can organise production in a number of ways:
- For small plots they depend on family labour especially where the Joint Family system exists and where the labour market cost is high.
- Alternatively they could function by hiring workers at fixed wage rates and function as capitalist farmers or owner cultivators
- In both these cases landowners also act as entrepreneurs
- If they do not wish to take this responsibility they could go in for different tenurial arrangements- the best known ones being fixed rent tenancy and share tenancy.
- Under Fixed rent tenancy the tenants take charge of cultivating the land and pay the landlord a fixed amount in each period
- In case of share tenancy the tenant pays the landlord a fixed proportion of the output.
- Many economists have criticised share tenancy however it continues to exist.

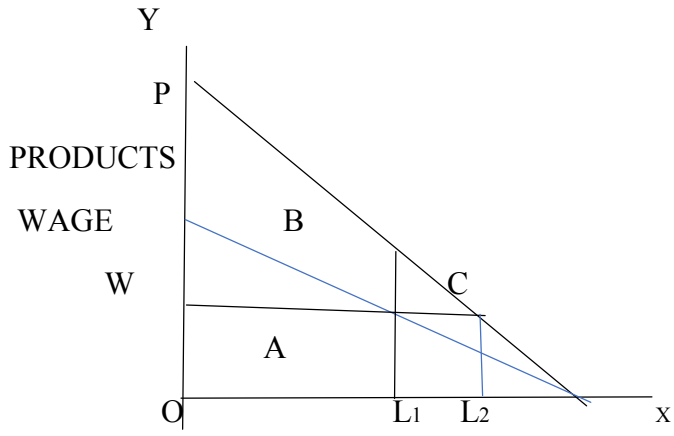


Figure No. 8.1

• In the diagram we assume that a landlord gives a plot of land to the tenant on the agreement that the tenant gives the landlord a fraction of the total output in each year as rent. Labour is the only Factor of Production. MP shows the Marginal Product of Labour and EM shows the Marginal Earnings Curve. The tenant cannot lease in any more land. The Wage Rate is represented by OW. The tenant uses $OL^{/}$ units of Labour. The Total Income of the Tenant will be $OEAL^{/}$.The Landlord gets a Rent of PEAB. Now, if the tenant had sold $OL^{/}$ units of Labour in the Labour market he would have earned $OWAL^{/}$. Hence the Tenant's net income is EAW. As long as net incomeis positive it is worthwhile for the tenant to be a share tenant. If the Landlord had acted as an owner operator and directly hired labour in the labour market and if he had employed OL* units of labour he would make a profit of PWC which is higher than the rent he earned earlier. The Total Production of the economy would be more and there would be better utilisation of inputs. Therefore, Marshall and Adam Smith have criticised Cheung's Theory of Share Tenancy stating that it results in sub-optimal use of inputs.

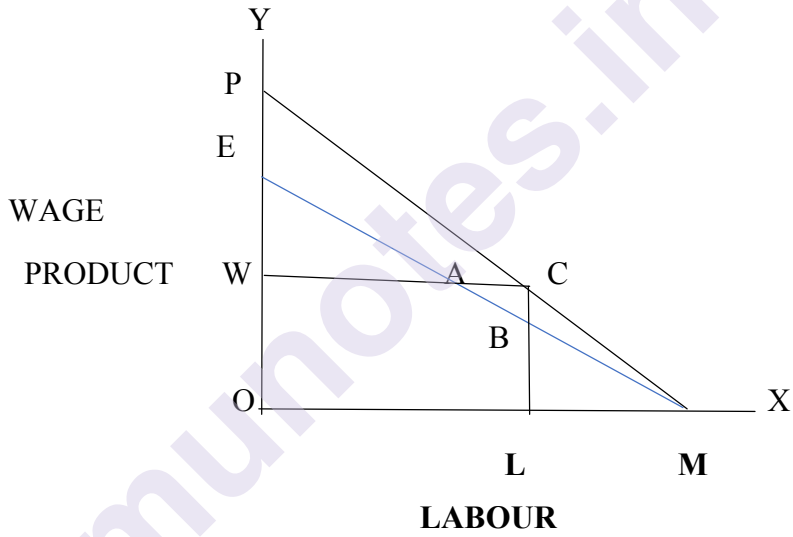


Figure No. 8.2

Equilibrium is reached where (1-r) x L = wLi.e. OE*DL*= OWCL*This implies that E*WA = ACD. The landlord's income under share tenancy is PE*DCand if he was an ownercultivator using hired labour it would be PWC.Thus, income is the same whether he goes in for share tenancyor using hired labour. In the case of Labour and Tenant also it is the same whether he goes in for share tenancy or hires out his labour. Share Cropping is possible when the tenant earns more through share tenancy than by hiring out his labour. Moreover, it is attractive if production risk exists. In case of share tenancy there is limited liability compared to fixed rent where the liability is totally on the tenant. Moreover, if the landlord uses hired labour he has to bear the total liability while in the case of share tenancy he would have shared the risk with the tenant.

8.2. SHARECROPPING/CROP SHARING IN INDIAN ECONOMY

Sharecropping is a form of land tenancy, in which the landowner permits the tenant to use his land in return for a stipulated fraction of the output (the 'share'). It is an institutional arrangement which has prevailed in both developing countries and less-developed countries [LD(s)]. No doubt, sharecropping is most commonly found in LDCs.

Sharecropping is a legal arrangement with regard to agricultural land in which a landowner allows a tenant to use the land in return for a share of the crops produced on that land.

Sharecropping has a long history and there are a wide range of different situations and types of agreements that have used a form of the system. Some are governed by tradition, and others by law.

Sharecropping has benefits and costs for both the owners and the tenant. Under a sharecropping system, the landowner provided a share of land to be worked by the sharecropper, and usually provided other necessities such as housing, tools, seed, or working animals. Local merchants usually provided food and other supplies to the sharecropper on credit. In exchange for the land and supplies, the cropper would pay the owner a share of the crop at the end of the season, typically one-half to two-thirds. The cropper used his share to pay off his debt to the merchant. If there was any cash left over, the cropper kept it—but if his share came to less than what he owed, he remained in debt.

Farmers who farmed land belonging to others but owned their own mule and plow were called tenant farmers; they owed the landowner a smaller share of their crops, as the landowner did not have to provide them with as much in the way of supplies.

In this system, the landowner encourages the cropper to remain on the land, solving the harvest rush problem. Since the cropper pays in shares or portions of his harvest, owners and croppers both share the risks and benefits of harvests being large or small and of prices being high or low. Because both parties benefit from larger harvests, tenants have an incentive to work harder and invest in better methods than, for example, in a slave plantation system.

8.2.1 A Progmatic Compromise:

It may apparently seem that, since, under sharecropping, a certain portion of output has to be surrendered to the landowner; there is loss of incentives to invest. However, a close look reveals that it has certain advantages which have not been offered by tenant farming. Sharecropping seeks to achieve a compromise between peasant proprietorship and tenant farming.

Sharecropping is an institutional arrangement designed both to share risks and to provide incentives, in a situation when monitoring effort (labour

supply) is costly. Sharecropping represents a compromise. While rental contracts provide (in the absence of bankruptcy) perfect incentives (since the sharecropper is able to retain all of his VMP_L), it provides no risk-sharing. On the other hand, wage contracts shift all of the risk on to landlords, who are in the best position to bear.

In truth, the sharecropping contract has certain optimality properties: the contract seeks to maximise the welfare of the worker, subject to the landlord obtaining a particular value of expected rents from his land. Even the inefficiency associated with the worker receiving less than the value of his marginal product may be mitigated with long-term contracts; workers who fail to produce a sufficiently high level of output over an extended period of time run the risk of termination of their contract.

8.2.2 Mainly for this reason we find the persistence of sharecropping, mainly in LDCs. Some of its important features are:

1. Cost Sharing:

The landowner has an incentive to encourage the tenant to use inputs such as fertilizer) which raise the workers' marginal product, and which, therefore, result in the workers putting extra effort (i.e., working hard). This explains why the landlord might bear a fraction of the costs of inputs that exceed the fraction of the output that he receives. This is he principal-agent view of sharecropping.

2. Positive Externalities:

Important externalities might arise between land markets and credit markets. These externalities can explain the interlinking between credit and land markets that is frequently observed in LDCs (i.e., the landowner is also a money-lender).

An increase in the amount of outstanding debt affect both workers' efforts and their choice of technique (risk). These, in truth affect the return to the landowner. Conversely, a change in the terms of the sharecropping contract will in general, affect the probability of default, and the return to the lender.

8.2.3 Current View of Sharecropping:

The current view is that sharecropping may not have the optimality properties associated with the 'principal-agent' view. Firstly, though the contracts are 'locally efficient' (that is they maximise the expected utility of the worker, given the expected rents to be received by the landlords), they are not 'general equilibrium efficient', that is, there exist, in general taxes and subsidies which could lead to Pareto improvements.

Secondly, sharecropping is likely to have a deleterious effect on the level of production A sharecropping contract with a 50% share has the same effects as that of a 50% tax on output Such a tax is likely to reduce output significantly unless the labour supply curve is backward bending (in which case the worker is likely to put extra effort to maintain his income due to a

tax-induced income fall). In such a situation, land reform in which workers receive the land which they formally cultivated as sharecroppers, may increase agricultural productivity significantly.

The sharecropping relationship may take a variety of forms. Some contractual forms may affect the adoption of innovations. In truth, innovations which increase output (at any level of input of labour), but which decrease the marginal product of labour (and, hence, reduce workers' incentives to work), will be resisted by landlords who may impose restrictions on the use of such technologies. But these innovations will, at the same time, reduce agricultural productivity.

8.2.4 Hanumantha Rao provides the following rational of share cropping in India:

"Owing to the continued pressure of population on limited land resources, tenancy has persisted through informal contracts. Because of the ceiling on-land holdings, sub-division and persisting pressure on land as a source of livelihood, there has been an increase in the operated area-owned as well as leased in-held by the small and marginal family. Moreover, with the widespread adoption of non-technology and rise in input intensity, the incentives for investment and for capturing the returns on investment seem to be predominating over the need for sharing yield risks leading to natural replacement of share-cropping tenancy by the fixed crop and cash rents."

8.2.5 Efficiency of Share-Cropping (Under Land Reforms):

According to T. Schultz, farm lease contracts are essentially institutional devices for allocating risk among landowners and tenants. In the opinion of Hanumantha Rao, cash rents guaranteed in advance of production that the risks of production are shared entirely by the tents, while crop-sharing rentals indicate the distribution of such risks among the tenants and the landlords in proportion to their respective shares in output. In contrast, fixed-kind rents settled in advance of production imply the sharing of price and allocate the yield risks entirely to the tenants.

Fixed cost rents are preferred by landowners where there exists a significant scope for entrepreneurship. The reason is that such rents offer a foretold advantage: they permit the tenants also to capture the returns expected from their own decision-making. Such rent also protects those who lease out their land against the possible risks arising from the production decisions of the tenants.

Under uncertain situations, there is limited scope for entrepreneurial functions. In such situations there may be a requirement for the tenants to reduce fluctuations in their income by shifting part of their risk to the landowners through share cropping arrangements.

Thus it logically follows that in situations where the element of uncertainty is smaller and there is hardly any role of the entrepreneur, the landowners find it profitable to lease out a portion of land on a share-rent basis, rather than cultivate the entire holding by using hired labours.

While referring to the inefficiency of share-cropping, Alfred Marshall brought into focus a very important point: the rent under this system would be lower than the fixed rent or net income from own cultivation if the tenants were free to restrict their household income.

8.2.6 In Marshall's view:

" When the cultivator has to give his landlord half of the returns to each dose of capital and labour that he applied to the land, it will not be to his interest to apply any doses the total return to which is less than twice enough to reward him. If, then, he is free to cultivate as he chooses … he will apply only so much capital and labour as will give him returns more than twice enough to repay himself; so that his landlord will get a smaller share even of those returns than he would have on the plan of a fixed payment."

Fig. 2 illustrates this proposition with labour as a variable resource applied to a unit of land. Under own cultivation, $\partial Y/\partial x = w$, output from a unit of land, say one acre, is equal to the area OXW'Y, and net income is equal to WW'Y, which would also be the amount under a fixed-rent contract.

Under share-cropping, where rent constitutes 50% of output, it will not be to the advantage of the tenant to extend input beyond X' where $\partial Y/\partial x = 2W$, output per acre will not exceed the area OX' YY', and rent will not exceed one-half of this area or P_{mYY} which is less than WW'Y. The share-tenant can get additional income to the extent of the area W_{mP} as compared with what he would otherwise get as a wage-earner.

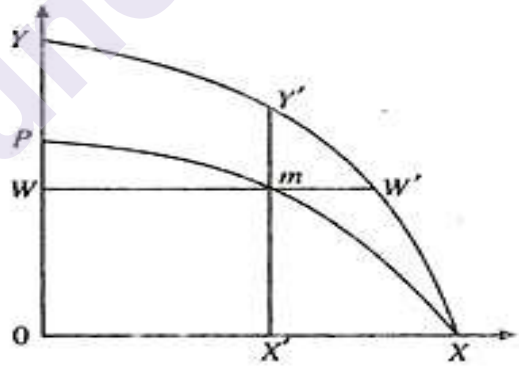


Fig. 1: Economic efficiency of share cropping

Figure No. 8.3

In Marshall's view, share-cropping (tenancy) may be advantageous when the holdings are very small and is not suitable for holdings large enough to give scope to the enterprise of an able and responsible tenant. In 1969, Cheung presented an interesting theory of the choice of contracts on the basis of the 'gains from risk dispersion.'

However, his theory suggests that share contracts can be expected to be more widespread in areas characterised by a high degree of uncertainty

than in areas of relative certainty, if transaction costs are equal. However, in the Indian context, Hanumantha Rao has reached a different conclusion.

As he puts it- "Relative economic certainty in the sense of limited scope for decision-making seems to be necessary for the prevalence of share-cropping. Otherwise, individual anticipations regarding input-output rates and prices may differ, making it difficult for the parties concerned to arrive at an agreed choice as to the product mix and the amount of inputs to be committed." In contrast, situations of high uncertainty call for fixed-cash rents.

Cheung notes: 'the tenant's incentive to use an amount of input less than that stipulated in a share contract' and suggests the role of transaction costs in determining the lease arrangements In making this suggestion Cheung implicitly assumes that the proposition between land and labour inputs can be varied over a significant range for share-rented crops.

However; if production functions are characterised by relatively inflexible input combinations, then the costs of enforcing tenants' input would be lower and the incentives for share-contract would be in areas where share-cropping is widely practiced and where landowners prefer to leave out land, owing to managerial discounts of crop cultivation with hired labours.

8.3 INEQUITY IN DISTRIBUTION OF HOLDING

8.3.1 Meaning of Agricultural Holding :

The term "Agricultural Holding " implies the total area of land which is held for cultivation as a single unit by an individual , joint family or more than one farmer on a joint basis. Such land may either entirely be owned, taken on lease ,or may be partly owned and partly rented,

An "Operational Holding " is one which includes all lands(i.e., cultivated , fallow and even the land which is not under cultivation) used wholly or partially for agricultural production

operated as a single technical unit by a single household or anumber of households operating jointly. An individual may have asingle or a number of operational holdings if each of them constitutes a separate unit of management

On the other hand "Ownership Holding " includes all the area owned by a cultivator or a number of cultivators jointly whether under own cultivation or subject to others. The concept of this type of holding is useful under feudal systems, as it gives an idea whether land ownership is concentrated in a few hands or is evenly distributed .It may also be known if the tendency is towards dispersal among a number of persons.

It also helps in finding out the level of income and living of the farmer, employment, requirements of hired labour, and utilisation of farming equipment. This type of information provides the necessary background

on which agrarian relations in a socialistic society could be based .If there is a heavy concentration of land in a few hands, it may be distributed among those without land through legislative measures

8.3.2 SIZE OF HOLDINGS

The size of an agricultural holding in any country depends on geographical and climate conditions ,partly upon the laws and social institutions ,partly upon the methods and technique of cultivation .The ideal size of the holdings will vary likewise with the nature of the crop, and the objective behind agricultural production .Thus ,where grain and food are in demand ,the larger holdings alone can be regarded as economic .Small farm on the other hand ,are best suited for dairy produce ,vegetable and fruit growing or for vine orchards .According to Crver to be most profitable a farm devoted to the cultivation of wheat must be at least 160 acres ,but this is obviously an impossible ideal in the Punjab or in Tamilnadu .The question where a holding is economic or uneconomic can not be settled in a rigid manner. Various authorities have attempted to define an economic holding for Indian conditions .

According to Keatinge , " A holding which allows a man a chance of producing sufficient to support himself and his family in reasonable comfort after paying his necessary expenses may be termed an "economic holding". On the other hand Dr. Mann has defination economic holding as "one which will provide for an average family at the minimum standard of life considered satisfactory. "

The summary of the limit of economic holdings ,as prescribed by different authorities may be given below Prof. East has adopted 2 ½ acres per capita as the minimum needed to produce an adequate diet for one person. Keeping in mind the fact that in many part of the country two crops are raised during the year and the food requirements may be less in the East than in the colder countries of the West ,we may safely assume that 5 acres in the minimum size of agricultural holding necessary for the maintenance of a family of the 5 souls or 1 acre per capita, although differences in soil ,productivity, water supply ,crop rotation and agricultural practice may alter the size of the holding to some extent. Dr.D.Stamp assumed that one acres of well-cultivated land in the mid-latitude is sufficient to produce an adequate diet for one person .

It may be said that an economic holding should be such as may offer reasonable opportunities to the peasant and his family to employ the factor units(i.e. a pair of bullocks) in the most efficient manner .The return from such a holding will depend upon fertility of soil ;intensity of cultivation ;crops raised ;method of cultivation ,and the organisation of agriculture; cost and returns and living cost

The agrarian reforms committee evolved an idea of three norms of size of holdings

a) Economic holding : According to the Committee, an Economic holding is that : (i) which must afford a reasonable standard of living to

the cultivators (ii) Provide full employment to a family of normal size and at least two pair of bullocks . (iii) Have a bearing on other relevant factors peculiar to the agrarian economy of the region

(b) Basic holding : A basic holding is a holding smaller than the economic holding which may be able to provide a reasonable standard of living to the cultivator but not efficient for the purpose of the agricultural operations .

(c) Optimum holding : An optimum holding is the holding ,which keeping in view the ceiling to the size, the managerial capacity and financial resources of an average cultivator, refers to the size not exceeding three times the size of an economic holding.

8.3.3. FACTORS DETERMINING SIZE OF ECONOMIC HODING

If the term an "Economic Holding " is understood in the above sense ,it should be at once obvious that an economic holding can not be a fixed quantity of land at all places and under all circumstances. It is obvious that size of an economic holding will be different in the fertile land of Punjab compared to dry land in Deccan and an economic holding in the case of plantation crops like tea, coffee, and spices will be different from one in the case where only jowar, maize and such other minor cereals can be produced. The size of an economic holding in the case of horticulture would be different from that of land producing tobacco, or groundnut or one which can grow rice.

It is also obvious that size of an economic holding in the case where primitive technique of production is yet employed would be different from the one where mechanisation of agriculture has taken place .

What then are the factors that determine the size of economic holding in a country ? Broadly following factors may be said to determine the size of an economic holding in a country at any particular time :

(i) The quality of land ,degree of fertility, etc.; (ii) Availability of adequate and steady supply of water , say ,from an irrigational project in the area making double or even treble cropping possible . (iii) Method of cultivation, namely whether the land is cultivated extensively with conventional tools and implements or whether modern methods of cultivation such as mechanisation, use of chemical fertilisers, improved seeds and pesticides, etc., are used. (iv) Nature of crops grown on land – whether it is tobacco, or wheat ,or rice or tea or coffee or jowar and maize, will determine the size of an economic holding in the country; and (v) Organisational capability of a farmer is also an important determinant .

It is thus clear that various factors such as quality of soil ,rainfall ,possibility of adequate and regular supply of water ,whether single or multiple cropping is adopted ,mode of cultivation , distance from city markets , organisational capability of the cultivator ,etc., determine the size of an economic holding. It should be obvious that size of an economic

holding will differ from region to region and from one time to another depending upon the above factors.

The concept of an "Economic Holding" comes to be quantified in terms of "Standard Acres" which enable an average family of a farmer to earn an income sufficient for at a minimum level of civilized consumption or in simple terms a reasonable standard of living prevailing at any particular time in the country.

8.3.4 CAUSES FOR SMALL SIZE OF LAND HOLDINGS :

Indian agriculture is characterised by the dominance of very small size of holdings. As already seen ,more than half of the operational holdings in India are either sub-marginal (below 0.5 hect.) or marginal (0.5 to 1.0 hect.) .

The following are the main causes o smallness of holdings.

1) Growing population in the country : Fast growing population in our country has placed heavy pressure on the fixed supply of land .With every increase in population, the land gets divided and sub-divided, leading to a smaller size of holding .

2) The Law of Inheritance : Another important factor giving rise to the small size of holding is the operation of the law of inheritance. At the death of the farmer ,his land gets divided among all his sons.

3) Decline Of Joint Family System : Under the joint family system ,the land of the whole family was held and cultivated jointly. With the breakdown of this system ,the number of small holdings has increased.

4) Decline Of Handicrafts And Village Industries : It is a known fact that India was on world map of the finest handicrafts in the past. The village economy was marked by a close co-operation between industry and agriculture. Villagers were selfcontented economic units exchanging surpluses between industry and agriculture. With the advent of Britishers on the Indian scene, the situation progressively deteriorated and Indian handicraft faced stiff competition from British manufactured goods.

The British occupation slowly changed the professional system ,ruining the overtaxed peasant, developing exchange and monetary economy, reducing millions of craftsmen to poverty through competition from modern industrial goods. The decline in village industries and handicrafts displaced the village artisans and compelled them to take refuge in agriculture. This increased the pressure on land and resulted in its sub-division into smaller holdings on a large-scale.

5) Rural Indebtedness : Indebtedness of the rural peasant has been a serious problem .With too much of belief in superstitions ,rituals and social ceremonies an too much of an authority of the priest ,the poor peasant always cut their coat beyond the cloth and have to resort to borrowing .With the absence of the organised credit institutions, they have often to borrow from the village money lender who always welcome them

to fall in to his trap. With high rates of interest , the amount of loan keep on compounding and renders it difficult for the borrower to repay it in full. At one or the other stage ,therefore, the money lender would annex part of the land holding of the borrower leaving only a small holding for him .Since millions living in the village fall into this trap ,small holdings also multiply by millions and in a large number of cases peasants become landless.

6) Attachment Of Landed Property : The social structure in the country is such that people remain greatly attached to landed property and this results in the family holding being divided over and over again. There has been rigidity in the occupational structure. Sufficient or not ,a family will remain attached even to a small piece of land rather than look out for an alternative employment.

8.3.5 AGRARIAN STRUCTURE

The significance of land reforms anywhere arises from the defects in the prevalent agrarian structure .In the context of India ,it will be proper to have a look at the agrarian structure that obtained on the eve of the overall strategy of agrarian reconstruction and growth. Agrarian Structure on the Eve of Independence : Various interests in land on the eve of independence fell into four classes:

- **Cultivating Holders :** These may be classified into two categories, (a) owners, (b) tenants. If the owner cultivates the land himself, there is no other person holding an interest in his land above or below him and between him and the state. As against this, tenant-holders do not have any ownership rights on land. They may more appropriately be described as ' occupancy tenants' to distinguish them from the 'tenants-at-will'. They have no direct relation with the state, but there is a chain of intermediaries.

- **Intermediaries :** These are either non-cultivating owners of land or noncultivating occupancy tenants.

- **Tenant-at-will :** He cultivates the land and bears its cost of cultivation. He may or may not have any security of tenure. Invariably his interest is not permanent and heritable.

- **Agricultural Labourers :** These constitute the mass of unemployed landless population in village; very few of them are at the bottom of the socio-economic ladder of the rural community.

The agrarian structure in pre-Independence period was woven around these varied interest. It presented decadent semifeudal order with wide inequalities and multifarious exploitation of the mass of cultivators. There was a high degree of concentration of land ownership at the top.

This type of agrarian structure, acts as a powerful 0bstacle to economics development in four ways :

• The tenant has little incentive to increase his output since a large share accrues to the landowner who incurs no cot. • A very small margin is left with actual cultivator; and this may be quite insufficient to provide for capital in vestment on the land. • Tenants secure no benefits of working with better equipment or with better seeds. In short, under this type of agrarian structure landlords and intermediaries grow rich and continue to flourish, the state is revenue and the cultivator-tenants live a hand-tomouth existence. • It is in this backdrop that we have to examine the major objectives of land reforms policy in India, the progress achieved structure. This type of analysis will help us make suggestions for an improved land relations system in future.

8.3.6 BROAD FEATURES OF THE EMERGING AGRARIAN STRUCTURE

The emerging agrarian structure reveals the existence of three distinct sectors of Indian agriculture, coexisting but also contending with one another.

• The first sector is the developed sector of modern entrepreneur farming by rich peasants.

• The second sector comprises the area under self-cultivation by medium, small and marginal farmers.

• The third sector is composed of the vast area of land under cultivation by share-croppers and various kinds of tenants and sub-tenants having no proprietary rights in land, no security of tenure, no share in the various aids, no security of tenure, no share in the various aids and inputs distributed by the State or institutional agencies.

It is this third sector which is the worst placed in the agrarian economy and is still subject to various forms of semi-feudal exploitation such as rack-renting, usury, economic bondage and caste.

This makes it necessary for us to suggest as to what the agrarian structure in future should be. Before we should know the causes that have been responsible for the relatively poor performance of land reforms in India.

8.3.7 Cause for poor performance :

• Lack of political will : Enactment of progressive measures of land reforms and their efficient implementation call for hard political decisions and an effective political support, direction and control. considering the character of the political power structure obtaining in the country it was only natural that the required political will was not forthcoming the political bosses and the powers –that-be resorted to what can be called ‘land grabbing’. The political will assured that land reforms failed.

• Absence of pressure from Below : The beneficiaries of land reforms, particularly share-croppers and agricultural labourers, are weighed down by crippling social and economic disabilities. Except in a few scattered

and localized pockets, practically all over the country the poor peasants and agricultural workers are passive, unorganized and inarticulate. In the circumstances, it issmall wonder the there has been no insistent pressure from below, a prerequisite for the effective implementation of land reform laws.

• Administrative Organisation-Inadequate : Policy Instrument In all the States, the responsibility for the implementation of measures of land freeform rests with the revenue administration. The implementation of land reforms is only one among its many function. Traditionally, high priority is given to the maintenance of land reforms is only one among its many function. Traditionally, high priority is given to the maintenance of public order, collection of land revenue and other regulatory functions. Land reforms do not, therefore, get the required attention.

• Legal Hurdles : The land reform laws were defective in many ways. Legislations relating to the land reform were so full of loopholes that a commentator was led to say that an elephant could easily walk through them. Some loopholes were deliberately built in, while others were the result of poor drafting. Practically, in every State protracted litigation has delayed and often frustrated the implementation of land reform laws.

• Absence of Correct Updated Land Records : A programme that aims at the redistribution of income and wealth in the rural areas cannot succeed unless the beneficiaries can produce evidence of their rights. The position regarding records of tenancies, particularly in the matter of entries relating to the rights of share-croppers, is not satisfactory anywhere in the country, and no records exist in some areas.

- The main reasons for this unsatisfactory state of affairs are the following. ¬ In some areas, where cadastral surveys have been out-ofdate for a long time, resurveys have not taken place;
- Some areas have never been cadastrally surveyed ; ¬ In some cases no machinery of any kind has existed for maintaining village records;
- In some areas(such as the zamindari areas,) The machinery which keeps records is private;
- Even where records are kept by Government revenue officials there is no uniform system; ¬ Even official records may not be correct.

The errors would be of two kinds with reference to their origin;(a) Bona fide errors arising out of law on the part of the recorder; (b) Deliberate wrong recording from mala fide motives. The problem is largely administrative.

• Some Weak Spots in the Programme : The programme of land reforms has been viewed so fat in isolation form the mainstream of economic development. The main ingredients of the programme like the abolition of intermediary tenures, tenancy reform and ceilings on agricultural holdings were treated as disjointed programmes and sought to be implemented as

such . The lack of financial support has been the weakness of land reforms right from the beginning. No separate allocation of funds was made in the Five-Years Plant for financing land reforms.

8.3.8 SUGGESTIONS FOR IMPROVEMENT

Review of Tenancy Legislation:

The existing legislation was enacted in background of the traditional agricultural technology. With the new agricultural technology coming in, things have changed radically. Owner cultivation of a minimum size of land has become viable and it no longer needs legislative support. Moreover, in some areas the ground-level picture has changed as small farmers are facing difficulties in coping with the new expensive agricultural technologies. Under the compelling to give their land to a bigger farmer who has enough resources including tractors and other implements of cultivate more land. This rich tenant in some cases has used the protective, well-intentioned legislation to cheat the poor owner.

No social purpose is served in giving the big tenant security at the expense of the small landlord. There is, therefore, need to liberalise tenancy laws.

Effective Implementation of Ceiling legislation : Firm measure are required against fictitious and benami transfers deliberately effected by big landowners to circumvent ceiling laws. The State Government should hold a proper enquiry into such transfers. If on enquiry it is found that the transfers wee made to evade the provisions of ceiling laws, the land so transferred should be vested in the State after the imposition of a suitable penalty on the transferor. Ceiling may be relaxed in case of uncultivated waste land where large and long gestating investment may be needed, provided it can be ensured that the land will be used for agricultural purposes and that it will not be used as a tax shelter.

Surplus Land and Its Distribution : The surplus land should be allotted to the beneficiaries on the specific condition that they would not be permitted to sell or mortgage these lands to private individuals. If at any time a beneficiary wants to leave the profession of cultivation the land held by him would revert to the State

Simplifying Legal Procedures and Administrative Machinery : The establishment of special courts to dispose of cases in villages of their origin or in the close- by township would expedite work as they would be in the know of relationship and happenings in the field and thereby serve the ends of justice better.

Land reform cannot be properly enforced without popular cooperation and support at all levels. Popular co-operation and support at all levels. Popular supervisory committees should, therefore, be constituted at all levels, consisting of people's representatives, including the beneficiaries, officials and experts to exercise vigilance on implementation. These committees should be vested with certain statutory powers like the inspection of records and sites, collection of evidence, etc., weight age.

Generation of Awareness among Potential Beneficiaries : The requires the support of educational campaigns and political mobilization on the principles of land reform, Further, the existing socio-economic order in which the power base lies with the rural rich should be radically reconstructed to form a new order in which the power balance will favour the rural poor.

There are three developments in recent times that may have favourable impact on this type of change: • Emergence of 'biological, technology' in agriculture which has made the small-peasant agriculture potentially viable; • Political dependence of the power elite of all types of ideological and political persuasions on peasant support; and • Emergence outside the agricultural system of State-sponsored institutional framework of State-sponsored institutional framework of scientific research, technological innovation and diffusion, water control, input and credit supply and price support for agricultural development.

8.4 INTER-LOCKING OF INDIAN AGRICULTURAL MARKET

Interlocking **often acts as a security (hedge) against risk**. For example, when a landowner makes loan to a tenant, (or a sharecropper), he faces very little risk of default. The reason is that, he can recover his loan from the tenants' share of the crop.

8.4.1 Causes of Interlocking of Agricultural Markets:

1. Risk Reduction:

Interlocking often acts as a security (hedge) against risk. For example, when a landowner makes loan to a tenant, (or a sharecropper), he faces very little risk of default.

The reason is that, he can recover his loan from the tenants' share of the crop. Thus, the risk of default is reduced through the interlocking of the land (lease) and the credit market.

Similarly, if there is crop failure due to adverse weather or some natural calamity, the landowner can recover his rent by forcing the tenant to supply his labour service free in the next agricultural season. This is possible due to interlocking of land (lease) market and labour market. This interlocking of different markets in agriculture leads to risk reduction to some extent.

2. Economies:

Another reason for such interlocking is to derive some economies or advantages. For example, suppose the landowner gives loan to tied labour on the condition that the latter will supply labour service at a fixed wage for a specified time period.

During the peak season, the wage rate goes up due to high demand for labour. But due to inter-market contractual relations (in this case between the credit market and labour market) the landowner can get labour services from, the tied labourers at lower wage rates. In this way, the wage cost of the landowner becomes much less than it would be in the absence of interrelation between these two markets.

Borrowers also enjoy economies. For example, when a tenant owner borrows money from commercial banks or co-operative societies he has to incur some cost. He has to complete some rigid formalities and, in the process, spend time and money in order to get the loan. But if he borrows from the landowner he is not required to spend anything. Such cost saving is possible through such, interlocking.

3. Money-Substitute:

Finally, interlocking of different markets acts as a money-substitute. In most parts of rural India, the barter system still exists. Commodities are directly exchanged for commodities and money is not widely used as a medium of exchange. But the success of the barter system requires double coincidence of wants which is created through the interlocking of different markets in agriculture (Double coincidence of wants necessitates that the set of goods or commodities each individual is willing to exchange must be exactly what is required by the other party.).

An example will make the concept clear. Let us suppose, the landlord engages agricultural workers and agrees, as per contract, to pay them wages in terms of crop. In this case, the landowner needs labour services which can be supplied by the labourer. On the other hand, the labourers require food-grains for consumption which can be supplied by the landowner. Fig. 2.3 illustrates a barter transaction between two individuals due to double coincidence of wants which again is due to the interlocking of the labour market and the product market. In this way, the interlocking system is used to facilitate barter (i.e., non-money using) transactions in a subsistence economy.

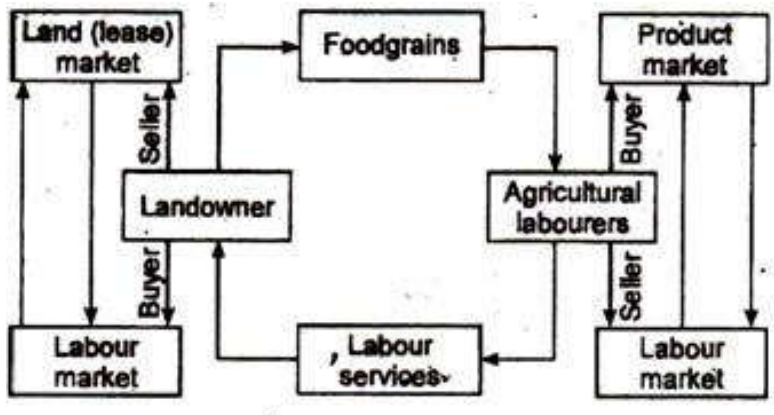


Figure No. 8.4

A Double Coincidence of wants

8.4.2 Effects of Market Interlocking:

(a) Distress Sale and Purchase:

Due to such interlocking farmers have to make distress sale of their crops immediately after harvest at low price to be able to pay kind rent. Again, they may require to take loan from the moneylenders in cash to be able to buy food from the market at a higher price in the lean season to be able to keep body and soul together.

(b) Involuntary Exchange:

Because of such interlocking, exchange is not always voluntary. When the tenant borrows for consumption from the landowners—either in cash or in kind—he is required to pay interest in kind. For that he may be forced to sell his output to the landowner at less than the market price (because the landowner may also be trader in commodities) or to agricultural supply, his labour power in the peak season at less than the market wage. In most cases, the exchange relations are not voluntary. Due to loan contract, the tenant or sharecropper can neither sell his portion of output (left after rent payment), at the market price, nor sell his labour in the peak season at the market wage.

(c) Monopolistic Control:

Thirdly, as a result of interlocking, the control of the agricultural sectors gets into the hands of a few individuals who control all the markets. No such thing as free competition or voluntary exchange is found in any of the markets. Through the exercise of monopolistic control of all the four markets, it is possible to extract more surplus which is, ultimately, converted into property income.

(d) Greater Dependence on a Few Individuals:

Due to such interlocking the majority of people in rural areas have to depend for more and more on few such powerful and influential individuals.

For example, the tenants will have to depend on the landowner for leasing in land. The labourers will have to depend on the landowner for employment and wages, the debtors will have to depend on the landowners for the supply of credit. Similarly, the buyers of agricultural products will have to depend on the landowner for food and industrial raw materials. For these reasons, the landowner becomes a strong force in the rural areas.

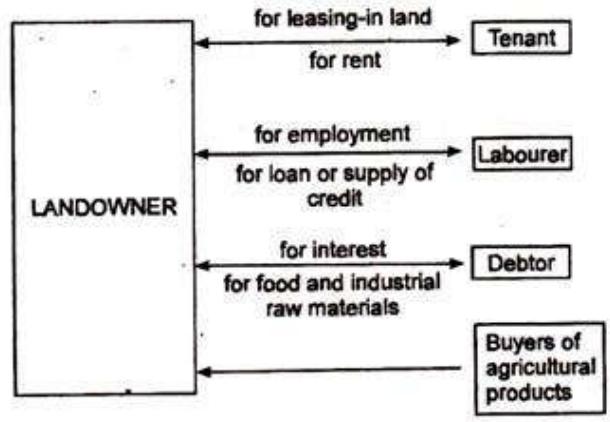


Figure No. 8.5

Dependence on the landowner by the other sections of society.

The landowner, in his turn, gets rent, labour service, interest and profit (from sales of marketed surplus).

(e) Greater Surplus Extraction:

Fifthly, as a result of such interlocking the landowner, who is usually most powerful in the rural sector, extracts surplus from different markets. If the same person extracts surplus from all the four markets, the amount of surplus extracted becomes very large. If, for example, the tenant refuses to pay higher rents (as demanded by the landowners), the landowner will refuse to lend him money in times of necessity.

At the same time, the tenant may be asked to pay higher interests. If he refuses to pay it, he may be given the threat of eviction. These examples are just enough to prove that interlocking of product and factor market in agriculture leads to greater surplus extraction.

(f) Obstacle to Technological Progress:

Some economists like Prof. Amit Bhaduri have opined that interlocking of different markets in agriculture acts as an obstacle to technological progress. If the landowner gives loans to the tenants at high rates of interest and if the former can make profits by selling agricultural products or if he can raise the level of rent, then he does not have any desire or inclination to apply modern (sophisticated) techniques in agriculture. He may live a quiet life without being bothered about the increase in land productivity.

The landowner gives only consumption loans to the tenants. So production loan is not given because it is feared that the tenant can use the loan to adopt modern technology and produce more output with the same amount of inputs. If output increases, he may not be required to borrow from the landowners for consumption purposes only.

Thus, the landowner can prevent the adoption of modern techniques. This is how the interlocking of different markets in agriculture—in this case land (lease) market and credit market—stands in the way of productivity-raising improvements (such as use of modern techniques).

However, in reality, we often find that landlords not only provide production loans to cultivators, but encourage them to adopt improved technique as well. Moreover, after the initial success of new agricultural strategy (which brought about the green revolution) new technique has become less costly and more attractive than before.

As things stand today, the landowner will induce the tenant to adopt new technique so that output of agricultural products and, consequently, his income, increases. Thus, the view that interlocking of different markets in agriculture is a major obstacle to technological progress does not stand to reason.

8.4.3 Conclusion:

Various studies and surveys have found interlocking among various markets in agriculture. However, much like the law of diminishing returns, interlocking is not something peculiar to-agriculture. Instead, interlocking is observable in the industrial sector as well. In case of the corporate form of business (or joint stock companies, as they are called) the same individual is found to be on the Board of Directors of several unrelated companies.

This is known as the interlink directorate—a situation in which one or more person(s) sit on the board of two or more companies, where these firms have similar products, such as oil and electricity or gas. Such conditions can lead to collusion or formation of cartels. Again, the director of an industrial company may be on the board of a financial organisation such as the Industrial Development Bank of India. This is how industrial and financial sectors of the economy get interlocked.

In the final analysis, it appears that the most notable and common feature of interlocking is that the same two persons confront each other in different (product and factor) markets. Such interlocking initially develops due to formal relations. But, over time, these formal relations gradually become social relations which get reflected in different markets (which are essentially social institutions).

Such interlocking existed in pre-market economies and continues to exist in today's market-based economies. So the truth is that interlocking of different markets in agriculture is not anything new or unique to agriculture. It is universal in its application. Such interlocking relation was and is found in almost all sectors of the economy.

8.5 INTERLOCKED/INTERLINKED FACTOR MARKET IN AGRARIAN SECTOR

Abstract Informal credit sector plays a vital role in the rural sector in developing countries since formal credit institutions failed to provide access to rural credit to poor farmers. Let us analyze various theoretical aspects of interlinked credit transactions in the rural credit market in developing countries. positive and negative theoretical concepts in regard to interlinked credit transactions in agrarian sector. It shows that the poor farmers in rural sector are exploited by lenders in the form of cash or kind or labour. However, it further indicates interlinked credit transactions may cause positive impacts in the rural credit markets. Hence, policy makers should give more focus on it to eradicate the above problem and should have a vibrant plan to give several subsidies to the poor, to make investment in rural areas, to strengthen easy marketing facilities etc.

The concept of interlinkage has probably been borrowed from anthropology, where the multi-standard nature of relationships in small face-to-face communities has often been emphasized. Such societies have been called multiplex, and multiplex relationships between the same economic agents in a poor agrarian community are often described as interlinked contracts encompassing several markets.). Interlinked credit transactions can broadly be classified into four categories, namely those involving linkage of land, labour, inputs and output of farm households (Sarap, 1991). An interlinked transaction is one in which the parties trade in at least two markets on the condition that the terms of all trade between them are jointly determined (Bell and Srinivasan, 1989). According to their definition two parties and more than one market are involved in the interlocked factor market. Prices of goods and services in the classical competitive markets are determined by the market forces (demand and supply) but, prices of factors of production in agrarian economy are interlinked, thus reward of land, labour and credit are determined by the interlockers.

Many theoretical and empirical studies have explained different types of linkages in the rural sector such as *land and labour markets, *land and input markets,* land and output markets,* labour and output markets,* input and output markets.

The credit linkages between poor borrowers and lenders may be in several forms, namely, *cash-to-cash (Cash receipt of the loan by the borrower and cash repayment of loan and interest to the creditors),* cash-to-kind (Cash receipt of the loan and kind repayment), *cash-tolabour (Cash receipt of the loan and repayment in the form of labour services), *kind-to-cash (kind receipt of the loan and cash repayment),* input-to-cash (input receipt of the loan and cash repayment), and *cash-to-output (Cash receipt of the loan and repayment in the form of output). However, all repayments also include interest with loan amount It could be proved that interlinked credit transactions between lenders and poor peasant lead to negative impacts to the borrowers while it incurs some advantages among credit market in rural sector.

The impacts of interlocked factor markets may be explained by two ways. One argument says that borrowers are exploited and affected by creditors in many ways. On the other hand, it is to be stated that interlinked transaction is efficient and effectiveness at the market. The word "interlinkage" was first used by Bardhan and Rudhra (1978) that caused to much of the development of recent theoretical work. Their survey examined the interrelationship of the factors in the rural market. According to them, the landlord quite often gave production loan to the tenants and the tenants very often took consumption loan from the landlords. They also suggests that overwhelming majority of tenancy and attached labourers contracts do not display feudalist features. Further, workers are employed in the peak season after being offered consumption loan in the lean season at subsidized rate of interest. In general, it is stated that two parties involving in the interlocked factor market are identified as weaker party and stronger or dominant party. Interlinking of transaction in different markets is also very effective way for the dominant party to avoid social or legal controls on charging higher prices in some markets and to select criteria for rationing scarce resources (like credit and land) when prices are inflexible or sluggish in adjustment (Bardhan, 1980). Interlinked transactions bring this type of market under the control of dominant party. Bardhan (1973), Basu (1983), have explained about the various kinds of control exercised by the money-lenders over landless borrowers which strengthen the segmented and personalized character of these markets.

Loans are given by money lenders under certain conditions. Duration of the loan, underpricing collateral system, deduction of the interest payments at the beginning of the loan and control over the borrowers are common practice at this market. Weaker party is always identified as peasant and poorer than stronger party. The dominant party would have a sufficient power at this market. Hence, this situation leads to exploit the weaker party. It has been argued that because of the imperfection in the land and credit markets where the landlord/ money-lender poses localized monopoly, interlinking of credit with tenancy transactions increases the power of the landlord which leads a greater exploitation of the tenant (Bardhan, 1983). These factor markets involving different parties do not operate under competitive conditions. This imperfection is that access to factors of production is far more difficult for the weaker parties than other parties (Baradwaj, 1974, 1980). In the rural sector quite often credit is paid or repaid in kind, quite often interest is not explicit but implicit in the terms of the transaction (Bardhan, 1983). Since the interest payments are implicit at the market, the rate of interests is higher than the normal market interest rate. Hence, poor borrowers happen to pay more than actual payments.

The main manifestation of this imperfection is that access to factors of production is far more difficult for the weaker parties than for others. Besides, inadequate information which is caused by short supply of these factors, which in turn, lead to a rationing of them, can result in the stronger party exploiting the weaker party in the process of exchanging goods and services. Thus, it has been generally recognized that agrarian

markets are highly fragmented and different parties in a given sub-market may have unequal access to the other markets (Sarap, 1991). Basu (1984) explained the concept of interlinkage in the light of lender's risk hypothesis while Bardhan (1984) described employer's risk hypothesis. Under the model of Basu (1984) the under pricing of collateral, the existence of high interest rate, and the multiplicity of interest rates are clearly indicated. All these features are widely prevalent in backward agriculture. Basu (1984) further says that interlinkage is a form of insurance against risk and moral hazard.

On the other hand, Bardhan (1984), in his theory, explained that the landlord presumes that there may be excess demand for labour at the agricultural peak season (sowing and harvesting) and hence he provides consumption loan to the workers on the basis of their pre-commitment to work in his field in the next peak season. It is to be noted that pre agreements are done by both groups. Hence, Poor peasants are controlled by landlords or other lenders. Interlinked transactions bring this type of market under the control of dominant party. Bardhan (1973), Basu (1983), have explained about the various kinds of control exercised by the money-lenders over landless borrowers which strengthen the segmented and personalized character of these markets.

Interlinking of transactions in different markets is also an effective way for the dominant party to avoid social or legal controls on charging high prices in some markets and to select criteria for rationing scarce resources when prices are inflexible or sluggish in adjustment (Bardhan 1980). Further, Baduri (1986) argues that a trader or money lender having a monopoly on one market of the interlinked transaction can gradually extend his control to the other market implied in the transaction. Lenders exercise monopoly power over these borrowers (Hoff and Stiglitz, 1990). Studies of informal credit market suggest that it is extremely important to understand the nature of dependence of poor households and the social character of the control mechanism exercised by the lenders (Subbarao, 1989). Stiglits (1992) also explains the general theory of interlinkage of agriculture in LDCs. According to him the landlord may also supply credit to workers to induce them to work hard. Interlinked transaction is a major barrier for poor farmers and labourers to take collective action.

Another type of interlocking relates to credit and product markets where the landlord serve as a trader in buying that part of his share of output in case the borrower is a tenant, or, in case the borrower is a small farmer, the output equivalent in value to the loan plus interest. It is possible that both small farmers and tenants sell their output immediately after the harvest to the landlord-cum-trader when prices are low (Subbarao, 1989). The medium and large farm households are relatively free in the product market due to their superior bargaining status compare to small farmers and agricultural labourers (Narayana Reddy, 1992). Interlinkage of the produce and credit markets and under-pricing of collateral may occur because of interest rate ceilings and also under-pricing of collateral and under-pricing of product interlinked with credit and low interest rates

should be observed together (Gangopadhyay and Sengupta, 1987). This indicates indicate the exploitation of borrowers in the rural credit market.

But, the study of Braverman and Stiglits (1982) explains the relation between the landlord and tenants with another perspective. According to them, the activities of landlord may be in certain circumstances lower agrarian output and make tenants worse off. In other circumstances, total agriculture output might increase and tenants could be better off and only the landlord suffers.

However, a number of studies indicate the benefit of interlinked credit transactions is an efficient way to reduce the excessive cost of acquiring information between transistors in imperfect market. Economists have not failed to show the advantages of interlinked credit transaction among markets. Brawerman and Stiglitz (1982) pointed out that it is an efficient response to information asymmetry and uncertainty. Brawerman and Guasch (1984) stated that this transaction plays as a screening device in the selection of consumers. On the other hand, Bell and Sirnivasan (1989) said that interlinked transaction is a flexible market response in the growing commercialization. They further pointed out that this transaction can increase economic efficiency in certain context.An interlinked transaction is an incentive mechanism to guarantee loan refunding.

Conclusion: The analysis has demonstrated the actual meaning of interlinked credit transactions and many theoretical explanations of several economist or authors. Imperfection is common features of backward agrarian sector.At least two parties, identified as weaker and dominant party, are involving in interlinked credit transactions at this market. Since the dominant party has a monopoly power, the landless labourers, tenancy farmers and other poor farmers (weaker party) are exploited by the lenders at this market. Higher implicit rate of interest, under pricing of collaterals and working more time in the field are the ways of exploitation. However, the interlinked credit transactions lead to economic efficiency and an effective way to reduce the cost of transactions among transactors in the rural credit market. In general, weaker parties are severely exploited by dominant parties through interlinked credit transection. In particular, inter-locking factor market still exists in under developed countries, especially in rural areas. The elimination of above situation would be helpful to reduce exploitation of dominant parties and it would also be a constructive way to assist weaker parties in terms of inter-locking factor market. Hence, policy makers should give more focus on it to eradicate the above problem and should have a vibrant plan to give several subsidies (Eg:- fertilizer subsidy) to the poor, to make investment in rural areas, to strengthen easy marketing facilities etc.

8.6 ANALYSIS OF RURAL CLASSES

The land holding is the principle determinant of the class structure in rural society. This is owing to the fact that agriculture is the principle economic activity in the rural areas. The land tenure system that evolved during the British period gave rise to the class of Zamindars, along with the class of

Watandars and the Jagirdars in the Indian states. The bulk of land in the rural areas was owned by this upper stratum of the society.

The merchants and traders who were also the moneylenders, gradually acquired the land of many small and marginal farmers, leading to the proliferation of the class of the landless labourers.

If we analyse class structure in rural India in the post-independence period, we come across four classes. The three classes in the agricultural field are of land owners, tenants and labourers and the fourth class was the class of non-agriculturists.

With this background of agrarian structure, let us now analyse agrarian relations. The relations may be classified as (a) those which are defined and enforced by law, (b) which are customary, and (c) which are of fluctuating character. Daniel Thorner rejected the often-described classification of cultivators in rural areas in three categories: landlords, tenants, and labourers.

If we analyze class structure in rural India in post-independence period, we find four classes: the three classes in the agricultural field are of land owners, tenants, and labourers, while the fourth class is of non-agriculturists According to A.R. Desai (1959), landowners constitute about 22 per cent, tenants about 27 per cent, agricultural labourers about 31 per cent and non-agriculturalists about 20 per cent.

A large majority of the cultivators (60%) are marginal cultivators with less than 2 hectares land, followed by small cultivators (16%) with 2 to 5 hectares land, medium cultivators (6%) with 5 to 10 hectares land, and big cultivators (18%) with more than 10 hectares land.

The available land per family in villages is less than one acre (or 0.4 ha). About 75 per cent of the total sown area is under food crops. About 35 per cent of the total produce is sold by cultivators. In about 65 per cent of these sale transactions, commodities are sold to the trader in the village itself.

The marketing of agricultural produce in the mandis (markets) is largely in the hands of intermediaries who represent private interests and who control both credit as well as disposal of the produce. Thus, a large number of agrarian proletariat, a large number of uneconomic holders of land, and a small number of artisans and self-employed people in villages reveal a miserable economic life lived by these people.

With this background of agrarian structure, let us now analyse agrarian relations. The relations may be classified as (a) those which are defined and enforced by law, (b) which are customary, and (c) which are of fluctuating character. Daniel Thorner rejected the often-described classification of cultivators in rural areas in three categories: landlords, tenants, and labourers.

This was on the ground that one and the same man can belong simultaneously to all three of these categories. A person can himself cultivate a few acres of land he owns, give some land on rent, and in emergency may work on other's field as labourer. He has analysed agrarian relations by using three specific terms: Malik for agricultural landlords, Kisan for working peasants (including tenants), and Mazdoor for agricultural labourers.

The Malik derives his agricultural income primarily (although not necessarily solely) from property rights in the soil, i.e., from a share of the produce of lands possessed by him. The share is realised in cash as well as in kind (percentage of produce). He may give his land either to tenant(s) or may cultivate it by hiring labourers. He may manage the hired labourers himself or through a manager.

The Malik may also have subsidiary income from business, profession, etc. The Maliks are of two types: those who are absentee landlords and those who reside in the village in which they own land Kisans are the working peasants, who may be small landowners or tenants the difference between the Malik and the small Kisan is the size of the land held. The Kisan himself and one or more members of his family actually perform the field labour. Sometimes the income of the Kisan is so low that he himself or his family members(s) work as agricultural labourers.

Mazdoors are those landless villagers who earn their livelihood primarily from working on other people's land. They receive wages in cash and sometimes in kind also. When they are not able to find work in villages, they migrate to other states either for working as agricultural labourers (as Biharis migrating to Punjab) or as construction or industrial labourers.

While Daniel Thorner has analysed agrarian social structure in terms of three classes on the basis of three criteria, viz.,:

(a) Income obtained from the soil (i.e., rent, own cultivation, or wages),

(b) The nature of rights (i.e., ownership, tenancy, sharecropping and no rights at all), and

(c) The extent of fieldwork actually performed (i.e., doing no work, doing partial work, doing total work, and doing work for others).

D.N. Dhanagre (in Desai, 1983) has suggested a different model of agrarian classes. He has proposed five classes: landlords, who derive income primarily from land- ownership by collecting rent from tenants, sub-tenants and share croppers; rich peasants, i.e., small landowners with sufficient land to support the family and who cultivate land themselves, and rich tenants who have substantial holdings and have to pay a nominal rent to their landlords; middle peasants, i.e., landowners of medium size holdings and tenants with substantial holdings and paying higher rent; poor peasants, i.e.,

(a) Land-owners with holdings insufficient to maintain a family, and therefore forced to rent others' land,

(b) Tenants with small holdings,

(c) Sharecroppers, and

(d) Landless labourers.

The rich peasants and the trader moneylenders exploit the poor tenants and the landless labourers so much that relations amongst them are always sour. The former two classes wield considerable economic, social, and political power. The emergence of cooperative and credit societies in the villages have no doubt affected the power of the Maliks, yet they continue to be strong.

Two things are to be noted here: one, cooperative societies have not been much successful in villages, and two, private trader continues to operate successfully. People with vested interests want to maintain the status quo.

Even land reforms have not reduced the power of Maliks and money-lenders. Unless economic, social and political progress takes place in the countryside, unless a movement is born which leads to more even distribution of productive resources, greater economic strength on the part of the smaller units leading to ability to withstand pressures from either the top cultivators' strata or the moneylender trader classes, no great success can be achieved in improving class relations.

The problems of landless agricultural labourers are more economic than social. We do not deny that their place in the social structure is of great importance but we hold that the problem of employment opportunity to them, and the problem of their wages are more crucial.

Employment opportunity is related to the growth of agricultural economy and incentives to artisans in the villages. In the Agricultural Labour Enquiry, an agricultural labourer was described as a person who worked as an agricultural labourer for more than one-half of the total number of days on which he actually worked during the year. On the basis of this definition, about 30 per cent workers were identified as agricultural labourers, one-half of them being without land and the rest being in possession of a little land (say one bigha or so).

As many as 85 per cent of agricultural labourers get only casual work during times of harvesting, weeding, preparation of soil, and ploughing. Today, the average wage of an agricultural labourer varies from Rs. 30 to Rs. 60 per day. The extent of employment varies under different conditions in various parts of the country, the average being about 200 days.

Thus, there is work for wages for about six months in a year, total unemployment for rather more than three months, and some kind of self-employment for less than three months. In this way, their (agricultural

labourers) average income is hardly about Rs. 10,000 a year. They, thus, live below the poverty line.

The Agricultural Labour Enquiry was concerned primarily with certain economic aspects but the social disabilities and low social position of the bulk of agricultural labourers are in themselves no small part of the problem. The vast majority belong to SCs, STs, and OBCs.

Some of their social handicaps might have diminished because of the government's discriminatory and reservation policies, yet their economic and social status has not much improved. They are not considered a part of social life in a village.

8.7 CONTRACT FARMING

Contract farming can be defined as agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of a farm product or products. Typically, the farmer agrees to provide agreed quantities of a specific agricultural product. These should meet the quality standards of the purchaser and be supplied at the time determined by the purchaser. In turn, the buyer commits to purchase the product and, in some cases, to support production through, for example, the supply of farm inputs, land preparation and the provision of technical advice.

Contract farming involves agricultural production being carried out on the basis of an agreement between the buyer and farm producers. Sometimes it involves the buyer specifying the quality required and the price, with the farmer agreeing to deliver at a future date. More commonly, however, contracts outline conditions for the production of farm products and for their delivery to the buyer's premises.[1] The farmer undertakes to supply agreed quantities of a crop or livestock product, based on the quality standards and delivery requirements of the purchaser. In return, the buyer, usually a company, agrees to buy the product, often at a price that is established in advance. The company often also agrees to support the farmer through, e.g., supplying inputs, assisting with land preparation, providing production advice and transporting produce to its premises.

Contract farming is the contractual arrangement between farmer and the firm, whether oral or written, specifying one or more conditions of production and/or marketing of an agricultural product.

Contract farming minimally demands a crop agreement made in advance, the firms, in varying degrees, shares the decision making power with the farmer. The farmer lends to the production process labour and land in his possession. Conversely the firm provides some of the production, knowledge inputs, marketing facility and participates in production decision and supervision.

8.7.1 Objectives

1. Supplying planting material
2. Guiding production of crops
3. Facilitate bank loan
4. Assured buy back agreement

8.7.2 Types

Several types of contracts are distinguished according to the sharing of risks and specification of contract terms. From the management view point, two types of contracts are determined.

1. Limited Management Contract where a farmer gets production input and sells the produce to the firm. There is no real guarantee for the price for the produce.
2. Full Management Contract where the farmer and the firm have entered into contract for certain amount of production. In this kind of contract the price is announced before the season thus the price risk is minimised. The firm provides market for the produce provided the quality specifications are met.

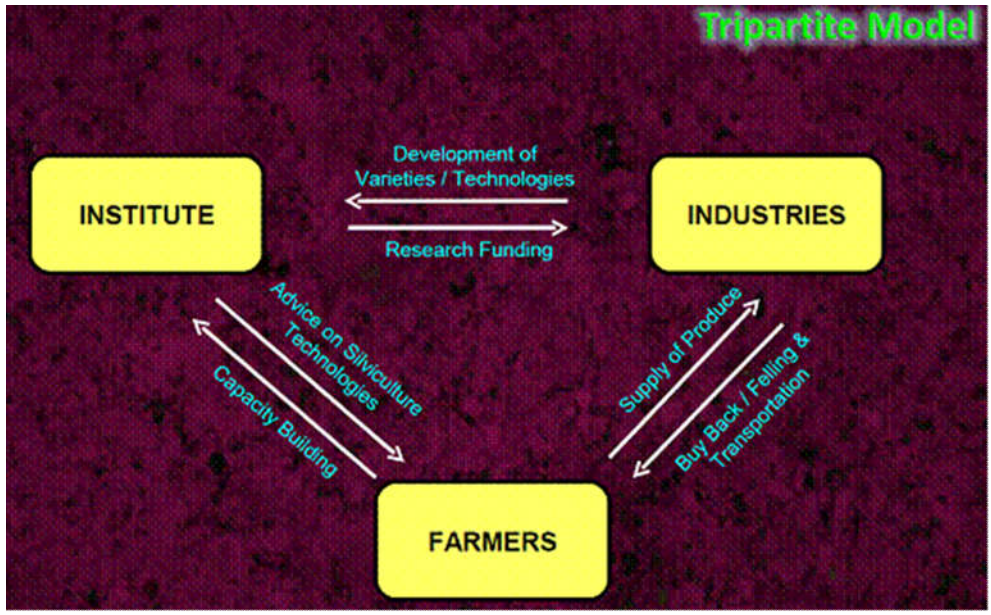
8.7.3 Khols and Uhl (1985) classified contracts into three broad categories :

1. Market specification contract where contract is a pre-harvest arrangement that binds the firm and grower to a particular set of conditions governing the sale of the crop. These conditions often specify price, quality and timing of delivery of the produce.
2. Resource providing contract where the contract oblige the contracting firms to supply production inputs, extension or credit in exchange for a marketing arrangement.
3. Management and income guaranteeing contract where contract includes the production and marketing stipulations of the former two types. In addition, market and price risks were transferred from farmers to firm and the farmer is assured of a certain level of revenue. But the contracting firms take a substantial part of the managerial responsibility of the farmer.

8.7.4 Models :

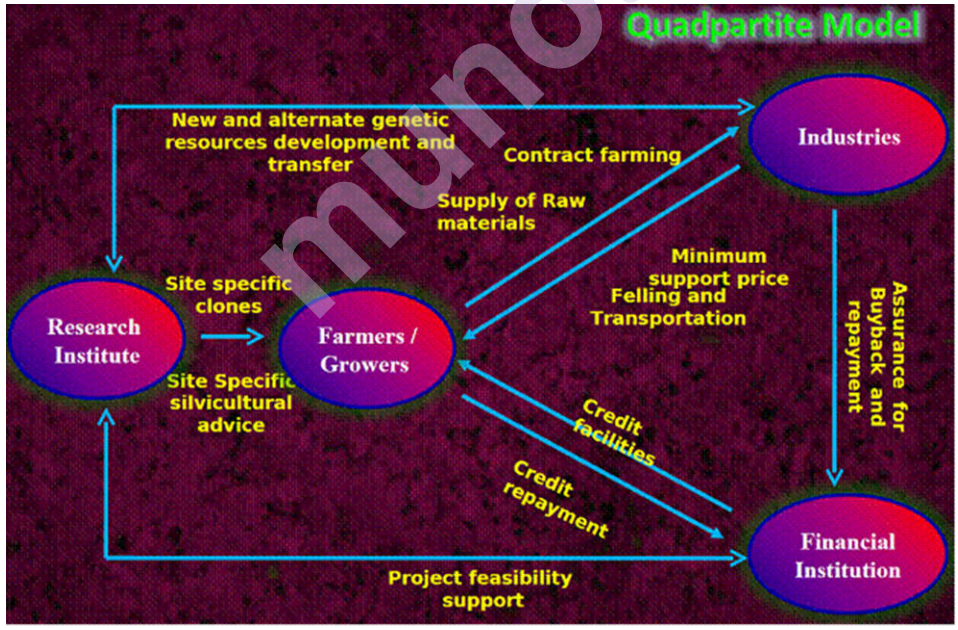
1) Tri-partite Model :

This model incorporates industry, growers and financial institutions. Under this system, the industry supplies quality planting material at subsidized rate and assures minimum support price.The financial institutions viz., Indian Bank, State Bank of India and Syndicate Bank provide credit facilities to the growers.



2. Quad-partite Model

This system is similar to tri-partite model barring the involvement of research institute. In this system, research institute play a significant role for technological advancements through varietal development and also to advice site specific precision technology to the growers. A pre and post-plantation scientific advice helps to develop human resources through on and off institute mode to farmers and plantation staff of the industries.



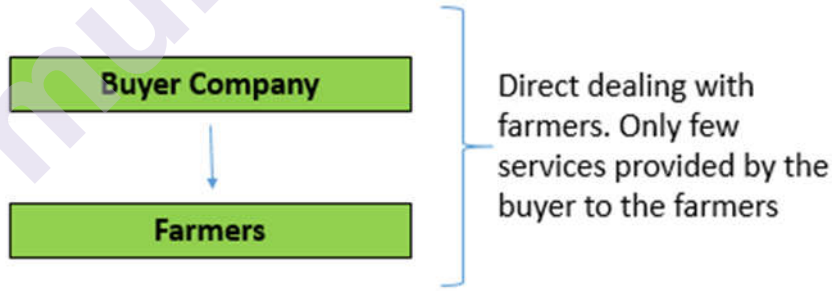
Contract farming business models

3. Informal model - As the name suggests, it is an informal model. This model is followed by single entrepreneurs or small companies who enter informal contracts with the farmers for a particular season. This is majorly done for fresh vegetables and fruits. Unlike the rest of contracts which are long term, the informal model is not for long. It could be for a single

season or two. Generally the duration of such a contract depends upon the need and resource arrangement by the entrepreneurs or small companies.

- Generally, in this type of informal model, the buyer has to take help from the government regarding the supporting services like extension service, technology transfer, technical know-how as well as credit arrangement. The buyer can also form contracts with farmers without giving services to them while ensuring their produce will be bought by the buyer.
- This model is the most transient and speculative of all contract farming models, with a risk of default by both the promoter and the farmer. However, this depends on the situation: interdependence of contract parties or long-term trustful relationships may reduce the risk of opportunistic behaviour. Special features of this CF model are:

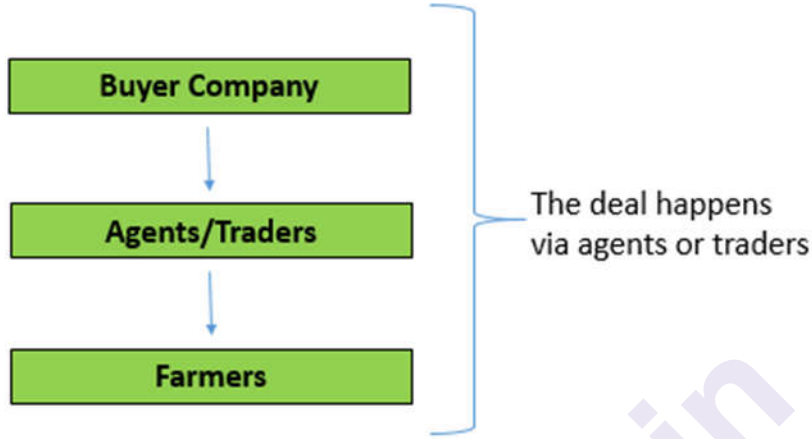
  - Small firms conclude simple, informal seasonal production contracts with smallholders.
  - The success often depends on the availability and quality of external extension services.
  - Embedded services, if at all provided, are limited to the delivery of basic inputs, occasionally on credit; advice is usually limited to grading and quality control.
  - Typical products: requiring minimal processing/ packaging, vertical coordination; e.g. fresh fruit/ vegetables for local markets, sometimes also staple crops.



4. Intermediary model - In this model, the buyer subcontracts an intermediary (collector, aggregator or farmer organisation) who formally or informally contracts farmers (combination of the centralised/ informal models). Special characteristics of this CF model are:

- The intermediary provides embedded services (usu- ally passing through services provided by buyers against service charges) and purchases the crop.
- This model can work, if well-designed and if incentive-structures are adequate and control mechanisms are in place.

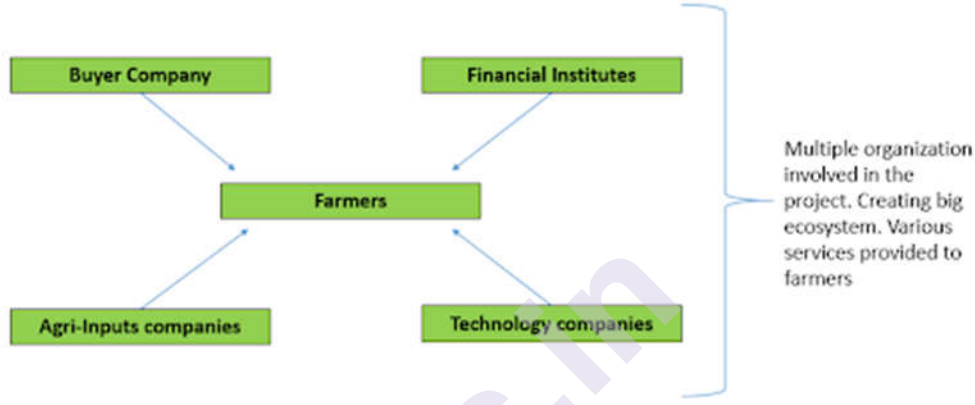
- This model can bear disadvantages for vertical coordination and for providing incentives to farmers (buyers may lose control of production processes, quality assurance and regularity of supplies; farmers may not benefit from technology transfer; there is also a risk of price distortion and reduced incomes for farmers).



5. Multipartite model - This model can develop from the centralised or nucleus estate models, e.g. following the privatisation of para- statals. It involves various organisations such as govern- mental statutory bodies alongside private companies and sometimes financial institutions. The services provided by the farmer will come from different organizations according to their expertise. For example, farmers will be provided financial services from the financial institutes who are part of the contract, they will be getting agri-inputs from the agri-inputs company, while specific technology needed at farm level will be provided by the tech company. And at the end, the harvested produce is taken by the main buyer company.

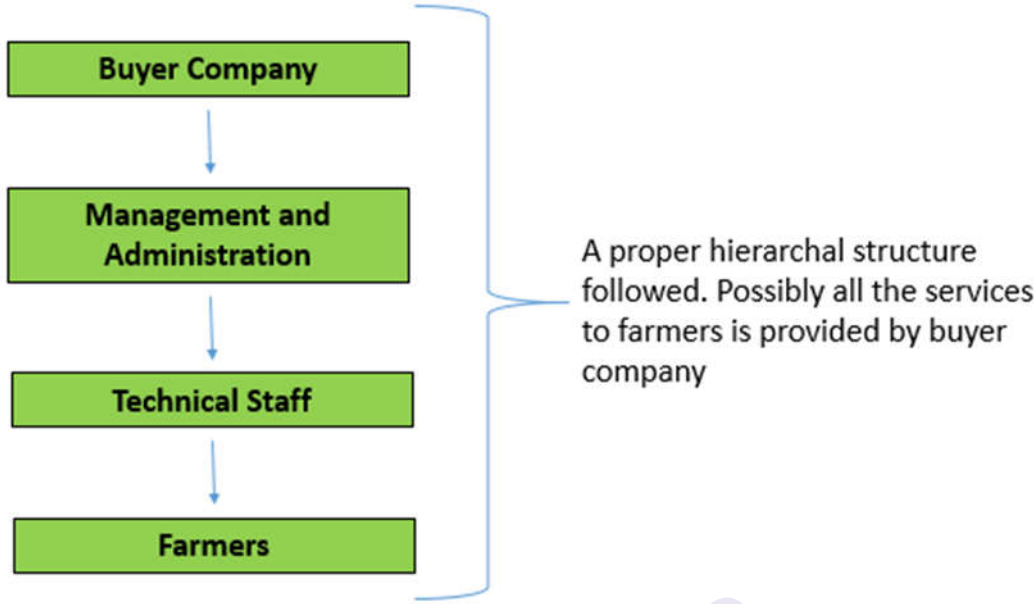
- This model makes a large ecosystem where different stakeholders are involved under one project. Typically such projects are relatively big and a large quantity of produce is exchanged between the grower and buyer.
- This type of contract farming system brings a win-win situation for all the bodies coming under the project. Farmers are benefited as they have access to all kinds of services
- Special features:
  - This model may feature as joint ventures of parastatals/ community companies with domestic/ foreign investors for processing.
  - The vertical coordination depends on the discretion of the firm. Due attention has to be paid to possible political interferences.

- This model may also feature as farm-firm arrangement complemented by agreements with 3rd party service providers (e.g. extension, training, credits, inputs, logistics).
- Separate organisations (e.g. cooperatives) may organise farmers and provide embedded services (e.g. credits, extension, marketing, sometimes also processing).
- This model may involve equity share schemes for producers.



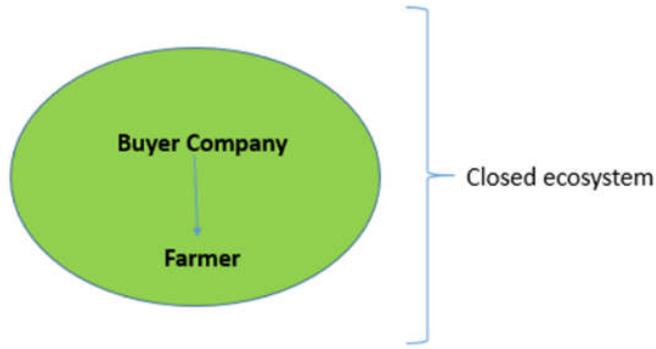
6. **Centralized model** - In this model, the buyers' involvement may vary from minimal input provision (e.g. specific varieties) to control of most production aspects (e.g. from land preparation to harvesting). In this type of contract farming, there is one centralized processor or buyer who is the only entity involved in the contract with farmers. It is centrally monitored and managed by the buyer. All the services whether it is technical guidance or advisory is provided by them and no other stakeholder or entity is involved. The services by the buyer company may range from providing just good quality seeds or the extreme opposite by providing all the required services like land preparation, seedlings, Agro-chemicals and even harvesting services. Moreover, in this type of contract farming, the buyer procures from many small farmers rather than buying from a few large farmers. This is the most common CF model, which can be characterised as follows:

- The buyer sources products from and provides services to large numbers of small, medium or large farmers.
- The relation/ coordination between farmers and contractor is strictly vertically organised.
- The quantities (quota), qualities and delivery conditions are determined at the beginning of the season.
- The production and harvesting processes and qualities are tightly controlled, sometimes directly implemented by the buyer's staff.
- Typical products: large volumes of uniform quality usually for processing; e.g. sugar cane, tobacco, tea, coffee, cotton, tree crops, vegetables, dairy, poultry.



7. Nucleus estate model - In this model, the buyer sources both from own estates/ plantations and from contracted farmers. The estate system involves significant investments by the buyer into land, machines, staff and management. This CF model can be characterised as follows:

- The nucleus estate usually guarantees supplies to assure cost-efficient utilisation of installed processing capacities and to satisfy firm sales obligations respectively.
- In some cases, the nucleus estate is used for research, breeding or piloting and demonstration purposes and/ or as collection point.
- The farmers are at times called 'satellite farmers' illustrating their link to the nucleus farm. This model was in the past often used for state owned farms that re-allocated land to former workers. It is nowadays also used by the private sector as one type of CF. This model is often referred to as "outgrower model".
- Typical products: perennials
- The nucleus estate model
- In the nucleus estate model the buyer company owns and manages the farm. The land which they own may be their own or taken on lease from the farmers. This type of contract farming model forms a closed ecosystem where the buyer has much control on the farm as well as all the activities done throughout the season. Hence, they can expect the exact quality of farm produce after the harvest. Such a model is followed by the companies who have their own land and the quantity produced from that land fulfills their need.



8.7.5 Advantages/ Benefits of Contract Farming :

Contract farming comes with various benefits not only to farmers but also to the buyer companies. Contract farming is looking towards the benefits both for the farm-producers as well as to the agro-processing firms. Let us see some of the benefits of contract farming:

1. Benefits to farmers:

- **Guaranteed and fixed pricing structure:** Generally farmers are unaware of the price they will get from the market after harvesting. Due to supply demand fluctuations the agricultural products are priced beyond the affordability of the farmers. Contracts enable the price fixation before the season starts and give an assured price to the farmer.

- **Guaranteed buy back:** The private companies guarantee buying of the farm products after the harvesting. Hence, farmers do not have to find a market to sell their produce. This also decreases the transportation cost which other wise farmers have to bear taking the products to market.

- **Introduction to the technology:** Involvement of technology firms helps the farmers to adopt the latest technology. Eventually the best quality of produce can be grown and incomes for farmers increase.

- **Access to credit and financial services:** India`s rural financing sector is still unexplored. Farmers are not aware of various financial services. Even if they are aware, there is poor accessibility. Contracts enable them to take the benefit of taking credit and crop insurance.

- **Skill and knowledge transfer:** Through technical knowledge and advanced cropping schedule given by the buyer company farmers have an opportunity to learn something new and adopt in their daily farming activities.

- **Provision to inputs and production services:** Not only the input provided but also the knowledge transfer of judicious use of those inputs are provided which is beneficial to the farmers.

- **Makes small scale farming competitive -** small farmers can access technology, credit, marketing channels and information while lowering transaction costs

Assured market for their produce at their doorsteps, reducing marketing and transaction costs

It reduces the risk of production, price and marketing costs.

Contract farming can open up new markets which would otherwise be unavailable to small farmers.

It also ensures higher production of better quality, financial support in cash and /or kind and technical guidance to the farmers.

In case of agri-processing level, it ensures consistent supply of agricultural produce with quality, at right time and lesser cost.

2. Benefits to buyer:

Desired quality and quantity of produce: The firms can get the specific and timely delivery of products directly from the field.

Traceability: As the produce is grown under the constant monitoring and observation, the company is well aware of the ingredients used in the form of inputs to produce them which helps to get advantage of backward traceability.

Avoiding market supply-demand fluctuation: The market is never constant for the raw material produced at farm. However, the demand for processed food is increasing day by day. In such a case, it is very much important to have a constant supply of raw material. The contract based farming enables the constant supply.

Cost-efficient: The cost of procuring the farm produce decreases while procuring it directly from the farm gate as there is minimal involvement of middlemen like agents who charge the commission.

3. Agri-based firms

- Optimally utilize their installed capacity, infrastructure and manpower, and respond to food safety and quality concerns of the consumers.
- Make direct private investment in agricultural activities.
- The price fixation is done by the negotiation between the producers and firms.
- The farmers enter into contract production with an assured price under term and conditions.

8.7.7 Challenges :

- Contract farming arrangements are often criticized for being biased in favor of firms or large farmers, while exploiting the poor bargaining power of small farmers.
- Problems faced by growers like undue quality cut on produce by firms, delayed deliveries at the factory, delayed payments, low price and pest attack on the contract crop which raised the cost of production.
- Contracting agreements are often verbal or informal in nature, and even written contracts often do not provide the legal protection in India that may be observed in other countries . Lack of enforceability of contractual provisions can result in breach of contracts by either party.
- Single Buyer – Multiple Sellers (Monopsony).
- Adverse gender effects - Women have less access to contract farming than men.
- while growing new crops,farmers face the risks of both market failure and production problems Farmers may become indebted because of production problem and excessive advances.

Some other issues are

- Soil fertility concern.
- Environmental issues.
- Food security concerns.
- Seed problems.
- Labour problems.
- Contract disputes.
- Middle man's influence.

8.7.8 Policy support :

Agricultural marketing is regulated by the States' Agricultural Produce Marketing Regulation (APMR) Acts. In order to regulate and develop practice of contract farming, Government has been actively advocating to the States/ Union Territories (UTs) to reform their agri marketing laws to provide a system of registration of contract farming sponsors, recording of their agreements and proper dispute settlement mechanism for orderly promotion of contract farming in the country.

8.7.9 NABARD's Initiatives in contact farming :

NABARD developed a special refinance package for contract farming arrangements (within and outside AEZs) aimed at promoting increased

production of commercial crops and creation of marketing avenues for the farmers. The various initiatives undertaken by NABARD in this direction are:

- Financial Interventions
- Special Refinance package for financing farmers for contract farming in AEZs
- 100% refinance to disbursements made by CBs, SCBs, RRBs and select SCARDBs (having net NPA less than 5%)
- Term facility for repayments (3 years)
- Fixation of higher scale of finance for crops under contract farming.
- Extension of refinance scheme for financing farmers for contract farming in AEZs to contract farming outside AEZs besides coverage of medicinal and aromatic plants.
- Extension of Refinance scheme for contract farming under Automatic Refinance Facility.

8.7.10 Agricultural produce suitable for Contract Farming :

The various agricultural produce are suitable for practices under contract farming like tomato pulp, organic dyes, poultry, pulpwood, mushrooms, dairy processing, edible oils, exotic vegetables, baby corn cultivation, basmati rice, medicinal plants, potato for making chips and wafers, onions, mandarin oranges, durum wheat, flowers and orchids, etc.

Key minimum requirements for appropriate contract schemes

Broadly, the project must:

- not result in farmers' overspecialisation in certain crops to the detriment of building resilience and contributing to local food security;
- promote sustainable farming practices and not promote reliance on chemicals or expensive seeds, or lead to excessive debts;
- lead to higher incomes for farmers than they would otherwise earn, and compared to alternative models
- substantially include women farmers and promote their rights;
- promote the land rights of farmers;
- apply free, prior and informed consent of those affected in terms of project design and implementation.

In relation to contractual terms, the project should:

- be negotiated transparently and fairly among the parties, providing adequate information at all times on the financial aspects of the project and the risks and likely impacts;
- consider alternative contract farming models;
- be regulated by a written contract spelling out the details and obligations of both the company and the out-growers, and which must be written in a clear and understandable way with out-growers given sufficient time to review it;
- be transparent about how the price is determined, the duration of the project and how production inputs and other services are to be supplied and used by farmers;
- build in a clause for the renegotiation of the contract at agreed intervals, and specify the sharing of production and market risks among the parties;
- track and communicate performance to affected stakeholders to build accountability at the operational level;
- prevent unfair practices in buyer-farmer relations, and not prohibit or discourage farmers from associating with other farmers to compare contractual clauses or to address concerns or problems;
- have clear mechanisms for settling disputes.

The government should:

- act as a third party, or mediator, between the parties and not be a mouthpiece for the company sponsor;
- have appropriate legislation to ensure that farmers' rights can be enforced

8.7.11 Conclusion :

Companes like HUL • ITC • SUGUNA POULTRY • VENKATESHWARA HATCHERIES • PEPSICO • RALLIS • NESTLE have entered in contract farming.

India, given the diverse agro climatic zones, can be a competitive producer of a large number of crops. There is a Need to convert our factor price advantage into sustainable competitive advantage. India has most small and marginal farmers. They are not able to avail some basic services required in Agriculture. The reason can be either they are not aware of such services or they are not able to access them. Contract farming in India can solve this issue. Moreover, there is constant price fluctuation in the market, due to which not only farmers but also exporters, agri processing firms are facing challenges. This system of getting under contracts gives them the assure price and the timely exchange of the farm

produce. India has to evolve from its conventional way of farming. The first step is to adopt the contract farming system and scaling the model throughout the geography. Government can also support by actively making public private partnerships and working with farmers making many such joint ventures and achieving the target of doubling farmers' income.

8.8. QUESTIONS

Q.1. Explain the economics of share tenancy.

Q.2 Write an explanatory note on share tenancy.

Q.3 Explain crop sharing practices in India.

Q.4 Write a note on inequality in distribution of holdings.

Q.5 Write a note on market interlocking and interlinkages.

Q.6 Write a note on analysis of rural classes.

Q.7 Write an explanatory note on contract farming.

8.9. REFERENCES

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