

स्वाध्याय

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स्वावलम्बन

**UTTAR PRADESH RAJARSHI TANDON OPEN UNIVERSITY**  
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**MBA-3.12**  
**HUMAN RESOURCE PLANNING**

**FIRST BLOCK**

**Basics of Human Resource Planning**



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Block

# 1

## **BASICS OF HUMAN RESOURCE PLANNING**

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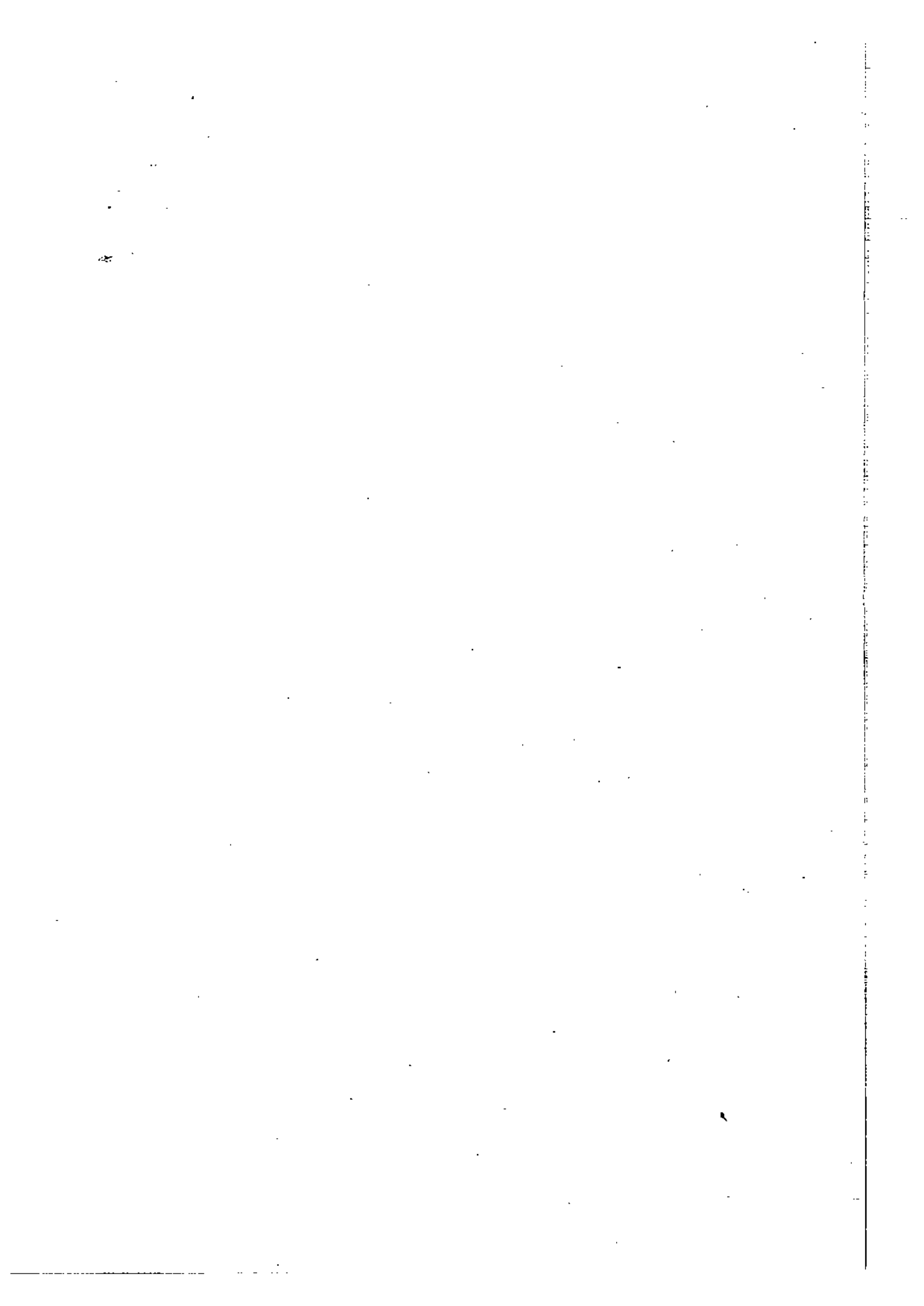
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## **BLOCK 1    BASICS OF HUMAN RESOURCE PLANNING**

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This block comprises four units. The first unit deals with concept of human resources and its relevance to economic development. It also discusses Quantitative and Qualitative dimensions of Human Resources Planning, concept and flexibility of labour markets. The second unit presents an overview of the concept, and different alternative approaches and resultant practices in Human Resources Planning.

The last two units deal with various aspects, methods and techniques of demand and supply forecasting of human resources at macro and micro levels.



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# UNIT 1 MACRO LEVEL SCENARIO OF HUMAN RESOURCES PLANNING

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## Objectives

After reading this unit, you should be able to understand :

- the concept of human resources and its relevance to economic development;
- quantitative and qualitative dimensions of human resources and their role in human resources development;
- the concept of Labour market, the relevance of functioning and flexibility of labour markets to human resources planning;
- dimensions of and the need for a comprehensive labour market information as a pre-requisite to human resources planning.

## Structure

- 1.1 Introduction
- 1.2 Quantitative Dimensions of Human Resources Planning
- 1.3 Qualitative Dimensions of Human Resources Planning
- 1.4 Labour Market Behaviour
- 1.5 Summary
- 1.6 Further Readings

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## 1.1 INTRODUCTION

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The word 'resource' refers to productive power of natural goods. Human resource is, therefore, the productive power in human beings. Unlike the material resources, human resources are the participants as also the beneficiaries of economic development process. In that, human resources figure on the demand as well as the supply side of production of goods and services in the economy. On the demand side, goods and services produced are used by the human beings to alleviate poverty, improve health, generate better living conditions, enhance general educational levels and provide better facilities for training. Utilisation of goods and services thus leads to an improvement of quality of human resources and hence labour productivity. On the supply side, human resources and capital form essential ingredients of production system which transform natural and physical resources into goods and services.

Complementarity between human resources and capital is so close that optimal increases in output and hence optimal economic growth is not possible through increases in output and hence optimal economic growth is not possible through increases in one of them - either human resources or capital- at the cost of the other. Theodore W. Schultz (1962) observes "Some growth of course can be had from the increase in more conventional capital even though the labour that is available is lacking both in skill and knowledge. But the rate of growth will be seriously limited. It simply is not possible to have the fruits of modern agriculture and the abundance of modern industry without making large investments in human beings". Based on a study of per capita income differences among many countries Anne O. Krueger (1968) comes to the conclusion that there is an optimal ratio of human resources to capital which has to be maintained to reach the attainable rate of economic growth.

Given the endowment of capital and other material resources, human resources could accelerate the production process and hence economic growth. At the same time,

unprecedented growth in human resources - disproportionate to the pattern of accumulation of capital and other material resources - could hinder development.

Rate of growth in human resources, in turn, is determined by the two dimensions of human resources: Quantity and quality. Quantity of human resources is determined by variable such as :

- population policy.
- population structure
- migration, and
- labour force participation.

Quality of human resources, on the other hand, is influenced by the status of variable like:

- education and training
- health and nutrition, and
- equality of opportunity.

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## 1.2 QUANTITATIVE DIMENSIONS OF HUMAN RESOURCES PLANNING

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Human resources viewed as the productive power of human beings constitute one of the two parts of population of any economy. The other being the human beings without any productive power.

### Definition Population

Population of a country, in a generic sense, is taken as constituting the totality of all human beings of the country. The concept of population, viewed in this manner, appears to be very simple. However, in reality, the definitions used vary not only from country to country but even within a country also depending on the purpose of enquiry. Broadly, the definitions of population used may be categorised into *de facto* and *de jure*.

#### *de facto* and *de jure*.

A *de facto* (or present-in-area) concept involves complete count of all persons — residents and non-residents alike — physically present in the country at the time of enumeration.

A *de jure* concept necessitates complete count of all persons considered to be normal residents of the country, irrespective of where each person is located, at the time of the census.

Strict conformity to either of these concepts is not possible because of difficulties in enumeration.

- nationals living abroad.
- nomadic population,
- jungle inhabitants, and
- population in disturbed areas.

Added to this, are the administrative difficulties — logistic, financial and human — of recording everyone at the same time. There is thus a degree of inaccuracy in the census of population of any country. The greater the number to be counted and/or the larger the area to be covered the larger is the degree of inaccuracy.

Human resources being an integral part of population, growth of human resources is naturally dependent on the growth of population.

Population growth, in turn, is determined by three factors: Population policies, population structure and migration.

### Population Policies

In terms of State intervention in population planning, it is useful to distinguish between population - influencing policies and population responsive policies. The former are anticipatory in nature and operate through the demographic sub-system by influencing factors primarily responsible for population growth such as fertility, marriage and mortality. The latter are essentially reactive in character which are often implemented through the socio-

economic sub-system to accommodate or adjust to observed demographic trends with the help of programmes like health, nutrition, education, housing, transport network expansion and employment promotion.

In an over-populated economy, sufficiently robust population - influencing policies alongwith appropriate population-responsive policies (complementary in nature) might be the optimal population policy framework. In any case, understanding the structure and pattern of growth of population is essential for evolving an appropriate combination of population— influencing and population — responsive policies towards achieving an optimal population policy framework.

### Population Structure

Population is a dynamic concept. Consequently, structure or composition of population at any point of time reveals two things: First, it is the result of interaction in the past among factors causing population growth. Second, it reveals the potential for future growth in population. In so far as population growth is concerned, there are two aspects of population composition which are most important: Sex composition and age composition.

### Sex Composition

The principal measure of sex composition is the sex ratio - defined as the number males per 100 females. In other words

$$\text{Sex ratio} = \frac{\text{Number of males in the population}}{\text{Number of females in the population}} \times 100$$

One hundred is the point of balance between males and females. A sex rate above 100 denotes an excess of males. Likewise, a sex ratio below 100 indicates an excess of females. In general sex ratios tend to range between 95 to 102. Heavy war losses, heavy migration and local social considerations such as female infanticide may upset the sex ratio. In any case a sex ratio outside the range of 90-105 is to be viewed with suspicion.

Starting point for all population projections is the projection of female population on whom the number of births crucially will depend. Higher the female population, higher will be the number of births and hence the higher will be the population growth. Sex composition thus indicates the potential future growth in population.

### Age Composition

Age composition is the distribution of population by age groups - usually five year age groups. Age composition at any given point of time is the result of past trends in fertility and mortality and is also the basis for establishing future trends.

In the computation rate of growth of population, future births are usually computed by applying five year age specific fertility rates to the women of child bearing age (10 to 49 years) at the midpoint of each five-years time interval.

Data on age composition is also useful in the computation and analysis of labour supply. Economically active age-group is considered to be 15 to 65 years. Population in the age group crucially determine the extent and composition of labour force.

### Migration

Age and sex composition are indicative of only the natural growth in population. Another factor which causes changes in population is the net migration. If the net migration is positive, the population grows at a rate faster than that indicated by natural growth. On the contrary, if the net migration is negative it causes decline in the rate of growth indicated by the natural growth.

Movements from and to other regions within the country are termed as out-migration and in-migration, respectively, and these movements together are known as internal migration. Data on internal migration are useful, when it is intended to analyse population changes at provincial level or some other administrative level. Internal migration is a function of the inter-regional and inter-sectoral rates of growth and wage differentials.

Movement across national boundaries — termed as international migration — causes changes in the population at the national level. The effect of international migration on the national population is measured by the rate of net-migration defined as

$$\text{Rate of net migration} = \frac{\text{Total immigrants} - \text{Total emigrants}}{\text{Mid-year population}} \times 1000$$

Rate of population increase at any point of time equals the rate of natural increase plus the rate of net migration.

### Labour Force Participation

Population change as such do not cause changes in human resources. Rather it is the change in the economically active component of population which affects growth in the human resources. In terms of economic activity classification, population may be divided into workers and non-workers.

Worker is defined as a person whose main activity is participation in economically productive work by his mental or physical presence. Work involves not only actual work but also effective supervision and direction. Workers thus defined, others in the population are considered as non-workers. For the purpose of elaboration non-workers may be categorised as:

- full-time students;
- persons engaged in household duties;
- infants and dependents doing no work;
- retired persons and rentiers living on rent on an agricultural or non-agricultural royalty;
- beggars, vagrants and others with unspecified sources of income;
- inmates of penal, charitable and mental institutions;
- unemployed but available for work; and
- others.

Labour force or economically active population is that segment of the population whose function is to produce goods and services demanded by the whole population. Usually, those aged 15-64 years are considered to be in the productive age-group. However, not everyone in the productive age-group is effectively in the labour force. According to the accepted definition, labour force comprises all persons of either sex who furnish the supply of labour available for the production of economic goods and services including

- employers,
- employees,
- self-employed persons, and
- those engaged in family enterprises without pay.

In other words, labour-force may be defined as comprising workers and non-workers in the productive age-group who are 'unemployed but available for work'. Labour-force participation rate is then defined as

$$\text{Labour force participation rate} = \frac{\text{Labour force}}{\text{Total population}} \times 100$$

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## 1.3 QUALITATIVE DIMENSIONS OF HUMAN RESOURCES PLANNING

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While the quantitative dimensions assist in the analysis of human resources in terms of numbers, qualitative dimension facilitates assessment and analysis of productive power in human resources.

### Education and Training

Education and training is the most dominant dimension affecting quality of human resources in terms of knowledge and skill. Education and training serve both individual and social ends. To an individual, it has both vocational and cultural significance in achieving economic emancipation and social upgradation. To the society, education and training is a means which makes possible to take advantage of technological changes as well as furthering technological progress.

Depending on the method of imparting knowledge and skill, education and training may be classified into two types: Formal and informal. Formal education and training, which is imparted through schools and colleges, emphasises transfer of knowledge. Informal education



and training such as on-the-job training and hereditary training lays stress on transfer of skill i.e., practical application of knowledge.

Education and training as a means of human resources planning involves critical choices, as no country can have all education and training. Rather, it is essential to identify priorities in education and training, emphasise programmes which have high priority and tone down or even discard programme with a low priority. As far as development of education and training is concerned there are six choice areas which are critical:

- Choice between levels of education such as primary, secondary and higher education.
- Choice between quality and quantity in education and training.
- Choice between science and technology on the one hand, and humanities and liberal arts on the other hand.
- Choice between market forces and incentives to attract people into some occupations.
- Choice between the aspirations of individuals and needs of the society.

### Health and Nutrition

Health and nutrition status constitute one of the most important indicators of quality of human resource, as they contribute significantly to building and maintaining a productive human resource as well as improving average expectation of life and quality of life.

There are three determinants of health status:

- Purchasing power of people
- Public sanitation, climate and availability of medical facilities.
- People's knowledge and understanding of health hygiene and nutrition.

Education, health and nutrition are interlinked, and complement each other in the process of human resources development.

### Equality of Opportunity

Investments in human resources development do not always ensure proportionate development of all sections of population. In the absence of deliberate policy intervention, there are bound to be discriminations. There are three distinct forms of discriminations which are relevant to developing nations:

- Social discrimination
- Economic discrimination
- Regional discrimination.

These three forms of discriminations individually and/or jointly lead to inequality of opportunities of varying degrees among different sections of population.

Social discrimination may take either the form of sex discrimination or discrimination among different social groups of both.

Economic discrimination takes place largely among groups of population belonging to different economic strata classified in terms of either income generating assets.

Regional discrimination can be in the form either discrimination between rural and urban population or discrimination among population belonging to different regions.

Discrimination of any form causes differential access to education and training, and health and nutrition. This in turn leads to differences in quality and productivity of human resources belonging to different segments of the population - with the privileged benefitting the most and under privileged being deprived of their due share in the development process.

Opportunity costs of discrimination are very high, as it leads to many social and economic evils apart from retarding the pace of economic development. In the context of racial discrimination in the United States, it has been demonstrated in particular that the national out-put can be further expanded by improving the average level of productivity of each individual through appropriate social and economic policies directed towards equality of opportunity in the fields of education and health.

## 1.4 LABOUR MARKET BEHAVIOUR

Quantitative and qualitative dimensions of human resources only regulate the supply of human resources. Utilisation of human resources, which results in the demand for the same, depends crucially on the functioning and flexibility of labour markets. The primary constituents of labour markets are employers and employees.

Employers can be either individuals, or establishments or institutions including those in the public sector.

Employees, on the other hand, can be individuals, groups of house-holds or their representatives such as labour union leaders and labour contractors.

Interactions among these different groups of employers and employees together characterise the behaviour of labour markets.

The resulting decision of these interactions are in the form of overall labour allocation among different segments of the economy within the context of relative factor prices, technological progress and organisational framework.

The level of competition among the employers and employees, which indicates the degree of flexibility of labour markets, in turn determines the level of employment/unemployment and hence the demand for human resources. In an extreme rigid form, where employers are dominating, it may lead to involuntary unemployment and hence reduced demand for human resources. On the other hand, if the employees are dominating in a rigid labour market, it may result in disguised unemployment and increased demand for human resources.

The structure of labour markets is determined by internal and external economic environment; technological progress and technology absorption; degree of labour mobility - sectorial, spatial and occupations; and wage structure with reference to productivity differentials. In developing countries, because of labour market imperfections, labour markets are usually segmented and the segmentation is primarily caused by the various factors influencing the structure of labour markets. Some of the important forms of segmentation are :

- agricultural and non-agricultural,
- rural and urban,
- formal and informal,
- male and female, and
- skilled and unskilled.

Labour market analysis should be the principal instrument of human resource planning, as it helps identify skill shortages at more disaggregated levels of occupations and geographical locations and also enable a diagnosis of market failure to match labour supply with demand. In developing countries, labour market analysis is not used as a means of human resources planning primarily because of lack of information on labour markets.

For effective human resource planning labour market information should be comprehensive, updated at regular intervals and should throw light specifically on the following aspects:

- Population, labour force and workforce.
- Unemployment and underemployment,
- Manpower requirements by occupation, education and experience.
- Wages and earning structure.
- Job search patterns.
- Formal and informal sector entry requirements, occupational profiles and horizontal relationships among occupations.
- Work environment and industrial relations.
- Stocks and output of different education/skill categories.

th flow of information on the aspects outlined above and easy access to such information not only facilitates detailed labour market analysis but it has also the potential to reduce labour market imperfections, thereby eliminating segmentation of labour markets.

les information networks, the other factor which can contribute to the reduction of labour market information is the public policy towards wages and salaries, labour-management relations, regional and industrial development, and education and training.

Competitive labour market is the prime requirement for achieving optimal human resources planning.

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## 5 SUMMARY

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dimensions, attributes and distribution of population the product of whose labour adds to national wealth constitute human resources. They are thus the participants and beneficiaries of economic development. The demographic profile, migration and mobility and participation patterns in economic activity determine the quantitative aspects of actual and potential human resources. Investments in education and training, health and nutrition, and social welfare and quality promote quality of human resources through enhanced labour productivity.

While quantitative and qualitative dimensions only regulate supply of human resources, the demand aspect of human resources planning namely the demand for human resources crucially depends on the functioning and flexibility of labour markets. Labour market analysis is a principal instrument of human resources planning, as it helps identify skill shortages and so enables a diagnosis of market failure to match labour supply with demand. To facilitate labour market analysis, there is a need for a comprehensive and regularly updated labour market information system.

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## 6 FURTHER READINGS

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## UNIT 2 CONCEPTS AND PROCESS OF HUMAN RESOURCES PLANNING

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### Objectives

After reading this Unit, you should be able to understand:

- the concept of human resources planning;
- the need for public intervention in human resources planning;
- the theoretical basis and conceptual issues associated with alternative approaches to human resources planning; and
- conflict between the theoretical construct and political process of human resources planning and the resultant practices in human resources planning.

### Structure:

- 2.1 Concept of Human Resources Planning
- 2.2 Need for Human Resources Planning
- 2.3 Approaches to Human Resources Planning
- 2.4 Practices in Human Resources Planning
- 2.5 Summary
- 2.6 Further Readings

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### 2.1 CONCEPT OF HUMAN RESOURCES PLANNING

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Planning is a process of preparing a set of decisions for action in the future. Human Resources planning may then be interpreted as a process of preparing a set of decisions on human resources development for action by human resources in future. The actions required on the part of human resources are exogenous to human resources planning and they are primarily of two types:

- Availing the employment opportunities generated by the technologies in vogue in the process of economic development, and
- evolving new technologies to aid the process of economic development.

Given the pattern of growth in population, labour force and hence the human resources; there are three types of investments which have the potential to contribute to human resources development.

They are investments in :

- health and nutrition,
- social and economic equity, and
- education.

The first two types of investment can only contribute to the accumulation of human beings in terms of health, physical capacity to work and socio-economic status. As an economic asset - human capital a mature human being is similar to unimproved land that has been protected from destruction by fire and erosion. It is the education and training, directed toward development of skills in human beings, that at chance the future asset value, productivity and earning power of human beings. This is the human capital approach to human resources planning which attaches prime importance to investment in education as a means of human resources development.

In a broader sense, thus, human resources planning and educational planning are almost synonymous.

## 2.2 NEED FOR HUMAN RESOURCES PLANNING

Education being the dominant dimension, human resources planning essentially involves making conscious decision with regard to education to facilitate future actions regarding participation of human resources in economic development. The natural question that arises is that should policy planners make such decisions? Can not the market mechanism involving employers as users of human resources, and students and their parents as suppliers of human resources make such decisions? These are very relevant questions which must be answered before moving on to techniques of human resources planning.

Any market mechanism essentially involves interactions between profit maximising producers and utility maximising consumers. In a perfectly competitive market economy, wherein each of the participants among the producers as well as consumers is endowed with perfect knowledge about the market forces, the interactions between producers and consumers result in a set of prices which guarantee optimum allocation of resources provided certain conditions are met. Allocative efficiency of resources is considered optimum when it is not possible to improve welfare of anyone of the participants in the market without impairing the welfare of at least one of the participants in the market. Welfare of each participant is viewed here from the point of view of individual's perceptions of choices and preferences according to his or her own standards. This is the standard definition of Pareto optimality.

The conditions which must be fulfilled to achieve Pareto optimality in resource allocation are four:

- informed consumers,
- absence of internal economies of scale in production,
- absence of externalities either in production or in consumption, and
- absence of public goods.

Failure to fulfill any one or more of the above conditions leads to market failure in effecting optimum allocation of resources and justifies state intervention to effect necessary corrections through policy decisions.

The next relevant question is whether education violates any one of the four conditions.

### Consumer's Knowledge of Education

Parental influence is a decisive factor in the educational achievements of children. Parental ignorance caused by either lack of adequate knowledge about the market for education or perceptions based on their career experiences rather than based on the career challenges ahead of their children or both is often viewed as the basis for state intervention in education. State sponsored vocational guidance programmes and the stress on generating employment market information through government machinery as a means to provide appropriate labour market signals among developing nations bears evidence to state intervention to make up for consumer ignorance or lack of adequate knowledge.

### Scale Economies in Production in Education

In the context of education, optimum allocation of resources implies that all resources should be equally productive in every possible use in education. If there are scale economies in any one or more segments of education, then the resource allocation pattern is not optimum. Available empirical evidence based on studies relating to American urban schools and private colleges, British Universities, and Indian Technical education colleges and polytechnics supports the belief that scale economies do exist in educational system and that resource allocation within education system is not necessarily optimum.

### Externalities in Production or in Consumption

Efficient allocation of resources requires that the value of output in different end uses is identical. If some activities generate external benefits, they would be better off if more of these activities are carried out. External benefits of education are enormous and

varied. Some are economic benefits such as income gains to persons other than those who are educated and income gains of subsequent generations from a better educated present generation. Some are social benefits like reduced crime and encouragement of lawful behaviour. And, others are the cultural benefits such as widening of intellectual horizons and increased interests in cultural pursuits.

It is the presence and recognition of these external benefits of education which have supported state intervention in education as a means of maximising the external benefits of education to the society.

### Public Good

Public goods are generated by such economic activities whose benefits or losses cannot be assigned to any single individual. They belong to the society as a whole and their consumption is necessarily joint and is equal among all individuals in the society. As a result, the market mechanism is powerless to induce anyone to reveal their preferences for public goods. It is thus difficult to establish optimum quantity of public goods and the quantity to be provided can only be determined through deliberate policy decision based on non-economic objectives. Existence of public goods is thus a case in State intervention.

The advocates of education as a public good rested their case more often on non-economic objectives of education (than economic considerations underlying conditions essential to achieve Pareto optimality) in resource allocation to education. The three non-economic objectives which are of prime importance are :

- equality of educational opportunities,
- social cohesion, and
- socialization function of education.

Parental choice, particularly in a developing economy with diverse socio-economic structure, can neither guarantee optimal use of resources nor has the potential to meet the non-economic objectives. State intervention in the planning and development of education is thus imperative.

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## 2.3 APPROACHES TO HUMAN RESOURCES PLANNING

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On the theoretical plane there are three options to any educational planner: The first option is to treat education as a consumption good and demand for education as an aggregate of individual consumer's demand for schooling, and to provide facilities for education and training accordingly. The second option is to view education as an investment good, evaluate investment in education at par with investment in physical capital, and provide just enough schooling to equalize rates of return on investment in education with the rates of return on investment in physical capital. The third option is to consider skilled manpower as basic input to production of goods and services with in the economy, assess the skill requirements to achieve any predetermined economic growth target, and to gear the expansion of educational system to provide the needed education and training.

Accordingly, there are three approaches to educational planning:

- Social Demand Approach
- Rate of Return Approach
- Manpower Requirement Approach.

### Social Demand Approach

The social demand approach relies on an assessment of society's requirement for education. In principle, it is an aggregate of individuals demand for education in respect of all individuals within the society. It is not always possible particularly in large societies, to assess individuals demand for education. In practice, therefore, social demand approach relies on a projection of past trends in demographic aspects of population and the enrolment at different levels of education.

Social demand approach is thus capable of revealing the number of students with different types of professional preparation that may be expected by a given target date, based on past experience. Projections of social demand for education are contingent upon given levels of

- incomes of educated people,
- tastes and preferences of households for education.
- demographic characteristics such as fertility and mortality,
- direct costs of education,
- student grants, and
- existing standards of admissions to various levels of education.

Added to these constraints, there are the perennial problems associated with the data base on demographic aspects at disaggregated levels such as district, block and village; and data on wastage and stagnation in education, and intensity of utilisation of existing educational facilities.

Social demand approach thus suffers from the difficulties associated with any futurological exercise.

### **Rate of Return Approach**

Critics of social demand approach argue that the decision to choose more or less of education, beyond a legal school-learning age, is made by an individual who attaches a positive value to the present and the future benefits of education. Aggregate of individuals demand for education, which is construed as the social demand for education, should then be based an aggregate of individuals assessment of benefits of education-reflecting the social benefits.

This brings us to the rate of return approach to education.

Rate of return approach looks upon education as a contributor to productivity and in this sense, it is expected to facilitate investment decisions in education - whether or not the student should undergo more schooling, or whether or not the state should invest more and expand educational facilities.

Like in the rate of return analysis of any investment, rate of return on investment in education is used to expand educational facilities until schooling equalizes.

- on the one hand yield of investment in different types of education, and
- on the other hand yield of investment in education vis-a-vis other sectors of the economy.

The analysis, however, is confined to formal education only.

Estimation of rate return involves the calculation of internal rate of return which equates the present value of returns earned throughout the future active life with costs incurred soon after investment decision is made. There are thus three parameters involved in the estimation of rate of return.

- Costs of education
- Returns to education
- Discount rate (used in discounting future returns to arrive at present value).

Variety of conceptual issues are involved in the estimation of these three parameters.

### **Costs of Education**

Economic analysis of investment in education has a simple two-element taxonomy of cost: Direct costs and indirect costs.

#### **Direct costs**

Direct cost again have two components: private expenditure on education and public expenditure on education.

Private expenditure on education is the expenditure incurred by the individuals pursuing education which includes items such as tuition fees, cost of books, extra room and board

expenses and out-of-pocket expenses. It is relatively easier to estimate expenditure on these items.

Public expenditure on education is what the government spends on creating, expanding and maintaining educational facilities. Public expenditure may be divided into recurring and non-recurring items of expenditure. Recurring expenditure consists of items such as salaries of teaching and non-teaching staff, maintenance expenditure, office expenses including contingencies, and expenditure on student welfare. Non-recurring expenditure comprises costs of building, plant and equipment, library, and sports complex. In the case of recurring expenditure, apportioning salaries of teaching staff lecturing to students in more than one discipline is a problem, as it requires an assessment of workload distribution which is not uniform among various educational institutions. Non-recurring expenditure poses two sets of problems: One, imputing costs to any particular cohort of students. Second, apportioning costs imputed to any cohort among students belonging to various disciplines, as all students may not use each and every facility in an identical manner. For example, social sciences students do not use laboratories.

#### **Indirect Costs**

Indirect cost may be viewed from both private and social angles. From the private angle it is the earning foregone by individual students while attending school. There are a variety of conceptual issues involved in estimating earnings and in attributing it to a particular level of education which will be discussed later. Estimation of foregone earnings is even more difficult; as it calls for identification of all possible avenues of employment and possible earnings therefrom, and an assessment of money value of foregone leisure. This necessitates subjective valuation of earning and leisure.

Social view point of indirect costs involves estimation of opportunity cost of public expenditure on education. There are no standard procedures in the estimation of social indirect costs.

#### **Returns to Education**

Return to education may be categorised into three types: Direct monetary benefits, indirect monetary benefits and non-monetary benefits.

##### **Direct monetary benefits**

Direct monetary benefits to education are the extra life-time earnings received that can be attributed to schooling.

Observed earnings differential of any education program, say college education, can at best constitute a first approximation to the true earnings differential attributable to college education. This is because intelligence, family wealth, parents education and earnings, and motivation play an important role - more than education per-se. Isolating the effect of all such factors and estimating the true earnings differential attributable to any given level of education is a difficult task.

As for earnings data on only the past and present returns are available. To estimate future returns it calls for intel. gent guess regarding productivity and growth in incomes. Any assumption on the security rate of growth of earnings differential between high school and college graduates may have a crucial effect on the rate of return to college education.

Computation of life time earnings also necessitates adjustments for education specific unemployment and mortality rates; which is a difficult task as no data exists in this regard. This apart, monetary gain to an individual over his life time should be measured by his disposable income - income net of taxes. Anticipating future tax structures for different streams of life time income is not an easy job.

##### **Indirect monetary benefits**

Education definitely influences earnings from the first job. Earnings from subsequent jobs are not all dependent on initial education. Rather, they are dependent on the skills acquired through on-the-job-training and other in-service training. additional earnings attributable to such training are thus indirect to initial education. Such training, however, is dependent on initial level of education, although the nature of on-the-job / in-service training received need not necessarily be the same for all individuals with identical initial education. Isolating the



effect of the such training on future earnings from the life time earnings to a given initial education, in computing returns to a given level of education, is a difficult job.

Human capital in an educated worker is often used to increase the productivity of co-workers. For example, an educated worker may improve production techniques and office procedures which may improve the efficiency of all other workers and lead to an increase in the overall productivity. Corrections should, therefore, be made to add the productivity related earning gains of all the lesser educated who may benefit from the education and skill of the workers who causes improvement in production, as the benefits to other workers are indirect by-products of education and such benefits are not captured by the recipients of education.

If the meaning of private returns is extended further to include all benefits received by the recipient's family, then there are other forms of indirect monetary benefits such as:

- child-care services - during the period the child is at school the parents have free time to further their economic interests, and
- generational transmission of education - educated parents facilitate inherited aptitude for schooling among their children and effective home instruction which saves expenditure on private tuition.

It is easier to visualise numerous such miscellaneous indirect benefits. The problem, however, is that of quantifying monetary gains from such benefits.

#### **Non-monetary benefits**

There are some non-monetary benefits which accrue to the individual pursuing education. Education may, for instance, alter and modify tastes, preferences and outlook leading to cultural upgradation. Likewise, education may facilitate individuals to take up more satisfying job with higher prestige and greater independence, and less of stress and strain. In fact, the attraction of such psychological returns as compared with the monetary returns of white collared jobs which swells the number seeking them among the educated.

Many other non-monetary benefits of education are not captured by the educated individual. Rather, they benefit the society. These benefits are categorised as "externalities". The educated mind is trained to inquire and question, and not to accept authority by default. This aspect of education is expected to strengthen democratic principles, and reduce the chances of losing collective and individual freedom of the society. Like wise, education causes better understanding and appreciation of the importance of health and hygiene thus leading to improved health standards of the society at large. Proponents of education even argue that schooling reduces crime and improves social order.

Education causes quality improvement in labour. Given other factors of production, including the physical capital endowments, growth of the economy can come about only through improvements in the quality of labour. Education thus contributes to economic growth.

Non-monetary benefits of education are all qualitative in nature. They are not amenable to quantitative measurement.

#### **Discount Rate**

While the costs of education are incurred at the beginning, returns to education accrue over the life-time. In the computation of internal rate of return, which is used as a criteria for making investment decisions on education, there is a need to discount future returns to arrive at their present value. Rate of return to education thus crucially depends on the discount rate used for discounting future returns.

In the case of private returns the discount rate could be :

- either the rate of interest at which an individual borrows for financing education,
- or the rate of return from the best possible alternative to investment in education.

Here again there are a number of possible alternatives and there is no objective criterion for making a choice among the alternatives.

Choosing a discount rate in respect of social returns is even more complicated. This is because, apart from economic criteria, welfare considerations also enter the calculus to the determination of an acceptable social rate of discount.

#### **Limitations of Rate of Return Approach**

Apart from the conceptual issues associated with the parameters involved in the estimation of rate of return to education and difficulties associated with the availability of data, there are a number of other limitations associated with this approach.

The primary limitation is the in-determinacy of the signals it generate for educational planning. Rate of return analysis is only indicative of relative priorities. It does not facilitate value judgement among different projects in the priority ordering. In particular, when it comes to making a choice among non-comparable projects, rate of return approach is an extremely defective tool. Even within education, because of sequential hierarchical linkages (like college education follows school education), it is difficult to make decision on how much to invest at each level purely based on rate of return analysis and without any reference to backward and forward linkages of the level of education concerned.

Rate of return analysis does not take cognisance of supply and demand of skills in the labour market. Excess supply (or excess demand) is likely to cause distortions in the occupation-education profiles and hence affect the life-time earning profiles. These distortions are likely to vitiate the signals made available by rate of return analysis which may ultimately lead to a wrong set of choice in education.

To an economist, education is only a screening device in analysing the process of human capital formation. Even here there is no unanimity among scholars with regard to the filtration function of education. In view of this, it is doubtful whether rate of return to education could be used as an effective tool in making investment decisions within education sector as well as among different sectors of economy with education included as a sector.

#### **Manpower Requirements Approach**

The fundamental axiom of manpower requirements approach is that there is a definite link between education and economic growth, and that lack of skilled manpower in required numbers impedes growth.

In this approach an attempt is made to forecast future requirements of educated manpower to fulfil a future target of gross national product (GNP) or specific targets of industrial production. Based on the forecasts of educated manpower requirements over a specified period, the planners would then indicate the directions of development of the educational sector over the same specified period.

The basic steps involved in this exercise are as under:

- Anticipating the directions and magnitude of development of each individual sectors of the economy.
- Evolving norms for employing manpower in each individual sector keeping in view the technological options - present as well as future - for each sector of the economy.
- Translating the physical targets for the development of each individual sector into manpower requirements using sector specific manpower norms.
- Estimating the educational equivalents of the manpower requirements.
- Analysing the implications of estimates of educated manpower requirements for educational development; based on assumptions regarding enrolment rates, transition probabilities, and wastage and stagnation rates at each level of education.

#### **Limitations of Manpower Requirements Approach**

The first limitation is that the approach assumes that educated manpower of different types are used in fixed proportion and that there are no substitution possibilities among the various categories of educated manpower.

The second limitation is that it postulates a definite link between an industrial task and an educational level.

Prices — either in terms of cost of producing educated manpower or in terms of salaries and wages of educated people — do not play any role in matching demand with supplies of educated manpower in this brand of educational planning. This makes good sense if formal education and training is the only means of producing educated manpower. If there are alternative ways of producing a given category of skilled manpower, then prices play a significant role and manpower requirements approach fails to take cognisance of this aspect. In the Indian context, even in the case of highly skilled occupations where graduate level engineers are required, it has been observed that over 30 per cent of the manpower do not have the basic minimum qualifications. They have reached these high levels through on-the-job training and such other informal training, in the requisite skills. Such persons are categorised as 'practicals', and these 'practicals' are to be found in every occupation.

The crucial limitation in all forecasting exercises is the assumption about the distant unknown future. Any error in judgement, in this regard, will seriously affect manpower balances at a later date resulting in either excess supply or excess demand. In the context of educational planning, excess demand is relatively easier to manage. Excess supply, on the other hand, leads to serious economic and sociological problems which are often difficult to deal with.

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## 2.4 PRACTICES IN HUMAN RESOURCES PLANNING

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Educational planning essentially aims at improving the quality of manpower resources in the country. The benefits to the economy from educational planning are thus indirect and intangible. Planning in other sectors of the economy have tangible benefits and hence contribute directly to the growth of the economy. It is this aspect of the education sector which has led to a bias against the education sector in macro economic planning exercises among many developing nations.

The practices in planning indicate that other sectors of the economy covertly and overtly claim higher priority in the thinking of planners. Also, it is in the nature of projects in other sectors of the economy that once they are started they will have to be completed so as to be of any use to the economy. Projects in education sector on the other hand can either be postponed or left incomplete. For example, an incomplete irrigation dam cannot be of any use to the economy; while school buildings without roof, without a black board, or without teacher in some cases can be put to use by the society through improvisation. As a result, education seems to have residual claim to the plan resources.

The interaction between technical inputs to educational planning — based on well thought out dicata of planning — and the political process of planning often results in the statement of monetary resources available to education sector as a whole which need to be allocated to different sub-sectors of education. Added to this, lack of effective monetary device in education - resulting again from the inadequacy of financial resources to education - often causes divergence in the implementation of monetary plans for education from the physical plan for education. In the process it may even result in the distortion of physical priorities within the education sector.

Decision making with regard to education sector development, in practice, has been such that the essence of the ritual of educational planning is honoured more in its breach than in its observance. Yet, many developing countries go through these rituals at definite intervals.

In view of the qualitative aspects which predominate educational planning decision, it appears that comprehension of quality as a variable and its manoeuvrability is better facilitated at micro-level. There is thus a case for decentralised planning with regard to education sector.

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## 2.5 SUMMARY

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Human resources planning, as a process of human resources development, involves investment decisions on three aspects which are complementary to each other. Education, health, and social and economic equity. Education has undoubtedly been the dominant aspect.

Human resources planning has, therefore, been treated as synonymous with educational planning.

Educational planning involves both private and public investments. Yet, public investment decisions have dominated educational planning exercises in almost all the countries. This is because of labour market imperfections and failure of the market mechanisms to facilitate optimal investment decisions in education.

On the theoretical plane, there are three different approaches to human resources planning: Social demand approach, rate of return approach and manpower requirements approach. In practice, however, political process of planning - often at variance with the rationale based on a well thought out dicata of planning - has been dominating. This has resulted in the distortion of physical priorities within education sector in many cases.

In view of the predominance of qualitative aspects, there is a growing realisation that - educational planning at micro level will be more meaningful than at the macro level.

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## 2.6 FURTHER READINGS

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## UNIT 3 METHODS AND TECHNIQUES: DEMAND FORECASTING

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### Objectives

After reading this unit, you should be able to understand:

- the concept of manpower demand,
- the need for manpower demand forecasting and types of forecasts,
- the methodologies of manpower demand forecasting at the macro and micro levels, and
- the data base required for manpower demand forecasting at the macro and micro levels.

### Structure

- 3.1 Introduction
- 3.2 Macro Forecasting
- 3.3 Micro Forecasting
- 3.4 Data Base for Manpower Forecasting
- 3.5 Summary
- 3.6 Further Readings

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### 3.1 INTRODUCTION

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There are some conceptual issues which need elaboration. The primary issue relates to manpower demand. The other issues concern the manpower forecasts, need for manpower forecasts and types of forecasts.

#### Manpower demand

In manpower literature, there is considerable confusion concerning the precise meaning of the words 'demand', 'need' and 'requirements.' Some writers have used the terms as synonymous. Others, on the other hand, have used them in distinct senses.

'Demand' for a particular category of manpower, from the economists angle, is a schedule of relationships between quantities of that particular category of manpower demanded and a series of possible wage rates. It is conceived here that the quantity of manpower demanded varies with the wage rates — more at a lower wage rate than at a higher one. Estimating future manpower 'demand' from the economists angle is not an easy job, as it calls for detailed knowledge about the established relationships between manpower demand and wage rates paid by category of manpower, and knowledge of the future pattern of relative wage rates for various occupations — reflecting the marginal productivity in value terms.

'Need' refers to the number of people required to provide an ideal level of service. What is ideal is never achieved, because of structural, technological and other constraints. For example, a country's 'need' for education might be that every one should have education upto the secondary school level. However, because of socio-cultural constraints leading to discrimination against females and class distinction among various section of social hierarchy, resource constraint, and inadequate infrastructure support like school buildings and teachers, it may not be feasible to plan to provide secondary school level of education to every one.

'Requirements' are then the functional composition of employment that will be necessary to produce goods and services within the framework of social, cultural, economic and technological targets (or constraints) specifies. They are more often described as technological requirements, because manpower requirements of any task performance is conditioned by the state of technology.

In an extreme case, where the elasticity of substitution between different factors are zero or close to zero, any change in relative wages has either no effect or has insignificant effect on the 'demand' for manpower; and the level of employment resulting in such a situation is in fact technologically determined. Such a situation seems plausible in the short run; and it is unlikely to happen in the long run, because in the long run technologies might change giving rise to substitution possibilities.

Likewise, 'requirements' - which are in fact 'needs' in a constrained situation - may conform to 'need', if the constraints are not binding at the time of estimation.

In effect, 'demand', 'requirements' and needs might mean the same

- if there are no substitution possibilities among factors of production, and
- if the constraints are not binding.

The operative terms 'manpower demand' (or 'manpower requirements' or 'manpower needs') in the manpower literature implies manpower required to fulfil certain physical targets for Gross Domestic Product (GDP) or industrial output or socio-cultural status.

### **Manpower Forecasts**

In the context of manpower forecasting, there is a need to make a distinction between 'projections' and forecasts.

'Projections' predict the outcome of spontaneous forces i.e., the outcome which is expected in the normal course of events and in the absence of external stimulus.

Forecasts, on the other hand, refer to a prediction of the outcome when normal course of events are influenced and altered by external forces. For example, in the macro context, forecasts could result in a statement of what would happen if economic growth were deliberately manipulated by government policy.

### **Need for Manpower Forecasts**

The basic rationale for making manpower forecasts is the long gestation lags in the production of skilled professional people. Manpower forecasts made well in advance, facilitate planning of education/training in the effort to ensure that manpower required are available at the time when they are needed.

The second major reason is the observed imperfections in the labour market. Markets for manpower with long lead time for production are characterised by cobweb cycles, because of long lags in the supply side and short lags, on the demand side. In the event supply is not planned to meet the requirement, cobweb cycles in the labour market may ultimately lead to distortions in occupation-education correspondence, the fall out of which could either result in huge educated unemployment or with people taking up occupations for which they are not adequately prepared or both. Manpower forecasts, it is expected, would facilitate correction of labour market distortions.

The third major reason is that in the short-run atleast, elasticities of substitution among various skills have been observed to be either zero or near zero. Production of goods and services, therefore, require various categories of skilled manpower in fixed proportion. Shortage of any skilled category of manpower, in such a situation would adversely affect the production of goods and services within economy. Manpower forecasts would help avoid such a situation by facilitating anticipation of skill shortages and planning skill supplies accordingly.

### **Types of Manpower Forecasts**

Manpower forecasts could be categorised differently, depending on the purpose for which forecasts are made. Some of the major types of forecasts are briefly described here.

#### **Short-term forecasts.**

Short-term forecasts are usually made for a period not exceeding two years. Short-term manpower forecasts are made, primarily, to facilitate estimation of financial provision for wages/salaries in the programmes/projects initiated or likely to be initiated in the immediate future. Short-term manpower forecasts are also useful in resource allocation among

competing programmes to be taken up for implementation in the not too distant future. Short-term forecasts are very useful at the micro — level say, company level.

#### **Medium-term forecasts**

For most countries medium term is about two to five years—the horizon for planning. Medium term forecasts are useful in those offices which are concerned with advising Ministers or preparing contingency plans to meet the 'twists and turns of economic circumstances or international events.'

#### **Long-term forecasts**

Forecasts for a period more than five years are considered as long-term forecasts. How long a period beyond five years is involved in long-term planning will, however, vary from situation to situation. Long-term manpower forecasts are useful in educational planning, particularly relating to the highly skilled professional categories of manpower. They are also useful in the preparation of corporate plans incorporating productivity changes, technological changes and major organisational developments.

#### **Policy conditional forecasts**

Policy conditional manpower forecasts are those which are determined by the policy towards the factors which influence the demand for manpower. Such manpower forecasts may be based on a rule of thumb, or on professional judgement, or on an explicitly specified model, or any combination of the three.

#### **Onlookers forecasts**

An onlookers' manpower forecasts are those which are derived by assuming that the factors influencing manpower demand behave in the future as they did in the past. Like in the case of policy conditional forecasts, onlooker's forecasts are also obtained with the help of a rule of thumb, or professional judgement, or an explicitly specified model, or any combination of the three.

#### **Optimising forecasts**

Optimising manpower forecasts are those which are obtained as solutions to an optimising model in which numbers demanded of various categories of manpower are so determined that either the end benefits are maximised, or cost of resources used in achieving a pre-determined end objective is minimised.

#### **Macro and micro forecasts**

It is important to make a distinction between two other types of manpower forecasts viz., macro and micro forecasts, primarily because of two reasons: First, the end purposes of the two types of forecasts are different. Second, the methodologies employed and data base used are different. It is, however, possible that micro forecasts, if properly planned, might ultimately lead to macro forecasts but not vice-versa.

Macro forecast are done usually at the national, industry/sector and region/state levels. They are primarily used in

- planning education and training facilities;
- decision making for the choice of industries for development;
- choice of location, technology, and size of organisation among industries selected; and
- determining order of priorities for creating and/or for expanding economic and social infrastructure.

Micro forecasts are made at the enterprise or department level. Micro manpower forecasts are needed primarily for planning recruitment, promotion and training in accordance with the plans for the development of enterprise or department concerned. Forecasts at this level are, therefore, required to be in greater details as well as precise. The micro forecasts are usually expressed in terms of number required for each occupation, source and stage of recruitment, and scheduling of training.

The methods of forecasting at macro and micro levels are discussed in detail in the following sections.

### 3.2 MACRO FORECASTING

Manpower demand forecasting techniques used at the macro level in different countries may be summarised under five types:

- Employers Opinion Method
- Normative Method
- Component Method
- International Comparisons Method
- mediterranean Regional Project (MRP) Method.

These five methods are discussed in brief, in what follows, citing representative examples to illustrate the methods.

#### Employers Opinion Method

Under this method employers are asked to give their assessment of future manpower needs in different categories in their respective establishments. Aggregating over all employers and making allowance for death, retirement, migration and occupational mobility, it is then possible to arrive at future manpower demand by skill category. This method has been used in a number of developed countries like the United States, United Kingdom, Canada, Sweden and France.

The method has been found to be particularly useful in the case of highly skilled professional categories of manpower where the occupation-education correspondence has been observed to be almost unique. It has also been observed that the method has been very useful in making short-term manpower forecasts than medium-term and long-term forecasts.

However, the technique—even as a means of making short-term manpower forecasts—has been observed to be severely constrained. For instance, the technique assumes that employers are capable of making such forecasts. It might be true in the case of large corporate sector establishments with well staffed personnel divisions. Likewise, the use of technique implies that manpower demand forecasts made by employers are linked to the production levels of their respective establishments. In an opinion survey, this is rarely done. Finally, even if the manpower forecasts are linked to production levels employers expectations of production levels are never realised with the same degree of accuracy in an oligopolistic situation, because of stiff competition and market imperfections. In other words, where the market for goods and services are characterised by stiff competition, employers forecasts of manpower cannot be aggregated.

#### Normative Method

Normative method uses norms for employing manpower to produce goods and services. The norms are usually expressed as ratios between manpower employed and the volume (or value) of goods and services produced. These ratios are based on either the existing situation or the desirable situation.

Examples of the ratios are employment—output ratio, incremental employment-investment ratio, employment—fixed capital ratio, employment—value added ratio, medical doctor-population ratio, teacher-student ratio, nurse-medical doctor ratio, and engineer-technician ratio.

As an illustration of the method, using employment-output norm, as a first step, the norm is evolved for a base year. Next, output projection are obtained for the target year. Then, the base year employment-output norm is applied to the target year's estimated output to obtain employment forecasts in the target year.

This normative approach has two basic limitations: One is that the method assumes that the norms are stable over a period of time. This can be overcome, if it is also possible to predict changes in the norms as between the base year and target year.

The other limitation is that it uses a uniform norm for all components of a production process or for all regions within in country. This limitation can again be overcome by using different norms for different components or regions, which is the component method.



### Component Method

In the component method requirements of any category of manpower are further sub-divided into various components and then a separate norm appropriate to each component is used in arriving at a forecast of manpower requirements for each component. Forecasts for all the components are then aggregated to arrive at an estimate of future manpower requirements for the manpower category concerned.

For instance, in the case of medical doctors, instead of using an overall norm such as the doctor-population ratio, the requirements of doctors are sub-divided into four components:

- Doctors required in hospitals and other health centres maintained by the government.
- Doctors required as teachers in medical colleges.
- Doctors required in the hospitals and health centres in the private corporate sector.
- Doctors required as private practitioners.

In the case of first component, doctor-government health expenditure norm is used. Teacher-student ratio in medical colleges is used for the second component. Doctor-private corporate sector health expenditure norm (or any other norm prescribed by the concerned private corporate sector agency) is used in the case of the third component. In respect of the last component doctor-health expenditure (by the general public) norm is used.

A variant of the component method is to use different norms for different categories of manpower for producing the same set of goods/services such as engineer-output ratio, scientists-output ratio, technician-output ratio, managers-output ratio, and supporting manpower-output ratio.

The component approach is thus basically the normative approach. The difference lies basically in using different norms for different components.

The primary problem associated with the normative approach—that of obtaining reliable norms which are stable over a period of time—still remains.

### International Comparisons Method

International comparisons sometimes facilitate use of stable norms. An Italian study conducted in 1960 forecast sectoral distribution of workers in 1975 assuming that the Italian labour productivities in 1975 would match the levels reached in France in 1960. There is a considerable subjective evaluation of international experiences in using the international comparisons method which is not always easy to justify on objective considerations. This method has, therefore, been not very popular.

### MRP Method

The MRP Method is designed to forecast manpower requirements by educational categories so that the forecasts are rendered directly relevant to educational planning exercises. Primarily, there are five steps involved in forecasting manpower requirements by education. The first step is to arrive at the target year projections of GDP—exogenously determined by an economic plan in the case of planned economies.

The second step involves the estimation of sectoral contributions to GDP in the target year by major sectors such as agriculture, manufacturing, transport and communication, trade and commerce, and services.

At the third step, sector specific average employment-output ratios are applied to sectoral composition of GDP in the target year to arrive at estimates of employment in the target year by sector.

Sectoral forecasts of employment thus obtained for the target year are then distributed among a number of mutually exclusive occupational categories using either the base year or any desirable sector-occupation distributions.

At the final step, occupational structure of manpower forecasts relating to the target year are translated into educational structure by applying a standard measure of the level of formal education/training required to successfully perform the tasks specified under each occupational title. This procedure gives the net manpower needs - net of replacement needs.

Allowance are then made for death, retirement, migration and occupational mobility to estimate the replacement needs by the target year.

Net manpower needs and the replacement manpower needs by education will together then yield the total manpower needs by education.

The forecasts thus obtained are conditional on the achievement of GDP in the target year.

MRP approach, though very comprehensive, suffers from three sets of limitations: First, forecasts are made separately in respects of GDP, employment-output ratio, occupational structure and educational structure. This implies they are all independent which is not realistic. Second, the method assumes that the occupational and educational structures used are stable over time, and that there are no substitutional possibilities between occupations and between different kinds of education/training. This is an unrealistic assumption, as it amounts to assuming that demand for manpower is independent of the supply. Third, MRP approach is fairly expensive, because it lays demand on a wide variety of data which are not always available in the published form. One may, therefore, be compelled to resort to primary data collection on many aspects.

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### 3.3 MICRO FORECASTING

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Micro manpower forecasting (i.e., manpower forecasting at the enterprises or company level) involves estimation of manpower needs for a specified or anticipated workload structure. There are essentially three steps involved in the process:

- Evolving manning norms based on an analysis of workload structure.
- Forecasting Workloads
- Relating Workloads to manning norms.

#### Evolving manning norms

It starts with taking a comprehensive view of the work of an organisation which is first divided into functions. The functions are then sub-divided into tasks and work groups associated with each task are then identified. In respect of each workgroup:

- the levels and number of positions at each level,
- the job descriptions of each position by level, and
- performance of incumbants to each position by level vis-a-vis job expectations.

are analysed. Based on this analysis, number of levels and number of positions required at each level, skill gaps of incumbants to each position, and their education/training and experience requirements are worked out. The manning norms thus estimated for each workgroup are discussed with the employers and the employee unions to arrive at a set of desirable manning norms for the organisation as a whole relevant to the present workload pattern. Any changes in the workload pattern may result in a different set of manning norms for the organisation.

Changes in workload pattern can come about either through technological change, or better manpower utilisation or both.

Technological change could be labour saving—resulting in a reduction in the number of levels and/or number of positions at each level—ultimately leading to reduced manpower requirements. Alternatively, technological change could also be capital-saving which may end up in increased manpower requirements by level and position. In either case, technological change causes a change in the manning norms.

Better manpower utilisation is usually caused by better management, better organisation of work within each work group and among various work groups within the organisation, and better worker-management cooperation. Better manpower utilisation normally results in improved labour productivity and hence a reduction in manpower requirements.

Manpower forecasting process at the micro level, therefore, calls for a forecast and analysis of future workload patterns to arrive at appropriate manning norms.

### Forecasting workloads

If 'work' consists of a single type of activity, then the total output is a measure of the amount of work. In areas such as provision of health care, workload often is a function of population. Population forecasts obtained by demographic techniques, in the provision of health care can be treated as workload forecasts.

On the other hand, 'work' consists of a variety of tasks—the relative magnitudes of which vary with time, then one way is to predict workload of each task separately and aggregate the workloads of all tasks to arrive at a forecast of total workload. If the tasks are numerous then this procedure is very tedious. It is possible, however, that the numerous tasks are inter-correlated. Hence, it may be possible to reduce the dimensionality of the problem. In an extreme case, where all the tasks are perfectly correlated among themselves, it would suffice to take just one task — or an average of all tasks—for projection purposes. Where the tasks are all not perfectly correlated, it is still possible to reduce the dimensionality through the use of one of the two statistical techniques: Principal Component Analysis and Factor Analysis.

Principal Component Analysis is a descriptive technique which finds linear transformation of numerous tasks into a smaller number of indices (Principal Components) such that:

- the indices are all uncorrelated among themselves, and
- all the indices together summarise the information contained among the numerous tasks.

Principal Components are then projected to arrive at forecasts of workloads.

Factor Analysis, the aim of which is similar to that of Principal Component Analysis, uses a sophisticated statistical model. Here, some small number of factors are identified which have the potential to explain the behaviour of the numerous tasks. Then predicting the behaviour of individual factors, it is possible to arrive at forecasts of workload under each task and hence the forecast of total workload.

The foregoing methods assumed that the character of work in each task will not change significantly during the period of forecast, while technological change and/or manpower utilisation can change the character of work in any one or more tasks. It is possible to incorporate the effect of all the factors which affect the character of workload, if there is a priori information on the impact of each of the factors. An illustration, in this regard, based on the method outlined by I.G. Helps is presented in the table below:

Factor affecting Productivity	Improvement in productivity in three years(%)	Factor giving change in manpower in 3 years $1 - (\text{Improvement}/100)$
a) New organisation structure	6	0.94
b) Better equipment	6	0.95
c) New information requirements	8	1.08
d) Better manpower Utilisation	10	0.90
e) Training	8	0.92

$$\begin{array}{l} \text{Combined total} \\ \text{effect on productivity} \end{array} \left| \begin{array}{l} = 0.94 \times 0.95 \times 1.08 \times 0.90 \times 0.92 \\ = 0.80 \end{array} \right.$$

Thus the above five factors will reduce the workload by about 20 per cent for the same set of staff.

**Relating workload to manning norms**

If workload 'W' can be forecast by the methods discussed in the previous section, and productivity of workers 'P' - given as the ratio of workload to workers - can be estimated based on historical data and/or appriori information on factors affecting productivity, then manpower forecasts in terms of numbers required in future can be obtained as

$$\text{number required in future} = \frac{W}{P}$$

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### 3.4 DATA BASE FOR MANPOWER FORECASTING

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Data base has a crucial role to play in manpower forecasting, as it determines the methodologies that can be adopted and methodological refinements that can be effected.

Keeping this in view, data requirements for manpower demand forecasting are discussed at macro and micro levels separately.

**Data Base for Macro Forecasting**

For macro forecasting it would be ideal to have comparable data on the following items over a period of years in the past.

**Population Statistics**

Data on population of the country by age, sex, education, economic activity status, migration, marital status, region, and rural-urban distribution are needed.

**Data on economic parameters**

Economic parameters on which data are required on time-series basis are inputs, output, capital, investment, wages, productivity, value added and depreciation by industry; consumption, savings and expenditure on health by income strata of population in rural and urban areas of each region.

**Information on technologies**

Details about existing technologies are needed by industry specifying the implications of each technology for employment generation and investment. Similar information is also needed on emerging technologies by industry.

**Data base for Micro Forecasting**

For micro forecasting a well-defined manpower Information System (MIS) is needed at the enterprise or company level. MIS may have the following modules:

- **Personal Data Module:** Identification particulars, educational particulars, educational qualifications; privileges, if any such as military training, handicapped, scheduled castes/scheduled tribes etc.
- **Recruitment Module:** Date of recruitment, grading in aptitude tests, grading in leadership tests, overall grading, job preferences and choices, if any.
- **Job Experience Module:** Placement history, grade promotions, tasks performed gradewise, significant contributions, etc.
- **Performance Appraisal Module:** Performance appraisal at each job held, job experience evaluated with the background of job description, communication rating, rating of inter-personal relationships, rating of behaviours in a group, commitment of corporate goals, etc.
- **Training and Development Module:** Nature of training received at each level, individuals evaluation of effectiveness of training, individual assessment of training needs vis-a-vis jobs currently being performed etc.
- **Miscellaneous Module:** Record of compensation and benefits received, health status, information relating to personal problems which calls for the attention by the authorities, security needs, etc.

MIS is developed on the basis of personnel history records of each individual employee within the enterprise or company and is updated every year.

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### 3.5 SUMMARY

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On the theoretical plane, there is considerable confusion regarding the concept of manpower demand. In practice, however, manpower demand implies functional or technological requirements of manpower that will be necessary to perform a given task.

The primary rationale of manpower demand forecasts is the long gestation lags in the production of skilled professional people. Manpower demand forecasts are also needed to counter the influence of labour market influences, and to overcome technological rigidities atleast in the short-run.

The objectives and methodologies of manpower demand forecasting are different at macro and micro levels.

At the macro level manpower demand forecasts are needed as a basis for educational planning; choice of location of industries, size of industries and technology, and determining priorities for creating and/or expanding economic and social infra structure. The manpower demand forecasts may, therefore, need to be indicative in facilitating appropriate action. At the same time, macro demand forecasts are required to be comprehensive. The methodologies of macro manpower demand forecasting are, therefore, complex and are often expensive because of the nature of techniques used and data base required.

Micro level manpower demand forecasts are made at the enterprise or company level. At this level, the forecasts are needed for planning recruitment, promotion and training. Forecasts at this level will therefore, have to be in greater detail as well as precise. A well defined Manpower Information System built up on the basis of personnel history record of each individual employee is a pre-requisite for making detailed and precise forecasts at the enterprise or Company level.

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### 3.6 FURTHER READINGS

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Bartholomew, D.J. and Forbes, A.F. (1979) *Statistical Techniques for Manpower Planning* John Wiley & Sons, New York.

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## UNIT 4 METHODS AND TECHNIQUES : SUPPLY FORECASTING

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### Objectives

After reading this unit, you should be able to understand:

- the concept and dimension of manpower supply;
- the methods of manpower supply forecasting at the macro level;
- the significance of wastage rate and internal flows in the context of micro supply forecasting; and
- the data base required for macro and micro manpower supply forecasting.

### Structure

- 4.1 Introduction
- 4.2 Macro Forecasting
- 4.3 Micro Forecasting
- 4.4 Data Base for Supply Forecasting
- 4.5 Summary
- 4.6 Further Readings

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### 4.1 INTRODUCTION

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As a prelude to the discussion on the methods and techniques of manpower supply forecasting, it is essential to understand clearly the precise concept of manpower supply. There is also a need to elaborate on the dimensions of manpower supply; because the methods and techniques, and data sources vary with the dimension considered for estimation of manpower supply.

#### Concept of Manpower Supply

Manpower and labour force are treated often as synonymous. There is, however, a subtle distinction. While labour force includes all persons in the population who are economically active, manpower refers to all persons in the labour force—other than the purely unskilled. Manpower is thus the skilled component of labour force—irrespective of the level of skill attained. Manpower supply is then the totality of manpower employed and manpower unemployed but are seeking jobs.

#### Dimensions of Manpower Supply

In the literature on manpower planning the following four dimensions of manpower supply are clearly discernable:

- Stock and flow
- Quantity and Quality
- Occupation and education
- Macro and micro.

#### Stock and flow

Flow dimension refers to manpower supply over a period of time, say, over a five year plan period. Stock dimension, on the other hand, denotes manpower supply at a particular point of time like a target date of an economic plan.

#### Quantity and Quality

Quantitative dimension of manpower supply indicates the number of persons available with the requisite qualifications/skill both employed as well as unemployed and seeking jobs.

Qualitative dimension comes into play when characteristics of manpower supply such as specialisation; level, duration and quality of training; length of job related experience; and aptitude and motivation are being considered.

### Occupation and education

Occupation is a description of the functions role to be played. An occupation does not always indicate education/training/skill requirements to perform the expected functional roles.

There are some occupations—such as physicians—which are uniquely related to a given occupation. There are the other occupations which do not have any precise relationship with education.

Where an occupational group is uniquely related to an educational programme, so that all entrants to the occupation must come from the educational programme concerned. Manpower supply for that occupation, therefore, consists of all graduates of the educational programme.

In the case of occupation which do not have a precise relationship with an educational programme the concept of manpower supply for such an occupation is more complex. Engineers is one such occupation which falls under this category. Manpower supply in the case of engineers, would be:

- number of engineers with a degree from engineering colleges.
- number of engineering graduates in other occupations.
- number of engineers without engineering degrees (practicals).

Absence of reliable occupation-education information makes it extremely difficult to estimate manpower supply for an occupation. In view of this, manpower supply forecasts are usually made by broad categories of educational qualifications.

### Macro and micro

Macro level manpower supply at any future date consists of

- current stock of manpower;
- additions to current stock from new entrants or re-entrants; and
- subtractions due to death, retirement, migration, mobility, and withdrawal from labour force.

Micro level manpower supply, on the other hand, comprises

- external supply caused by recruitment; and
- internal supply resulting from transfers, promotions and redundancies.

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## 4.2 MACRO FORECASTING

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At the macro level there are two methods of estimation of manpower supply: one is known as the 'direct method' and the other is termed as the indirect method.

### Direct Method

Direct method relies on a census count of persons belonging to the category of manpower for which supply is being estimated. Census count can be usually obtained from the Population Census. The primary limitation of the direct method is that the census counts are infrequent. For example, in the Indian context Population Censuses are decadal. For inter censal years there is no information. Also, because census are infrequent, they cannot be used in any meaningful trend forecasting exercise. This apart, censuses are known to be subject to enumeration biases such as under count, misreporting and classification biases. In view of these limitations, researchers in the field of manpower have been resorting to indirect method.

### Indirect Method

Under the indirect method institutional out-turn over the active life span—starting from the base period upto the target date is cumulated making adjustments for factors of attrition and labour force participation to obtain an estimate of manpower stock at the target date.

Estimation of manpower by the indirect method thus involves the following steps:

- Estimating active life span.
- Determining base period.
- Forecasting annual institutional out-turn.
- Obtaining cumulated out-turn adjusted for attrition.
- Estimating manpower supply.

#### Estimating active life span

Active life span is defined as the span of life over which an individual is active in any given profession or occupation. Active life span varies with the occupation and it may also vary from individual to individual within an occupation. Hence, active life span is estimated for an average individual in each occupation.

For estimating average active life span of any occupation estimates of two parameters, namely:

- average age at entry into the occupation; and
- average age at retirement from the occupation;

are required. The span of life from the average age at entry to average age at retirement is then the average active life span.

Average age at entry into an occupation depends on the time taken by an average individual to complete the relevant education programme/skill training which in turn depends upon

- duration of education/skill training and
- average period of stagnation during training.

In respect of professional education/skill training stagnation might be insignificant, as compared with the general education, because entrants into professional education/skill training are usually more meritorious than those opting for general education. As an illustration, assume that the average age at completing higher secondary education is 17 years, average duration of engineering collegiate education is 4 years and average duration of medical collegiate education is 5 years. Then, active age at entry into engineering occupation will be 21 years. Likewise, average age at entry into physicians profession will be 22 years.

Average age at retirement from an occupation, for most of the occupations which offer scope only for wage employment in the same and it is usually taken to be 60 years. Average age at retirement may differ only in the case of highly skilled professional occupations like the physicians, architects, engineers and lawyers where there is ample scope for self-employment.

Assuming an average age of 65 at retirement for engineers and physicians, active life span of engineers will be from 21 years of age to 65 years of age. Similarly, for physicians it will be from 22 years of age to 65 years of age.

#### Determining base period

Manpower stock as of a target date comprises of manpower of all vintages starting from the persons who have just entered to those who are on the verge of retirement. Hence, base period can be determined by subtracting the number of years in the active life span from the target year.

For example, assuming an active life span of 34 years for engineers (from 21 to 65 years of age) and the target date as 2000 A.D., the base year will be 1966 (i.e., 2000-34).



### Forecasting annual institutional out-turn

To start with, past trends in enrolments are extrapolated to cover the target date, using suitable trend forecasting methods. The forecasts of enrolments thus obtained are then converted into forecasts of out-turn, with the help of observed trends in annual rates of completion of the educational level concerned.

### Estimating attrition rate

Attrition in the manpower supply relevant to any category of education may be caused by the following four factors:

- Death
- Retirement
- Migration
- Occupational mobility

The joint effect of these four factors is termed as the attrition rate. Among these four factors, impact of occupational mobility is very difficult to estimate. In view of this, attrition rate is usually taken to mean. The joint effect of death, retirement and migration only.

Impact of death is estimated, using age specific death rates. Effect of retirement is obtained by using a cut off age for retirement, usually 60 years of age, but more than 60 years in respect of occupations with ample scope for self-employment. The influence of migration factor is quantified through detailed education specific migration studies.

In the Indian context, for engineering degree holders, an annual attrition rate of 2 per cent is used. Out of this 0.8 per cent is due to death and retirement, and 1.2 per cent is due to migration.

### Obtaining cumulated out-turn adjusted for attrition

Given the base year manpower supply ( $S_0$ ), manpower supply in the first year after the base year ( $S_1$ ) is determined as

$$S_1 = S_0 \frac{(1 - a)}{100} + Y_1$$

Where

$a$  = attrition rate and

$Y_1$  = Institutional out-turn in the first year after the base year.

Man power supply in the second year ( $S_2$ ) after the base year will be

$$S_2 = S_1 \frac{(1 - a)}{100} + Y_2$$

where  $Y_2$  is the institutional out-turn in the second year after base year. Using this cumulation process, manpower supply in the target year (which is say 't' years after the base year) will be

$$S_t = S_{t-1} \frac{(1 - a)}{100} + Y_t$$

Where  $S_{t-1}$  is the manpower supply in the year prior to the target year.

### Estimating manpower Supply

Cumulated out-turn adjusted for attrition, obtained in the manner outlined above, indicates the total number of persons in the population with the requisite education/training. Manpower supply, on the other hand, is the labour-force component of the cumulated and adjusted out-turn. Further adjustment to cumulated and adjusted out-turn is, therefore, warranted to account for withdrawals from the labour force in respect of persons with the requisite education/training as outline below:

$$\text{Manpower Supply in the target year} = \text{Cumulated out-turn adjusted for attrition} \times \text{Labour force participation rate}$$

## 4.3 MICRO FORECASTING

Micro level manpower supply, as stated earlier comprises of external and internal supplies.

### External Supply Forecasting

External supply arises primarily through recruitment which is necessarily meant to augment internal supply. Another minor source of external supply is through seconding (or deputing) personnel from other organisations which takes place largely among government departments and parastatals. Hence, given the recruitment policy it is easy to predict the external supply.

### Internal Supply Forecasting

Internal supply within an organisation is governed by two factors:

- Wastage—the out-movement from the organisation caused by voluntary resignation, death or retirement.
- Internal movement resulting from transfers and promotion.

Manpower flows generated by these two factors are of course inter-related.

Forecasting internal supply is, therefore, crucially dependent on analysis of wastage and internal movements, with a view to obtain estimates of wastage and patterns of internal movements.

### Analysis of Wastage

A crude method of estimating wastage is termed as the British Institute of Management (BIM) index which expresses wastage as a percentage of staff in position i.e.,

$$\text{Annual Manpower Wastage} = \frac{\text{Manpower leaving in a year}}{\text{Average manpower in position}} \times 100$$

The BIM formula has many disadvantages, for example, it takes no cognisance of the characteristics of manpower—crucial among them being the length of service and skill. Further, it is difficult to assess the operational and financial implications of any given rate of wastage based on BIM formula. Also, it does not provide any meaningful indication for manpower planning.

### Stability index

An alternative method which takes into account the length of service of the persons leaving the organisation, termed as 'stability index', measures the complement of wastage rate (i.e., rate of retention) as

$$\frac{\text{Manpower with one year service at time } t}{\text{Manpower in position at time } t - 1} \times 100$$

This method indicates only the percentage of manpower who stayed with the organisation for one year. It does not directly measure the extent of wastage. Also, it gives equal weightage to persons who left the organisation with less than one year's service and with more than one year's service. This method is, therefore, not very useful for manpower supply forecasting:

### Modified stability index

Modified stability index, which is also referred to as Bowey's stability index includes everybody employed in the organisation and gives due weightage to varying lengths of service. In simple terms, Bowey's stability index may be expressed as

$$\frac{\text{Total length of service of manpower employed at the time of analysis}}{\text{Total possible length of service had there been no manpower wastage}} \times 100$$

This method is useful in analysing the extent of wastage in terms of length of service. However, as in the case of stability index it is not very helpful in manpower supply forecasting.

### Cohort analysis

Manpower cohort in an organisation is a group of staff who are more or less homogenous and who joined the organisation at the same time. Graphical presentation of leavers (those

leaving the organisation at each point of time from the date of joining to the date by which the entire cohort would have disappeared resembles Figure I below:

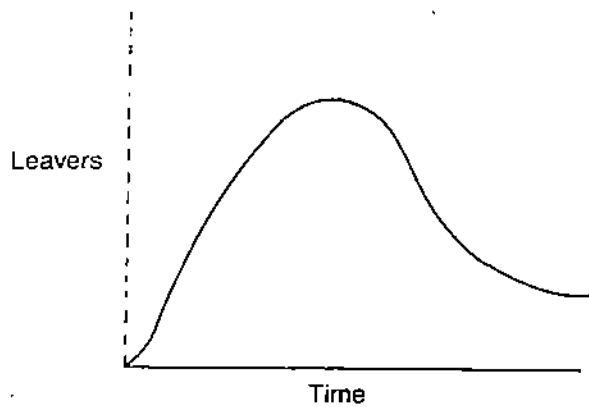


Figure I

In each cohort the peak of leaving occurs shortly after joining when either the manpower leaving realises that the job is not suitable to them or the employers find out that the leavers are not suitable to the organisation. The peak is, however, determined by the nature of job, work environment and career prospects within the organisation. The objective of manpower planning is to see that the peak of leavers does not arise early in the life of a cohort.

A slight transformation of Figure I by plotting cumulative percentage of leavers in the cohort on the vertical axis and logarithm of time on the horizontal axis the curve in Figure I becomes a straight line as in Figure II

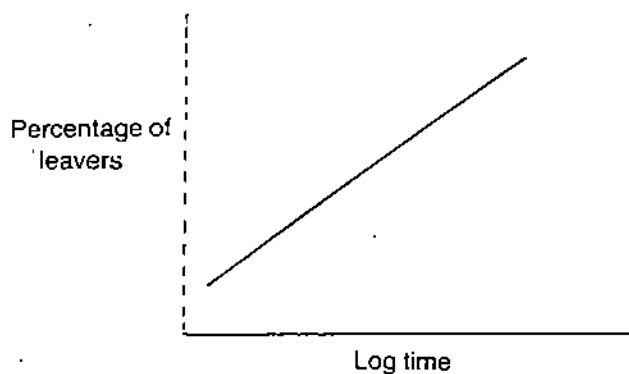


Figure II

In statistical terminology, the transformation effected above is termed as the log-normal transformation.

Using this curve, then forecasts of percentage of total leavers of a particular cohort at any future date can be made through extrapolation. Cohort analysis is thus very useful in analysing and forecasting wastage of specific groups of manpower who have similar characteristics and also joint at a particular time of the year such as management trainees, graduate engineers and computer professionals.

There are, however, some disadvantages. First, forecasting exercise requires information on year-wise wastage from a cohort. If there are many cohorts it may not be a very easy tasks. Second, for a meaningful analysis of wastage each leaver must be related to the concerned cohort and the cohort size must be know. In the absence of computerised personnel information system, this may not be all that easy. Third, if the manpower is relatively stable as is the case in government jobs or public sector organisations which assure job security-the length of time over which a cohort must be followed can be too unwieldy to attempt any reliable forecasts.

**Census method**

Some of the problems of cohort method can be overcome by using the census method. Under the census method a snapshot of the total situation is taken at a particular point of time or over a short period of time and data on leavers with completed length of service is obtained. Based on such data, it is possible to estimate—with the help of standard statistical techniques—the proportion of manpower joining at a given point of time who will survive to a specified length of service. For example, based on the census method it is possible to estimate proportion of manpower joining the service (say) in 1990 who will complete 10 years of service.

**Analysis of internal movements**

Internal movements are of two types: Vertical and horizontal. Vertical movements are the movements between categories or levels of manpower employed caused by either promotion or demotion. Horizontal movements are movements between locations or divisions within the same category or level of manpower which are caused by transfers.

**Markov Chain Model**

A very useful method of analysing and forecasting internal movements is the Markov Chain model. It calls for the estimation of transition probabilities relevant to each vertical and horizontal movement. A simple version of the model, without bringing in the complications of the probability theory involved, is illustrated here in adequate detail for any manpower planner or a personnel manager to judge the utility of the model in the context of micro level manpower planning.

The illustration assumes a simple organisation with a three grade structure: A, B and C. Also, the possible length of service is divided into three groups: 0-3 years, 3-10 years and more than 10 years (10+ years)

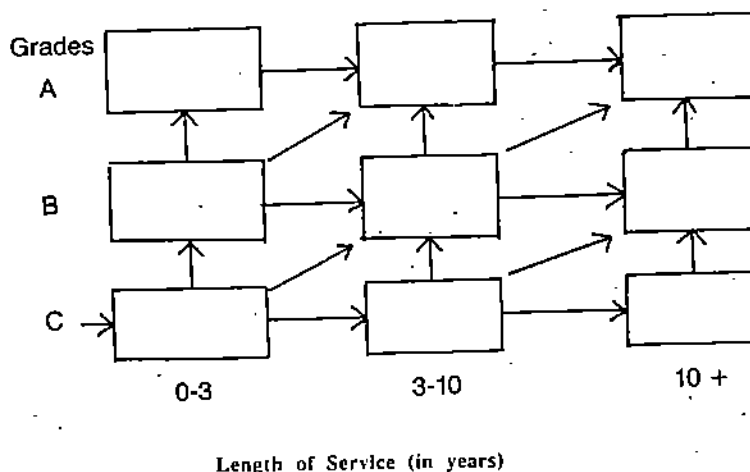


Figure III

Figure III above is graphic representation of the Markov Chain Model. In this, grade C is the entry level position, grade B are no further lateral entry levels in the organisation. Thus recruitment to higher levels is entirely through promotion-like in a government department. Further, a person entering at grade C level has several options. He may get promoted to grade B or even grade A within the first 3 years depending on his performance. Alternatively, he may get promoted to higher levels in the next 3 to 10 years or only after 10 years. In the extreme case of bad worker, however, he may retire as a worker in grade C only. At each grade and length of service, the worker has also the option to leave the organisation.

If systematic personnel records are available, it will be easier to estimate the percentage of manpower in each grade/length of service group who moved along the different arrows in Figure III. As an illustration again, the percentages-regarded as transition probabilities—who moved along different arrows can be show as in the table below:

Table: Markov Chain Probability Matrix

(Percentages)

		C			B			A		
		0-3	3-10	10+	0-3	3-10	10+	0-3	3-10	10+
C	0-3	40								
	3-10	10	50							
	10+	5	10	70						
B	0-3	4			55					
	3-10	7	10		10	60				
	10+	1	6		5	10	70			
A	0-3				1			70		
	3-10	1	1		3	10		10	75	
	10+	2	3		6	5		5	5	70
Wastage		30	20	30	20	15	30	15	20	30
Total		100	100	100	100	100	100	100	100	100

The table above indicates that in a year 40 per cent of grade C staff will have less than 3 years service, 10 per cent of them will have 3 to 10 years service and 5 per cent of them will have more than 10 years of service. Further, 4 percent are promoted to grade B in less than 3 years and soon. Also, 20 per cent of grade C staff leave the organisation annually.

Figure III and the table which followed represent a highly simplified version of an organisation. Markov Chain Model and the probability matrix depend very much on the recruitment and promotion policies as also the practices regarding transfers within an organisation. Any complex organisation structure can be presented within the framework of a Markov Chain Model, provided there is a well defined personnel information system - preferably computerised.

The most difficult task in the use of Markov Chain Model is the estimation of transition probabilities. Once the estimates of transition probabilities are made they can be applied to any intake of fresh batch of recruits to forecast internal supplies as well as wastage (or leavers) by grade and length of service. It is not also essential to keep transition probabilities constant in forecasting future supplies. They can be varied through deliberate intervention, if there is a priori information on the likely magnitudes of transition probabilities reflecting future recruitment, promotion and transfer policies.

#### 4.4 DATA BASE FOR SUPPLY FORECASTING

Data base requirements of macro and micro supply forecasts are different. Keeping this in view data base needed for macro and micro supply forecasts are discussed separately.

##### Data base for Macro Supply Forecasting

For macro supply forecasting data are received on the following aspects.

##### Age at entry and age at exist

Data on age at entry and age at exit are required by category of manpower. In respect of jobs in the civil service, defence services and most of the other salaried jobs age at entry and exist are predetermined. In the case highly professional categories of manpower age at entry is known, whereas age at exist varies and is unknown. In respect of skilled and semi-skilled manpower—particularly those who do not pass through any formal education/training system—there is a difficulty in obtaining information on age at entry and age at exist. This is because there are no prescribed age limits for recruitment and retirement. In all such cases average observed ages at entry and exist—obtained through sample surveys—may be treated as prescribed ages at entry and exist.

### **Annual enrolment and out-turn**

Data on annual enrolment and out-turn relating to all courses in the formal education/training system are usually published. Where there are gaps, they can be filled with the help of records maintained by the concerned departments. In respect of informal education/training, however, there is a need to conduct surveys of all the relevant institutions to obtain data on annual enrolment and out-turn.

### **Attrition rates**

Attrition rates are not readily available for most of the categories of manpower. They need to be compiled on the basis of pattern of retirement, migration and mortality.

### **Retirement**

In the case of government job the prescribed age at retirement is 58 years. Other salaried jobs may permit continuing in employment upto 60 years of age. Only in the case professional categories of manpower there is a possibility of remaining professionally active even beyond 60 years of age. In all cases, however, age at exit from the relevant occupation may be treated as retirement age.

### **Migration**

There is no published source of information on migration by education. Specific studies are needed covering Indian migrants settled in other countries to ascertain the magnitude and other characteristics of migrants by education.

### **Mortality**

Decennial Population Censuses and the mortality information compiled by the actuarial scientists in insurance companies are good sources of information for analysing mortality patterns and for estimating the mortality component of attrition rate.

### **Labour force participation rates.**

Decennial Population Censuses as well as comprehensive labour force enquiries conducted by other agencies (like the National Sample Survey Organisation in India) facilitate estimation of labour force participation rates by education.

### **Data base for Micro Supply Forecasting**

Supply forecasting at the micro level is essentially the internal supply forecasting, as external supply is determined by factors extraneous to the company or enterprise concerned. Internal supply forecasting calls for a detailed Manpower Information System (MIS) at the level of company or enterprise where supply forecasting is attempted. MIS is developed on the basis of personal history records of each individual employee and is updated every year. MIS comprises of the following modules.

- **Personal Data Module:** Identification particulars, educational particulars, educational qualifications, privileges, if any such as military training, handicapped, scheduled castes/scheduled tribes etc.
- **Recruitment Module:** Date of recruitment, grading in aptitude tests, grading in leadership tests, overall grading, job preferences and choices, if any.
- **Job Experience Module:** Placement history, grade promotions, tasks performed grade wise, significant contributions, etc.
- **Performance Appraisal Module:** Performance appraisal at each job held, job experience evaluated with the background of job description, communication rating of inter-personal relationships, rating of behaviours in a group, commitment corporate goals, etc.
- **Training and Development Module:** Nature of training received at each level, individuals evaluation of effectiveness of training, currently being performed etc.
- **Miscellaneous Module:** Record of compensation and benefits received, health status, information relating to personal problem which calls for the attention by the authorities, security needs, etc.

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## 4.5 SUMMARY

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Manpower is the skilled component of labour force. Manpower supply has four distinct dimensions: Stock and flow, Quantity and quality, occupation and education and macro and micro dimensions. Methods and techniques, and data sources may vary with the dimension considered in manpower supply estimation.

Among the four dimensions macro and micro dimension is the most important one, as each exercise in manpower forecasting is essentially either macro or micro forecasting. The other three dimensions are associated with both macro and micro forecasting exercise.

At the macro level there are two methods of making manpower forecasting: Direct method and indirect method. While the direct method relies on census count of all persons, indirect method estimates manpower supply by cumulating economically active component of institutional out-turn over the relevant period after making adjustment for all factors causing manpower attrition. Data base for macro forecasting is not always readily available. Often, there is a need to conduct specific studies to generate the needed data. Manpower supply at the micro level consists of external supply and internal supply. External supply is determined by factors extraneous to the company or enterprise level at which micro manpower supply forecasts are made. Internal supply over which a company or enterprise has control, is governed by the wastage rate (i.e., the rate of leavers from the company) and the internal flows - caused by transfers and promotions. Methods of analysis and forecasting of wastage rate and internal flows are different. Data base for micro forecasting is, however, a well defined MIS based on personnel history records of each individual employee.

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## 4.6 FURTHER READINGS

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Bartholomaw, D.J. and Forbest, A.F. (1979) *Statistical Technique for Manpower Planning* John Wiley & Sons, New York.

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NOTES





Uttar Pradesh  
Rajarshi Tandon Open University

MBA-3.12

## Human Resource Planning

Block

# 2

### JOB EVALUATION

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#### UNIT 5

Job Evaluation: Concepts, Scope and Limitations 5

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#### UNIT 6

Job Analysis and Job Description 15

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#### UNIT 7

Job Evaluation Methods 27

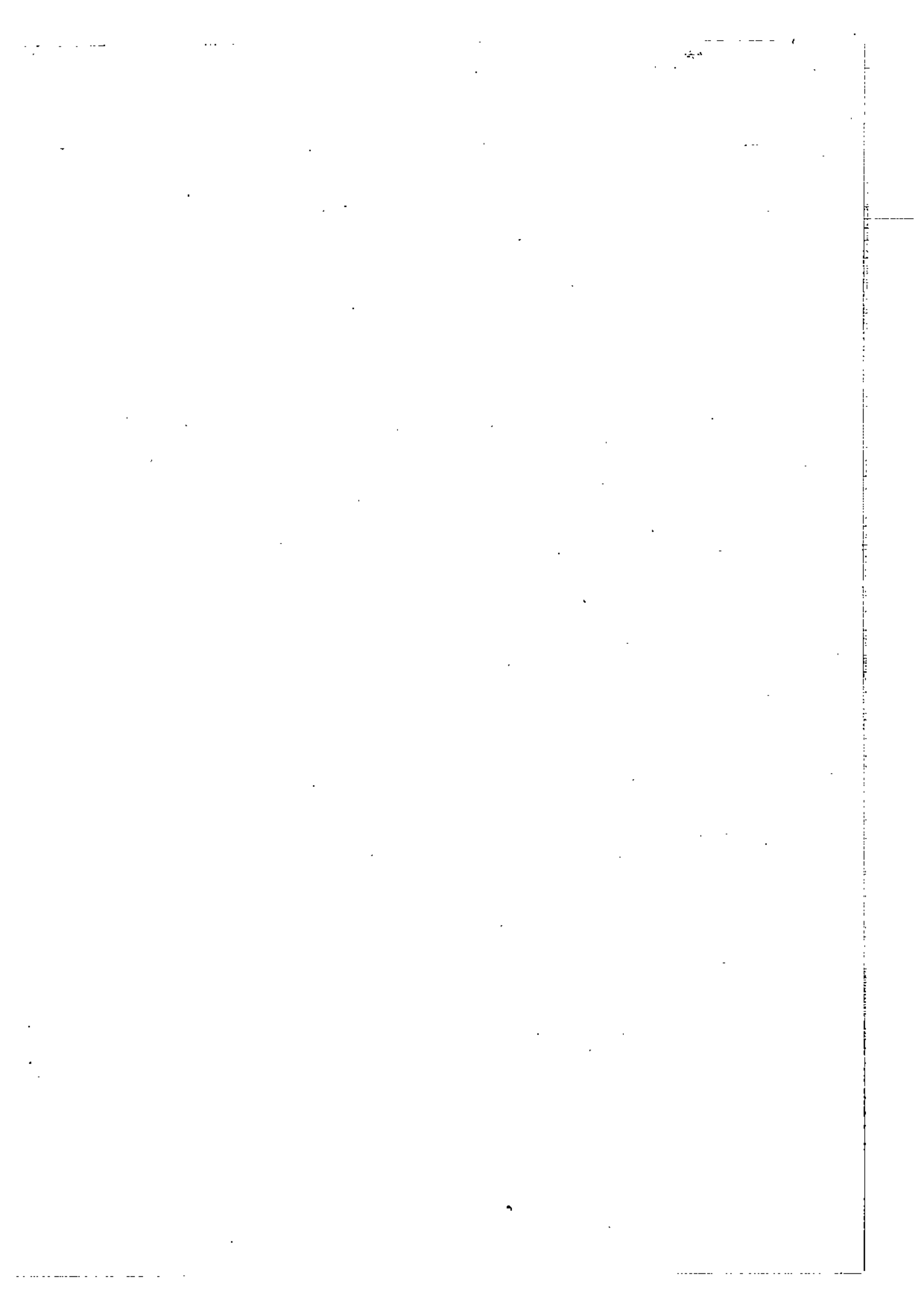
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## **BLOCK 2 JOB EVALUATION**

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This block comprises three units. The first unit provides an understanding of the historical developments regarding application of job evaluation, techniques and explains the concept, scope and limitations of job evaluation. Unit 6 deals with the concepts and process of job analysis and job description, explaining linkage between job description and job specifications with job analysis. It also gives an idea about design and uses of job description. The last unit presents an overview of job evaluation methods explaining relative advantages and disadvantages of various job evaluation method and steps involved in the application of the methods. The unit also discusses recent developments in job evaluation.



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# UNIT 5 JOB EVALUATION : CONCEPTS, SCOPE AND LIMITATIONS

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## Objectives

After reading this unit, you should be able to :

- appreciate the need for a rational and equitable pay structure;
- develop an understanding of the concept of job evaluation, its scope and limitations;
- take note of the historical development with regard to the application of the technique of job evaluation.

## Structure

- 5.1 Introduction
- 5.2 Need for a Rational and Equitable Pay Structure
- 5.3 What is Job Evaluation?
- 5.4 Objectives of Job Evaluation
- 5.5 Relationship of Wages and Job Evaluation
- 5.6 Anomalies in Wages and their Significance
- 5.7 Theory of Relative Values
- 5.8 Basic Assumptions in Job Evaluation
- 5.9 Trigger Points
- 5.10 Advantages of Job Evaluation
- 5.11 Historical Development of Job Evaluation
- 5.12 Areas of Application
- 5.13 Evaluatory Phases
- 5.14 Human, Technical and Economic Problems
- 5.15 Summary
- 5.16 Further Readings

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## 5.1 INTRODUCTION

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Productivity for any organisation or enterprise depends, to a great extent, on the morale and motivation of the employees of that organisation/enterprise. One of the principal factors affecting the morale and motivation is the "pay policy" and "pay structure" of the organisation. Assuming, we have two sections or categories of employees, say Category A and Category B. The former has a salary structure higher than that of the latter. The latter category has a feeling (real or imaginary) that the duties and responsibilities of the former are not more onerous than theirs. This feeling could lead to frustration and lowering of morale and productivity. An organisation needs a system which will attempt to prevent such situations to develop and to resolve them to the satisfaction of all concerned where such situations discern themselves. This unit is intended to identify such a system.

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## 5.2 NEED FOR A RATIONAL AND EQUITABLE PAY STRUCTURE

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As wages are probably the most important single element in conditions of employment, they have naturally always raised difficult issues in negotiations between employers and workers. These issues concern not just the general level of wages received by workers but also the differences in wages amongst them. These differences are of many kinds. They exist as between countries and, within each country, as between industries or groups of industries. Moreover, within any industry there are usually wage differences as between individual, regions, firms or plants and

within the latter as between different departments. Many of these differences may reflect differences in occupational content—quite apart from the fact that workers engaged in the same type of work may receive quite different wages according to their length of service, working conditions, personal performance or for a host of other reasons.

Among the many pay problems regularly confronting enterprises throughout the world, those associated with internal pay differentials are amongst the most common. The difficulties normally arise from the belief by certain workers that the position they occupy in the existing jobs and pay hierarchy is inappropriate. But responding to such concerns by means of upward pay adjustments does not necessarily represent a solution as other workers, with whom comparisons are traditionally made, may not accept having their relative position deteriorate in this way. Continuing ad hoc modifications to pay structures risk undermining faith in their rationality and initiating a series of conflicting pay claims. The way to resolve such difficulties lies in developing to the extent possible, a common understanding amongst all the workers and the management concerned on what the pay structure should be.

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### 5.3 WHAT IS JOB EVALUATION?

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It aims at establishing pay structures that are fair and equitable in the sense of ensuring equal pay for jobs demanding what are considered to be broadly similar sacrifices and of rewarding appropriately the greater efforts and hardships involved in some jobs as compared with others. In this way, it seeks to minimise the dissatisfaction associated with pay differentials and thus to contribute to more harmonious human relations at the work place.

Like many other modern management techniques, job evaluation has, over a period of time, acquired a considerable amount of linguistic mystique created by the jargons employed liberally by the management teachers and preachers, trainers, even practitioners, and compounded by the differential meanings attached to its terminologies by the various users. Yet, stripped of all its sophisticated trappings, it remains a technique designed basically to define job relativities on a systematic basis with a view to developing a rational remunerational structure. Job evaluation is the process of analysing and appraising the content of jobs, set in the family of other jobs, so as to put them in a suitably evolved rank-order which can then be utilised for installation of an acceptable wage structure in an organisation. In short, job evaluation concerns itself with pricing a job in relation to other jobs on the basis of concern consistent, fair, logical and equitable criteria and not on the basis of arbitrary, variable judgements dictated by short-term expediency or arrived at through rule of thumb methods. While one may get the impression that as a technique, job evaluation is invariable and inviolate and it also possesses first-degree precision of scientific variety, it is not so in practice; for, in the ultimate analysis, it is essentially a way of applying judgement, and since no evaluatory process can eliminate the need for exercising judgement, howsoever systematic it is or may be, it will always remain captive to human traffics; additionally so because the technique is to be administered by people and for people in the live-organisation world of work. Moreover, as the job evaluation deals with determination of the relationships between wage rates (not rates themselves) of jobs placed in horizontal and vertical hierarchies, corresponding to any change in the value of one (job)—due to myriad internal or external stimuli—there will be counterpart change in others so that there is no constancy or immutability about this exercise. In assessing the process of determining the relative worth of various jobs within the organisation so that differential wages may be paid to jobs of different worth, the technique not only helps but, then, more important than the technicality of evaluation are the issues that should influence the managerial decisions about the desirability, timing, etc., of such assessment itself, the values flowing from it, infrastructural support system, preparation, installation and maintenance strategies of the newly evaluated structure and so on. Like in a surgical case, crucial decisions do not certainly centre around the surgeon's knife, but are about the patient's conditions and other circumstances, together with the professional competence of the surgeon himself, perhaps his team of people required for surgery.

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## 5.4 OBJECTIVES OF JOB EVALUATION

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The primary objective of job evaluation is to find out the value of work, but this is a value which varies from time to time and from place to place under the influence of certain economic pressures, not least of which is the worth of money itself. Nevertheless, the value of work at a specific time and place is absolute, governed by supply and demand, and related to the value of all other work. The aim of job evaluation is not to create a rate, but to discover what that rate is at that time and in that place.

Another aim of job evaluation, is to supply bases for wage negotiations founded on facts rather than on vague indeterminate ideas.

Wages are always under pressure of one kind or another and some job wages are influenced more than others by such pressures—resulting in anomalies in rates of pay. It is the function of job evaluation to reveal these anomalies, rather than create them.

When job evaluation is used in the design of a wage structure it helps in rationalising or simplifying the system by reducing number of separate and different rates.

The technique of job evaluation can also be used to determine not only what the job is worth but also the value of each of the aspects such as the skill and responsibility levels. Such information could be useful for devising measures for improving labour productivity.

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## 5.5 RELATIONSHIP OF WAGES AND JOB EVALUATION

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The only monetary criteria that are available to assess the value of work are the wages that are already paid for the work. These wages comprise several components each of which contains a number of different features. The values of these components feature in all jobs, affect each other and are also continually influenced by such economic pressures which have very little to do with either the supply of labour or the demand for its product. Changes in the value of money and in the cost and standard of living, group and individual pressures, industrial action or inaction, job evaluation itself with its aims at parity, new towns, redevelopment, taxation, local, national and industrial wage settlements, all have their effect on the wage and its value. The pressures are continually changing, and their combined and single effects are never the same from one moment to another. If then the current wages are to be used as the criteria for the evaluation of work they can be really appropriate for one fleeting moment only in a particular location. This means that all that job evaluation can do is to say that at a given time the value of certain job was so much when compared with the other jobs in that location.

Even while the work has been evaluated or while the evaluation is proceeding the pressures will be applied and the wage and its worth will drift away from the evaluated value. Some wages will drift more than others, but if we know what the work is worth, and compare with value with what we are compelled to pay, we shall have some measure of the direction and force of the pressure.

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## 5.6 ANOMALIES IN WAGES AND THEIR SIGNIFICANCE

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One of the common anomalies is apparent when a worker is paid a wage which is not related to the work he does but is a carry over from some previous occupation or employment. While this may be a source of dissatisfaction and may appear to be anomalous, it is in fact only anomalous if transference from one job to another is excluded from the criteria: For instance, the case of the old servant who is retained at a wage in excess of the value of the work he does is not anomalous unless we

expressly exclude 'length of service' from the criteria. This goes to prove how important it is that the criteria should be properly defined and understood lest every difference should be thought to be anomalous.

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## 5.7 THEORY OF RELATIVE VALUES

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The concept of job evaluation is based on the theory of relative values, a theory which broadly implies that the value of anything depends on and is influenced by the values of other things. Thus, the value of work is relative to the value of other work, and so can be determined only by comparisons between different kinds of work. The effect of this is seen when, if the wage for a job is raised, the value of the wage paid to another job not so treated is lowered. To restore the status quo ante it is necessary to raise the wage of the second job proportionately.

Another part of this theory is that because of the internal and external economic pressures, the wages that are to be used as indicators for finding out what work is worth should not by themselves be anomalous, otherwise, the evaluation will be affected by the anomalies themselves and so would become unreliable.

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## 5.8 BASIC ASSUMPTIONS IN JOB EVALUATION

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Job evaluation is based on certain basic postulates. It assumes that:

- the work must have some intrinsic worth when judged against certain criteria, but that whatever this worth may be it will not necessarily be the same as the wage. Implicit in this assumption is that these criteria can be identified, specified and quantified. These criteria are in terms of the human characteristics or qualities that are required to do the work satisfactorily. Further, these characteristics are supposed to be in short supply in relation to the demand placed on them. The usual characteristics or factors are skill, responsibility, physical effort, mental effort and working conditions.
- it is logical to pay the most for jobs which contribute most to attaining the organizational objective(s).
- the enterprise goals are better served and furthered by installing and maintaining a job-cum-pay structure based on relative job worth.
- people 'feel fair' if two men at the opposite ends of the conveyor belt (one putting on the raw material and the other unloading the finished article) get the same pay, that is to say, if wages are based on relative worth of job.
- there is a broad, if not critical, consistency between wage rate structure in an organisation evolved on the basis of job evaluation and that in the outer community market.

The 'relative worth of jobs' is not easy to gauge. By far, the most important element in job price is the content factor. The content factor consists of duties and responsibilities of the post, the difficulty level(s) encountered by the incumbents, demands that are made by the post on job holder in terms of mental, intellectual, physical and environmental requirements for the due discharge of the duties attached to the post. These obviously are central points related to the post and, hence, are basic to the determination of the base rate for the job. Pay or salary structure may thus be seen to consist, in the main, of the following:

- the job rate which is related to the importance of the job, the responsibilities involved in it, skill levels and pattern of experience needed for adequate job performance, and the mental and physical demands made on the job incumbent.
- special or personal allowances connected with long service, skill scarcity, recompense for personal or social inconvenience.
- fringe benefits holidays with pay, pensions, life insurance, car, etc.
- payments associated with reward according to performance (payment by result scheme, merit rating or profit sharing schemes, share of production plan, etc.)

Though the wage structure is contingent on the functional inter-relations amongst these components, without doubt it is the first one, the job base rate, that constitutes the cornerstone of a sound remuneration system. In evaluating jobs, all the relevant factors have indeed to be taken into account, and the total job cost will evolve through an interplay of all these factors :

- it is worthwhile finding out what work is worth and that the knowledge thus acquired can be put to some use. It can be argued that unless there were some tangible advantage to be gained from what is a fairly costly exercise it were better left alone, but it is one thing to derive a benefit of some activity or other and another to demonstrate that benefit. It is almost impossible to evaluate job evaluation itself in terms of what it costs and what it saves as it is often a last resort in a crises of strained relationships the effects of which if allowed to continue might be quite calamitous.
- job evaluation also assumes that if the correct factors are chosen as the criteria and if these factors are valued correctly in relation to each other and if the work is properly assessed and evaluated in terms of these factors, then the job value so determined should be proportionate to the current wage rates, anomalies expected. This assumption is quite fundamental to the principle of job evaluation.
- the economic pressures affect the wages and they have to be altered accordingly. The basic evaluations of the work are not affected by such pressures. Once the differential has been determined between job and job, it remains unchanged as long as the system itself endures. The evaluation depends upon the criteria and so long as the criteria do not change, the evaluation should remain as it were.

Like everything job evaluation decays. It might begin to decay even before it is completed and can be kept in good order only by careful maintenance. But once a system has begun to collapse the best maintenance possible will not restore it and it will need to be replaced by another system.

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## 5.9 TRIGGER POINTS

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- The 'trigger points' for initiating job evaluation exercises in an organisation are basically two;
- disillusion with the existing remuneration patterns;
- realisation that prevalent salary structure will soon lose validity or situational rationality in the context of emerging organisational developments or near future conditions of growth or shrinkage.

New organisations starting operation in 'green field' site may be motivated all the same by a desire to experiment with a systematic and equitable payment system which the employee will accept as fair and, thus, may ab initio adopt job evaluation technique. Most organisations, however, take a fresh look at their wage structure when

- 1) pay of jobs of similar duties and responsibilities varies violently;
- 2) technology-change brings about variation in job nature, and difficulty levels;
- 3) the earlier job relationships or pay relativities have been upset by
  - i) sectional bargaining powers of trade unions;
  - ii) ad hoc management reaction to production problems, market pressures or other expedient realities, making pay of one group out of tune with that of other groups;
- 4) too many different rates lead to inflexibility in the use of labour, and high administrative costs or too few grades lead to a feeling of unfairness due to absence of differentials;
- 5) organisations face difficulty in attracting potential recruits or retaining the existing ones because of a feeling that the remuneration system is too complex, inadequate or unfair leading often to management-employee bickerings about pay. In short, the need for job evaluation arises because of technology change, plant and organisational growth.



## 5.10 ADVANTAGES OF JOB EVALUATION

When such things happen, job evaluation cannot lag behind. Indeed, the values of job evaluation techniques are even otherwise incontrovertible. The advantages flowing from it benefit all in the organisation—management, workers, trade unions and everyone:

Management	has the advantage of greater order in its pay arrangements and more stable wage structure, and benefits from looking at its pay problems in a more disciplined way;
Unions	benefit from a greater sense of fairness and reasons in pay matters. Unions can play a more important role in determining the relation between different levels of pay and in the joint regulation of work place conditions;
Employees	benefit because job evaluation provides an agreed framework for settling questions affecting jobs and so helps to prevent arbitrary decisions. It also helps to ensure that differences in skills and responsibilities are properly recognised and that when people increase their skills or take on more responsibilities, they are rewarded suitably;
Everyone	benefits from a system which enables the pay for new and revised jobs to be settled in the same way as pay for existing jobs, because it helps to prevent anomalies.

As stated already, the importance of job evaluation lies in its logicity, factuality and systematism in determining job-relativities. It deals with actual facts, and not what is thought of (by management or employees) as facts regarding jobs; it centres round commonality of previously determined criteria so as to enhance objectivity and consistency in factor analysis and value assessment; and it seeks to avoid all ad hocism, arbitrariness and expediency in dealing with pay matters, so that it not only provides a disciplined framework for all the organisational pay decisions, but also promotes positive acceptance of such decisions.

An additional rationale for reforming the payment systems through this technique stems from the important fact that management-employee relationships are improved and strengthened increasing the appreciation of each side's aspirations and viewpoints. When there is a pervasive goodwill in the organisation based on mutual understanding of management-and-union-postures over the principal irritant, that is, the pattern of payment and overall compensation structure, the organisational goals are more effectively realised, personnel growth and development stimulated, and mutually profitable partnership programmes are also promoted. It, thus, leads to reduction of lost time, reduction in wage anomalies and a number of wage disputes, reduced labour turnover and improved morale. Several other by-product benefits also accrue from the data gathered (for job evaluation) through job descriptions, namely,

- Manpower planning, recruitment, promotion, training, development and other management development programmes;
- Throwing light on organisation's structural and procedural problems, work norms and work simplification issues, elimination of duplication of functions, etc.;
- Development of more productive cost and budgetary control systems.

## 5.11 HISTORICAL DEVELOPMENT OF JOB EVALUATION

The first sign of analytical job evaluation appears in the work of American Management Association (AMA) in 1920 under the signature of Charles E. Bedaux/Merrill R. Lott, after trying out a 13-factor scheme in a number of Metal Working Enterprises, published a substantial handbook in 1926 entitled "Wage Scales and Job Evaluation". F.A. Kingsbury had proposed a similar method earlier

in 1923. At about the same time the classification Act of 1923 enacted in the United States harmonised the wage structure in the federal services by introducing a classification method that had considerable influence for many years.

A.L. Kress developed job evaluation plans for two influential industrial organisations in the United States, the National Electrical Manufacturers Association (NEMA) and the National Metal Trade Association (NMTA) based on the point-method. These plans were innovative in reducing a large number of factors to 4 generic factors of "skill", "effort", "responsibility" and the "job conditions", each with a weighting of its own. These plans were found to be practical and were adopted by many other sectors and enterprises.

Measures taken in the United States to regulate the economy during the Second World War also encouraged wider adoption of job evaluation. The 1942 Act on 'Economic Stabilisation' froze wages to prevent the leap-frogging caused by labour shortages. The only exception to the freeze approved by the National War Labour Board was a wage increase intended to rectify wage anomalies shown by the introduction of job evaluation method. Trade Unions had previously shown little enthusiasm for the job evaluation but it was now in their interest as well as that of the employers to adopt it. As a result, job evaluation plans quickly spread throughout the economy in United States.

The Federal position classification plan originated with Classification Act of 1923. That Act was amended several times and replaced by the Classification Act of 1949. The 1949 Act has also been amended and otherwise interpreted and supplemented, but it remains the principal legal authority for classifying positions within the Federal Government.

In Europe, despite a few isolated previous experiments, notably in the Federal Republic of Germany and the United Kingdom the development of Job Evaluation in Industry dates essentially from just after the Second World War when, to rebuild their national economies, many countries introduced and promoted job evaluation in order to rationalise the wage structure and thereby improve productivity. In the Netherlands, a large scale programme for the reconstruction of the national economy led to a wage freeze allowing increases in wages only when justified by job evaluation. In other European countries many enterprises introduced job evaluation at about the same time. For example, in France, a large enterprise in the power sector adopted a point-rating scheme of job evaluation in 1948. In the United Kingdom, some of the first attempts to apply industry-wide job evaluation were in 1952 in the Jute Industry and in 1955 in the Coal mining industry.

In the planned economy countries of eastern Europe, the importance of job evaluation grew substantially during the 1950s and early 1960s when unified national wage scales were implemented as an essential element of the centralised system of wage regulation.

As of today, job evaluation as a management technique is firmly rooted in the United States, Europe and United Kingdom. As far as India is concerned, many organisations suffer from inexplicable pay differentials, indefensible irrationalities and even vulnerable malbalancing in matters of salary administration. They do not go in for systematic and scientific job evaluation methods. In the Civil Services which are cadre based, the remuneration pattern of different classes of employees within the civil cadres is the result of historical evolution and it does not take into account the phenomenal changes which have taken place particularly after Independence. This is in spite of the fact that the philosophy of job evaluation i.e. "equal pay for equal work" is enshrined in our constitution. Fundamental Rights, under Articles 14 and 16, guarantee the right to equality before law and equality of opportunity in public employment while directive principles under Article 13, enjoin on the State to direct its policy towards securing 'equal pay for equal work' for both men and women. However, the present state of apathy towards job evaluation should not be allowed to last any longer in the interest of equity, industrial peace and improved productivity. The Supreme Court of India has already given a lead. The Supreme Court, in its judgement delivered on 24-2-1982 (Bench consisted of Justice Chennappa Reddy, Justice A.P. Sen, and Justice Baharul Islam) allowed a writ petition filed by a driver-constable of Delhi Police. The Court ruled that the principle of "equal pay for equal work" is deducible from constitutional provisions and may be applied to cases of unequal scales of pay, based on 'no classification' or

irrational classification, though doing identical work under the same employer. One hoped that following the Supreme Court ruling, job evaluation would become an essential feature of salary administration and job compensation schemes in the Govt. departments, public sector enterprises as also private sector establishments. However, the legitimate expectations have been belied. The principal reasons for this sandrum could be listed as under:

- a) "Equal pay for equal work" does not seem as yet to constitute an article of faith with the decision-making authorities. There, indeed, have to be some who are more than equals.
- b) Salary administration itself in this country does not appear to have come of age. Rationality and systematism are not necessarily virtues in organisations whose professional growth or functioning is only of a very recent vintage.
- c) There are ample extraneous considerations, not many of them grounded in justifiable propositions, which colour the pay decisions resulting in needless indefensible pay differentials.
- d) The trade unions are busy in fighting for privileges but not for overall organisational advancement based on sound and scientific salary administration.
- e) The civil services are structured on cadre system where there is a conglomeration of posts having a hierarchy of duties and responsibilities.
- f) There is no position-classification system requiring a clear and definitive correlation between job duties/incumbent qualifications and remuneration.
- g) There is the existence of what Fred Riggs described as "formalism", i.e. a gap between preaching modern management techniques (including job evaluation) and their practice.
- h) There is a conceptual autolimitation in that it is erroneously assumed that job evaluation is a technique which can be applied only to standardised, repetitive kinds of jobs where the output can be quantified and hence, advice, policy and highly professionalised types of jobs are automatically excluded from job evaluation purview.

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## 5.12 AREAS OF APPLICATION

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It is now an established fact all over the world that job evaluation can be used to develop pay structures for hourly or weekly paid clerical employees as much as for managers, executives, technicians and professionals. In this context, a question arises as to why in India, we are shying away from going in for such a scientific technique. Job evaluation as technique flounders in this country because, among other, there is no proper cultural preparation and back-up commitment. We have a job structure in which the evaluation of a job is not with reference to inter-job values and worth but with reference to rough and ready method of spotting nebulously determined duties and responsibilities. Posts are included in the cadre-clusters not through systematically devised technique but on recognition of broad, almost loose, identity of functions.

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## 5.13 EVALUATORY PHASES

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For a successful installation of a job evaluation system in any organisation, it is essential to follow a systematic phase-wise framework which is as under:

### Phase I: Preparatory

- a) Preparatory work concerned with policy, programme, planning and communications;
- b) Selection of the job evaluation method most appropriate to the circumstances of an organisation and tailoring it to fit the requirements of that organisation;
- c) Establishment of the necessary procedures and training of those applying the scheme.

### Phase II: Analysis and Assessment

- a) Indication to the employees concerned what the objective of the job evaluation exercise are and how the exercise will be carried out;
- b) Description analysis, and evaluation of jobs to define job relationships.

### Phase III: Building and Pricing the Structure

- a) Positioning of jobs into a number of grades;
- b) Financial evaluation of grades.

### Phase IV: Negotiation, Implementation and Control

- a) Where applicable, negotiation of the new pay structure;
- b) Implementation of the new pay structure, perhaps on phased basis ;
- c) Establishment of procedures to evaluate new and revised jobs and for maintenance of the system.

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## 5.14 HUMAN, TECHNICAL AND ECONOMIC PROBLEMS

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At the inception of a job evaluation application, many problems will arise—human, technical and economic. Experience shows that most of the human problems are based on or stem from the economic and technical ones. If people are ignorant as to what job evaluation holds for them it must be because the technique of communication has failed. If as a result of the application people are worse off than they expected to be, or not so well off as they hoped to be, something could not have been made clear in the first place. Nevertheless, there are bound to be some human problems which are not entirely technical in their origin. A lot of the problems will depend on the history of labour relationships in the establishment, so that difficulties encountered in one organisation will not necessarily be found in another.

Sometimes job evaluation forms part of a productivity deal, though it is hard to see just what the two things have in common. There are many instances where workers have literally been bribed to accept job evaluation in return for an increase in wages. This is typical of the confusion that exists between wages and values.

Another important problem confronts the workers who cannot resolve whether to cooperate in an application or not. Quite understandably they feel that once they accept the idea they will find themselves constrained by the system, unable to argue objectively against 'the book'. What is essential here is that everyone should regard the evaluation simply as a basis for negotiation rather than the actual wage.

The technical problems will mainly concern the management, although of course if workers' representatives are to be included they too will need to understand the technique that is to be used. Such questions as: which is the best system?; who is going to install it?; who is going to operate it?; do we have employee participation and if so how do we go about it?; when shall we start and how long will it take?; what problem are we likely to find in running and maintaining the scheme?; will all require to be resolved. The sooner they are answered the better, and certainly before the concern becomes too much involved. Not least of the technical problems will be to design the system so that it fits the complex shape of the organisation in which it is to be used. Seldom is it possible to find a readymade system which does not require some moulding and reshaping if it is to work satisfactorily. Tailoring a particular system to suit individual circumstances is often the most difficult part of the introduction.

The economic problems will be of concern to all, though for different reasons. Management will be anxious about the cost of the application (for obviously the amount of work involved is quite considerable) and about the proceeds, tangible and intangible, that are likely to accrue. Apart from the cost of introducing and running the scheme there may be wage adjustments, based on the evaluation, which can be quite expensive. These costs can be measured, but if the results are so intangible that

they cannot be seen let alone quantified, management may well be reluctant to spend the money. Perhaps, they may feel that as far as the value of work is concerned guess-work has been good enough in the past, and that it will continue to be good enough in the future.

So far as the workers are concerned they will want to know what happens to the jobs that are underpaid compared to their evaluation. If their rates are raised then the others will by comparison be automatically lowered. Will job evaluations cause redundancy? It is difficult to see why it should, yet it would be extremely foolish to guarantee that it will not (or indeed that the use of any management technique will not).

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## 5.15 SUMMARY

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Job evaluation is a technique which aims at establishing fair and equitable pay structures in an organisation. It seeks to achieve this objective by bringing out the relative worth of jobs in terms of their complexity, skill requirement and working environments. It benefits all the arms of the organisation — management, workers and trade unions. The data generated by job evaluation aids manpower planning, recruitment, promotion, training and other management development programmes. It also aids analysis of the organisation structures and the work systems/procedures and contribute towards improving the productivity of the organisation.

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## 5.16 FURTHER READINGS

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# UNIT 6 JOB ANALYSIS AND JOB DESCRIPTION

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## Objectives

After going through this unit, you should be able to :

- define the concepts of job analysis and job description
- identify the process of job analysis;
- identify the structure and uses of job description.

## Structure

- 6.1 Introduction
- 6.2 Definition of Job Analysis and Related Terms
- 6.3 Uses of Job Analysis
- 6.4 Linkage of Job Description and Job Specifications with Job Analysis
- 6.5 Job Requirements versus Personal Qualities of Job Holder
- 6.6 Job Identification
- 6.7 Information Collection Methods
- 6.8 Design of Job Analysis Questionnaire
- 6.9 Design of Job Description
- 6.10 Uses of a Job Description
- 6.11 Summary
- 6.12 Further Readings

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## 6.1 INTRODUCTION

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We presume that you are doing this course to acquire or enhance your knowledge about the modern management concepts and techniques. This understanding should, undoubtedly improve your skills as a manager, especially as a manager of men. You will also appreciate that an effective manager is one who is able to handle his people efficiently. In order to be a good manager of men, it will also be imperative for you to have an adequate understanding of the jobs assigned to them as also the relative job differentials in terms of their level of difficulty, responsibility, knowledge and skill.

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## 6.2 DEFINITION OF JOB ANALYSIS AND RELATED TERMS

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There exists a wide range of job evaluation methods. The choice of an evaluation method is dependent on the number and kind of jobs to be evaluated, the cost of the operation, available resources, the degree of precision required and the organisations' environments—both internal and external. However, whatever be the chosen method, systematic gathering and analysis of information about jobs is a prerequisite. The job analysis process involves gathering of such information as:

- a) What the worker does?
- b) How the worker does it?
- c) Why the worker does it?
- d) The materials, equipment, tools and procedures used in the conduct of the work;
- e) The physical activities involved in the performance of the work;
- f) The conditions under which the work is performed;
- g) Typical work incidents and work patterns.

Each of these pieces of information is essential; it is not sufficient to merely list a series of tasks or duties, because each piece of information is used in determining the

level of work and responsibility and the knowledge, skill and abilities needed to perform them to an acceptable level of proficiency.

The process of assembling and recording information on such essential characteristics of jobs is known as job analysis. In other words, jobs are subjected to analysis to find out precisely what the duties, responsibilities, working environment and other requirements of a job are and to present these in a clear, concise and systematic way. Job analysis should be undertaken by trained job analysts working in close collaboration with managers and job holders.

Before proceeding further, certain terms used in job analysis and related stages in the job evaluation process need to be clarified.

Element	: the smallest unit into which work can be divided.
Task	a distinct identifiable work activity which comprises a logical and necessary step in the performance of a job.
Duty	: a significant segment of the work performed in a job, usually comprising several tasks.
Post (or) position	: one or more duties which require the services or activities of one worker for their performance; there are as many posts as there are workers and vacancies in an organisation.
Job	: a group of posts that are identical or involve substantially similar tasks.
Occupation	: a group of jobs similar in terms of the knowledge, skills, abilities, training and work experience required by workers for their successful performance.

As its name suggests, job analysis involves a systematic examination of jobs in order to uncover the nature of the tasks performed, the working conditions under which they are carried out, the responsibilities entailed and the skill required.

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### 6.3 USES OF JOB ANALYSIS

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Apart from job evaluation, the information gathered through job analysis may be used for a wide range of personnel and general management decisions, such as the recruitment, selection, promotion and transfer of staff, performance review and appraisal, manpower planning, the design of training programmes and organisational analysis. It is indeed an essential part of any modern personnel management system. The kind of information gathered through job analysis varies considerably, depending on the specific uses to be made of it. Accordingly, job analysis programmes are usually tailor-made for the purposes in view. In practice, however, their main use is most often job evaluation.

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### 6.4 LINKAGE OF JOB DESCRIPTION AND JOB SPECIFICATIONS WITH JOB ANALYSIS

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Job descriptions summarise the essential information gathered through job analysis. They describe the main tasks and responsibilities of the job clearly and concisely in order to facilitate the systematic comparison of jobs for evaluation purposes. The kinds of information and amount of detail contained in the job descriptions depend on the job evaluation plan to be used. However, in all cases they must be standardised and use a uniform phraseology. If job characteristics are set out differently from one job to another, systematic comparisons are likely to be hampered and one of the main advantages of job evaluation will be lost right from the beginning.

Before we examine in detail the two cornerstones of job evaluation, viz job analysis and job descriptions, we should mention a complementary means of describing jobs, namely by job specifications. These usually involve a listing of the personal qualifications regarded as necessary for satisfactory performance. Job specifications

are mainly used in selecting and recruiting staff and are accordingly not essential to job evaluations. But certain personal attributes, such as experience, education and aptitude, may occur in both the job description and the job specification. Many job evaluation plans accordingly use job specifications to complement job descriptions.

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## 6.5 JOB REQUIREMENTS VERSUS PERSONAL QUALITIES OF JOB HOLDER

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It needs to be kept constantly in mind that job analysis seeks to determine job requirements as opposed to the personal skills of the incumbent. Of course, job content and job holder's aptitudes often tend to influence each other. Generally speaking, independent work encourages personal influence on job content; team work or work entailing the use of elaborate equipment reduces it. It is, however, very rare for job content to be so rigidly fixed that it leaves no room for any personal influence by the job holder. Conversely, a job is rarely so extensively affected by the holder that it is impossible to arrive at any idea of its content without considering his or her personal attributes. The job of a production manager, for example, has certain basic requirements, which are definable quite irrespective of the qualities of the incumbent. It is these basic requirements that are the focus of job analysis.

A job holder can be thought of as bringing to his work knowledge, physical and mental abilities, and other personal attributes, such as tact, initiative and assiduity, which he is called upon to use as his work may demand. But irrespective of individual differences related to innate ability, motivation, level of education, age and character, the nature of his job makes certain demands on him. Since job analysis focuses on the job and its requirements, those personal qualities and characteristics of the incumbent not directly required by the job have to be disregarded. This procedure of "distilling" from the activities involved in the job those qualifications deemed necessary and sufficient for the job, and a simultaneous systematic abstraction of the incumbent from the job, is essential to job analysis.

Job evaluation decisions are based on the duties, responsibilities and important requirements of the job or post, when compared to a set of standards; they are not based on considerations of the personal qualities or the efficiency of the incumbent; such as a function of the performance appraisal system. Nor are they based on workload or work output; these are the function of the work study process which is used to determine the number of posts required to undertake a given amount of work. It is very important that these various processes be recognised as separate and distinct, the one from the other, although of course they are interrelated in a broader context. Vacant jobs and posts can be evaluated just as readily as occupied ones, provided the requisite information is available.

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## 6.6 JOB IDENTIFICATION

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The first stage in the process of job analysis is job identification. Towards that end, the job analyst is required to gather and study general information on the organisation which includes organisation chart, a statement of principal objectives of the organisation, functions performed in pursuance of the accepted objectives, distribution of work amongst different functionaries and their interrelationships, a process chart of the production processes of the organisation etc., etc.

Having identified the job, the job analyst is required to study and note down the essentials of each job. To ensure systematic collection of information of all jobs, a standard job analysis form containing carefully chosen questions has to be prepared.

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## 6.7 INFORMATION COLLECTION METHODS

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There are three main methods to gather and verify information needed for each job; namely (i) questionnaire to be filled-in by the operative and his immediate



supervisor, (ii) an interview with the workers and his supervisors, and (iii) direct observations at the work place. The job analyst could use one of these methods or a combination of more than one of these methods depending on the work situation.

The relative advantages and disadvantages of these three methods are discussed below:

**i) The questionnaire**

The use of a questionnaire has a number of advantages. First of all, it is the most cost-effective method, since it can elicit information from a wide number of workers and their immediate superiors in a relatively short period of time. The main task of the analyst becomes one of planning the questionnaire well and checking the responses provided. Secondly, workers take an active part in completing the questionnaire, providing intimate detailed knowledge of their jobs which is not available elsewhere. Thirdly, the questionnaire has to be structured in advance, and this facilitates the processing of the results. In some cases, once the responses to the questionnaire have been verified, they can conveniently be used with little further processing to prepare a job description.

The questionnaire method does, however, have disadvantages—some of them serious. To start with, the people required to complete it must have a certain level of education; and even then, questions may be interpreted in different ways so that the answers may be beside the point. Furthermore, not everyone is able to describe fully and exactly the task that constitute their job. One may, for example, over-emphasise some features of it and completely ignore others even when they are important. There is less risk of this with a detailed questionnaire that includes a checklist of points, questionnaire suited to all jobs is not easily drawn up and may be unduly long.

In practice, while a well structured questionnaire can get essential information quickly, it is virtually impossible to get complete comparable information solely by questionnaire, and this method is generally used in combination with interviews and direct observation.

**ii) Interview**

In practice, an interview is almost always necessary in order to obtain precise, complete and comparable information. The interview conducted by the analyst is an effective way of checking on the information already available on job. The analyst asks the job holders questions on the duties and main tasks of their job, generally working from a previously prepared list of questions as with a questionnaire. After the interview, the analyst draws up a report which is shown to the job holder and his immediate superior for their approval. The analyst usually drafts the report in the form of a job description, which effectively speeds up the preparatory work of job evaluation.

Interviews are time consuming. At least an hour or two may be necessary for each case, plus the time spent by the analyst in drawing up his report and by the job holder and his immediate superior in checking it. In a large enterprise a team of analysts would be necessary.

The main difficulty of the interview lies in finding high quality analysts who can win the job holder's confidence. As has been noted, "too many imagine interviewing to be relatively simple whereas nothing could be farther from the truth." Obtaining information from a job holder about his job is difficult.

Many workers show a natural distrust of the analyst who comes to examine their work, whilst others will give a lot of information, much of it useless. It is accordingly essential to have a well trained and experienced team of analysts if the interview is to be the only method used.

**iii) Observation**

Repetitive work is the most suitable for direct observation of what the job holder actually does. Direct observation by the analyst can clear up points left unclear by the interview or questionnaire and give him an idea of the personal qualifications required; but the sight of an analyst in the work place may well cause some stress, and workers may dislike being observed. Observation is almost useless where the job calls for considerable personal judgement or intellectual ability, as in managerial or

administrative jobs; it cannot possibly comprehend all the tasks in a work cycle that covers a week or month or that entails changes of tasks only at long intervals. Consequently, observation alone is unlikely to elicit all the necessary information and should be used to complement other methods rather than take their place.

In practice, of course, a combination of all three methods is very often used; basic information obtained by questionnaire is checked and supplemented by interview and/or observation. The important thing is to adapt the methods to the characteristics of the jobs and the enterprise, as well as those of the job evaluation plan, and to keep the information collection process within reasonable cost in terms of time and money.

## 6.8 DESIGN OF JOB ANALYSIS QUESTIONNAIRE

It is difficult to design an omnibus format for job analysis questionnaire. Different formats may have to be used depending on the types of jobs to be evaluated and the job evaluation plans/methods to be used.

At the manual or unskilled worker's level, the job analysis consists of a simple description of actions taken in order to complete the job. In this case, a plain narrative statement would serve the purpose of job analysis. But, as one moves up in the hierarchy of the organisation, the complexity of the job increases, and it ceases to be self-explanatory. The role of the clerk, for example, his place in the organisation and the implications of his work and its effects on others, both alongside, above and below his are not self-evident. All this requires to be clearly put down. At a higher or managerial level, the issues become more complex and hence the need for job analysis is definitely greater.

A second and perhaps more complex aspect of this task is to decide the types of information to be gathered. As traditionally practised, job analysis has focused on the formal, the rational and the prescribed behaviours and outcomes. However, it is widely known that formal arrangements are only one aspect of the organisational realities. One's own experience as a manager would corroborate the fact that work gets done through a dynamic process of interaction between formal and informal behaviours, customs, norms and practices. Moreover, the actual results obtained may not always conform to official plans and expectations. Thus, for example, it is customary in many organisations for secretaries to serve coffee. This practice is an expectation which may not be mentioned in the formal list of duties. Workers very often develop personalised ways of operating machines. Official rules are sometimes ignored, thus changing the "real" job.

A typical job questionnaire used by the staff inspectors of the UK Civil Service is as follows:

### Job Analysis Questionnaire

Name : Ministry :  
Grade : Division :  
Job Title : Address :  
Length of time in job : Telephone No. :

#### 1) Position in the organisation

Please draw a diagram to show the position of your job in the organisation. This should show the grades immediately above you and all the staff for whom you have managerial responsibility.

**2) Reason for the job and formal objectives**

Please state briefly the main reasons for your job and record any formal aims/objectives you are required to achieve.

**3) Main job activities**

Please list your main job activities within each of your areas of responsibility. Place them in descending order of importance as far as possible and estimate the average percentage of total time that you spend on each.

**4) Problem solving responsibility**

Please describe the main problem solving demands of your job. In your account differentiate between the types of problem which fall to you. As far as possible indicate the novelty, diversity and complexity of the subject-matter. Describe any guidance available to you. Also mention the extent to which past experience is of value in reaching solutions. The extent to which the solution of your own problems involves recognising and accommodating interests outside your immediate area of responsibility should be recorded.

**5) Decision making responsibility**

Please describe the sort of decisions you take in the course of your job. Explain the nature and extent of any limitations on your freedom of action to take decisions. Also explain how your decisions involve the commitment of resources for which you are directly accountable, and give an indication of costs involved.

**6) Contributions**

Describe any decisions to which you contribute and give an account of your influence.

**7) Responsibility for staff management**

i) Please record below details of all the staff for whom you have clear management responsibility.

Grade	Job Title (if any)	Number
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ii) If you are required to exercise some form of control over personnel other than those for whom you are clearly accountable, please give details.

Grade	Job Title	No. of Staff	Nature and extent of Control	Professions Involved
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**8) Responsibility for representing your organisation**

Please describe the circumstances in which you are required to represent your own organisation at meetings or discussions inside or outside the department.

Please state:

- the frequency of contacts (e.g. monthly/weekly/daily)
- their purpose, and the levels at which contact is made
- the organisation involved, e.g. internal department, other ministries, trade unions, professional or public institutions, industry or commerce, members of the public etc.
- the extent to which your contact involves the commitment of departmental resources or policies.

**9) Knowledge, skills, and experience**

Please state below any form of qualifications, skills, techniques and experience that you consider to be essential to do your job **effectively**. Please note that it is not the intention that you should list your own personal qualifications.

**10) Additional information**

If you consider that there is information concerning your job which has not been adequately covered under the headings above, but which you believe are important to give a complete picture of your job, please give details below.

**11) Signature of job holder**

Date

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## **6.9 DESIGN OF JOB DESCRIPTION**

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A primary output or result of job analysis is a job description. Information obtained by job analysis is shifted and recorded concisely, clearly and fully in the job description. The job description must assemble all the important elements of a job, such as essential tasks, responsibilities, qualifications required and the functional relation of the job to other jobs.

There is no universally accepted standard format for job descriptions for the reason that the form and structure of the job descriptions must depend on the kind of work being analysed and the job evaluation plan being used. For example, if the job evaluation plan comprises factors such as physical and intellectual effort, knowledge, skills, responsibilities and working conditions, it follows that job description should be structured to reflect these factors so as to facilitate factor by factor comparison and evaluation of jobs. With non-analytical methods, job descriptions may be more flexible and simpler but must specify the title of the job and its position in the organisation, summarise the tasks performed and list the skills and abilities required.

It will be helpful to follow the following guidelines while writing a job description:

- 1) Always be accurate about what is expressed.
- 2) Omit expressions which are attributes — such as uninteresting, distasteful, etc.
- 3) Personal pronouns should be avoided — if it is necessary to refer to the worker, the word 'operator' may be used.
- 4) Do not describe only one phase of the job and give the impression that all phases are covered.
- 5) Generalised or ambiguous expressions, such as 'prepare', 'assist', 'handle' etc. should be omitted unless supported by data that will clarify them.
- 6) All statements should be clearly and simply set down — promiscuous use of adjectives only reflect one's own opinion.
- 7) Describe the job as is being done, by the majority of workers holding the designation.
- 8) Write in simple language — explain unusual technical terms.
- 9) Description of a job which is part of team-work, should establish the team relationship.
- 10) The length of description is immaterial; it is not expected even with printed forms that all job descriptions should be of equal length but write concisely.



**Desirable requirements**

- Knowledge
- Abilities
- Personal qualities
- Knowledge of office methods and procedures.
- Ability to screen and to distribute incoming mail.
- Ability to maintain files and registers.
- Ability to draft routine correspondence and reports.
- Tact, initiative and judgement.
- Tidy appearance.

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Source: Treasury Board, Public Service (Canada): Classification and selection standard: secretarial, stenographic, typing group administrative support category (Ottawa, 1974).

An analytical evaluation plan generally calls for a rather different structure, an example of which is provided below:

**Job description (in an analytical evaluation scheme)**

**Job title: Methods Engineer**

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- |   |  |
|---|--|
| <b>Job summary</b>                            | — To conduct the necessary investigation in order to recommend the purchase and commissioning of new plant and manufacturing techniques, these recommendations normally being accepted; and to be responsible for the introduction of new processes which increase the efficiency of production units and economic viability of individual products.   |
| <b>Education</b>                              | — Two to three CSEs would normally be required enabling the job holder to serve an apprenticeship leading to further education on ONC level.   |
| <b>Training and experience</b>                | — On completion of apprenticeship, four years' job-related experience is normally required.  |
| <b>Accountability for resources</b>           | — A poor decision based on the recommendation of the job-holder is likely to involve the company in loss. The effect is likely to be major as frequently the plant involved is specialised and often the only facility of its kind in the company.   |
| <b>Planning requirements</b>                  | — The job-holder works to specified objectives and the achievement checked by cost savings each quarter. The forward planning on the introduction of new techniques is approximately one year. The job-holder is responsible to the Chief Methods Engineer and is only expected to refer exceptional operating problems to him.  |
| <b>Accountability for reports and records</b> | — The job-holder is responsible for originating reports which must be accurate in order to avoid costly mistakes. This requires the ability to be analytical, literate and creative at a high level. The concentration required is normally high and the work is extremely varied. The effect of errors would be serious as the job-holder is responsible for maintaining the company data book and plant list. (The company data book, plant lists and company policy statements are all confidential and are handled regularly.) |
| <b>Contact and cooperation</b>                | — Contacts within the company require the good handling of associates in order to secure the coordination of effort between a number of departments. Outside the company, contacts are mainly to discuss requirements with suppliers. These require a high degree of tact and diplomacy.   |
| <b>Supervision of others</b>                  | — The job-holder is responsible for the distribution of work and the discipline of apprentices assigned to him during training. The job-holder is also responsible for the supervision of sub-contract erection and commissioning engineers. The job-holder is responsible for operator training until new plant is "handed over".   |
| <b>Working conditions</b>                     | — The job-holder works for 50 per cent of his time in normal office conditions and 50 per cent in various parts of the factory.  |

## 6.10 USES OF A JOB DESCRIPTION

Apart from being a basis for job evaluation, the job descriptions can be put to many uses. These are as under:

### a) Supervisor — Employee Communication

The information contained in the Job Description outlines the work which the incumbent is expected to perform: Hence it is an extremely useful document for both the supervisor and the subordinate for purposes of communication.

Furthermore, it helps employees to understand just what work their associates are expected to perform, thus, facilitating integration of efforts at the worksite by the employees themselves.

### b) Recruitment, Selection, Promotion, Transfer

Information pertaining to the knowledge, skills and abilities required to perform the work to an acceptable standard, can be used as a sound basis on which to base standards and procedures for recruitment, selection, promotion and transfer.

### c) Work Performance Appraisal

To be sound and objective, a performance appraisal system must be rooted in the work performed by the employees; such work is indicated by the duties in the job description. In such an approach, using each duty as the basis for discussion, the employee and the supervisor agree on work performance goals for the period to be covered by the subsequent evaluation report; they also agree on the criteria to be used to determine the extent to which the goals have been attained. The reports resulting from this methodology minimize subjectivity by focussing attention on the job, as distinct from the personality traits, habits or practices of the employee. As a consequence, the results are more factual; valid and defensible than is the case in other types of systems.

### d) Manpower Planning, Training and Development

These three processes are closely interrelated. The job description showing, in specific terms, the knowledge, skill and ability requirements for effective performance of the duties, is a sound and rational basis for each of these processes. Analysis of various types of jobs at progressively more senior levels will indicate logical sources of supply for more senior posts, as part of manpower planning; it will also indicate the gap to be bridged in terms of knowledge, skill and ability, thus providing a sound basis for preparing job-related training and development programmes.

### e) Industrial Relations

Frequently issues arise in the industrial relations field which have their origin in the work to be undertaken. In these instances the job description may be used to form a factual basis for discussion and problem resolution.

### f) Organisation and Procedure Analysis

The duties and responsibilities outlined in the job description may be used to great advantage by management in analysing organisation and procedures, because they reveal how the work is organised, how the procedures operate and how authority and responsibility are apportioned.

## 6.11 SUMMARY

Jobs are subjected to analysis to find out precisely what the duties, responsibilities, working environment and other requirements of a job are and to present these in a clear, concise and systematic way. The information gathered through job analysis can be used for a wide range of personnel and general management decisions. Job analysis is also a prerequisite to preparing job descriptions. In fact, job descriptions summarise the essential information gathered through job analysis.

## 6.11 FURTHER READINGS



Working Time Analysts.

Morris, J. Walker. *Principles and Practice of Job Evaluation (1973)*, Heinemann Halley Court, Jordan Hill, Oxford, London.

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Peterson, T.T. *Job Evaluation, Vol. 2 (1972) A Manual for Peterson Method*, Business Books, London.

US Civil Service Commission: *Classification, Principles and Policies*, Personnel Management Series No. 16, United States Civil Service Commission, Washington, D.C.

Burns Mike. *Understanding Job Evaluation (1978)*, Institute of Personnel Management, IPM House, 35, Camp Road, Wimbledon, London.

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# UNIT 7 JOB EVALUATION METHODS

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## Objectives

After going through this unit, you should be able to:

- identify and develop an understanding of the methods of job evaluation;
- identify the steps involved in the application of various methods;
- appreciate the relative advantages and disadvantages of various job evaluation methods,
- appreciate the recent developments in job evaluation.

## Structure

- 7.1 Introduction
- 7.2 Job Evaluation Methods
- 7.3 Job Ranking
- 7.4 Job Classification or Grade Description
- 7.5 Point Rating
- 7.6 The Factor Comparison Method
- 7.7 Recent Developments in Job Evaluation
- 7.8 Summary
- 7.9 Further Readings

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## 7.1 INTRODUCTION

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Inequitable salary relationships affect adversely employee motivation and morale with severe loss to the organisation's economy and effectiveness of operations. The general principle underlying job evaluation aiming at "equal pay for substantially equal work" and its corollary of variation in rates of base pay in proportion to substantial differences in the difficulty, responsibility and qualifications requirements of the work performed is eminently fair to employees and entirely compatible with prevailing economic and political philosophy. This unit attempts to identify and discuss various methods that have been in use in identifying job similarities and job differentials. Grouping of positions in an organisation into relatively few groups of similar positions or classes simplify the job of managing people in many respects and helps to develop a rational wage structure for different categories of employees in an organisation.

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## 7.2 JOB EVALUATION METHODS

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After job analysis and preparation of job descriptions comes the essential stage of job evaluation, namely, the systematic comparison of jobs in order to establish a job hierarchy. The techniques which have been commonly used tend to fall into one of the two main categories :

- Non analytical; and
- Analytical

Non analytical methods are:

- Job ranking;
- Job classification.

Analytical methods are:

- Point rating or assessment;
- factor comparison.

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## 7.3 JOB RANKING

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The simplest and least formal of all job evaluation systems is known as the **Ranking Methods**. Under this method no effort is made to break a job down into its elements or factors, but the aim is rather to judge the job as a whole and determine the relative values by ranking one whole job against another whole job. This is usually done by using a narrative position description, but in many cases even this is omitted. With or without information concerning the job at hand, an individual or group of individuals rank the jobs in the order of their difficulties or value to the Company.

This procedure is followed for jobs in each department and an attempt is then made to equate or compare jobs at various levels among the several departments. When this is completed, grade levels are defined and salary groups formed.

A Ranking Committee consisting of well-informed executives may, in relatively short time, rank several hundred jobs in various departments. In a great many instances, the rankings are not based on job descriptions but on the raters' general knowledge of the position. It is difficult to group together jobs which are similar or to separate jobs which are dissimilar, unless carefully prepared job descriptions have been developed. The lack of position descriptions, is of course, not the fault of the system. The very simplicity of the system leads to the neglecting of some of the tools which would make it more defensible. In most cases very liberal rate range limits must be provided to correct errors in judgement possible with such inaccurate measuring stick.

This method might serve the purposes of a small organisation with easily defined jobs but would probably be most unsuitable for a large company with a complex organisation structure.

### Advantages and Disadvantages

#### Advantages

- a) Easily understood and easy to administer.
- b) Sets a better rate than the arbitrary rate based purely on judgement and experience.

#### Disadvantages

- a) The classification is in general terms and only an overall assessment is possible.
- b) In a complex industrial organisation, it is not possible to be familiar with all the jobs and thus general descriptions will not enable correct assessment of the relative importance of all the jobs.
- c) The grading is very much influenced by the existing wage rates.
- d) It does not indicate the degree of difference between jobs, but only indicates that one job is more or less important than another one.

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## 7.4 JOB CLASSIFICATION OR GRADE DESCRIPTION

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This method received widest recognition in 1922 when the US Congress passed the Classification Act which made this system applicable to all clerical, administrative, professional and managerial civil service positions.

This method is similar to ranking in that in both methods neither points nor money values are used to classify jobs. No complicated procedures are involved; once the structure and definition of grades are fixed, the evaluation process is comparatively quick and simple. However, classification differs from ranking in that the order of operations is reversed. First of all, the grades are determined and then the jobs are graded by reference to their content. Figuratively, the method may be described as a series of carefully labelled shelves in a bookcase. The primary task is to describe each of the classes so that no difficulty is experienced in fitting each job into its proper niche. Jobs are then classified by comparing each job to the descriptions provided.

In this method the most difficult and important operation is defining the grades; it should be done so as to bring out perceptible differences between levels of skill, responsibility etc. Before defining the requirements of the various grades it is usual to select those factors which constitute essential aspects of jobs. Skills, knowledge, experience and responsibility required are generally used as basic factors, but the choice and number of factors depend on the nature of the organisation's activities. It should be noted, however, that whilst the classification method may rely on selected general factors, the evaluation itself is carried out on the basis of whole jobs — they are not broken down into their component elements. The factors are used to provide general guidance for the decisions but are unweighted and unscored.

The classification method has historically been the one most widely used for salaried jobs, particularly in government and service occupations, although there is also some evidence of its use in industry.

### Steps

The classification method proceeds by a number of steps which may vary slightly from one plan to another, depending on circumstances. However, these different steps always involve the two essential stages of

- 1) establishing grades and definitions;
- 2) classifying jobs in these grades.

The first stage, leading to grade definition, is usually fairly long, as the definition is the key reference point according to which jobs are classified. The grade definitions should enable a balanced distribution of jobs to be made between the various grades. Accordingly, deriving them is quite a delicate operation, only possible after job analysis and once the future structure has been determined.

In typical cases the classification method generally comprises the steps of :

- 1) job analysis;
- 2) grouping jobs by their content;
- 3) establishing the number and structure of grades and preparing grade definitions;
- 4) evaluating and classifying jobs.

Once grade definition is completed, evaluation and classification consist of comparing job descriptions one after another with the grade definitions and grading the jobs accordingly. The jobs are considered as a whole. This is a fairly simple operation where the grade definitions are exact and detailed, but where the definitions are in general and abstract terms the evaluation committee has considerable latitude for interpretation. One way of facilitating grading is to select benchmark jobs for each grade in accordance with its special requirements. The evaluation committee will then have operational points of comparison. As evaluation proceeds, grading of individual jobs becomes easier because the jobs already graded extend the opportunities for comparison and verification. Once all the jobs are graded the wage level for each grade can be fixed.

The stages of the classification method are fairly simple in a small enterprise, but where the method is applied to large number of workers, many problems arise. The United States federal civil service classification scheme is one of the best known examples of this method, both for its scope and longevity; its "general schedule" (GS) applies to more than 1 million non-manual civil servants. It was established by the 1949 Classification Act which itself originated in the 1923 Classification Act.

The system is based on definitions of the 18 "GS" grades, each of which covers a large number of jobs of various occupations. The definitions are evidently very broad; for example, grade GS-1 includes all "classes of positions" (jobs) performed under immediate supervision with little or no latitude for the exercise of independent judgement—(1) the simplest routine work in office, business or fiscal operations or (2) elementary work of a subordinate technical character in a professional, scientific or technical field. At the highest levels the definitions are more complex, as for example in the case of grade GS-15 :

Grade GS-15 includes all classes of positions the duties of which are (1) to perform, under general administrative direction, with very wide latitude for the exercise of independent judgement, work of outstanding difficulty and

responsibility along special, technical, supervisory or administrative lines which has demonstrated leadership and exceptional attainments; (2) to serve as head of a major organisation within a bureau involving work of comparable level; (3) to plan and direct or to plan and execute specialised programmes of marked difficulty, responsibility and national significance, along professional, scientific, technical, administrative, fiscal or other lines, requiring extended training and experience which has demonstrated leadership and unusual attainments in professional, scientific or technical research, practice or administration, or in administrative, fiscal or other specialised activities; or (4) to perform consulting or other professional, scientific, technical, administrative, fiscal or other specialised work of equal importance, difficulty and responsibility, and requiring comparable qualifications.

**Advantages and Disadvantages**

**Advantages**

- a) Comparatively simple and easily administered.
- b) Since written job descriptions are used evaluation of jobs tend to be more accurate than under ranking system.

**Disadvantages**

- a) Classification is in general terms and only an overall assessment is possible.
- b) It is very difficult to make comprehensive class specifications for a complex organisation. The specifications tend to overlap and it is difficult to decide which class a particular job belongs.
- c) Placing of jobs in classes is very much influenced by the existing wage rates.

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**7.5 POINT RATING**

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Point rating is probably now the most common method used for job evaluation in many countries. It employs clearly defined factors and allots numerical points. Different point rating plans may select different factors and weigh each factor differently.

The point rating procedure has to be clearly defined from the very start. By and large, its steps fall into two distinct stages, namely preparing and evaluation plan and schedule (by defining and weighting factors) and grading jobs by reference to this schedule.

**Preparing an evaluation plan**

This involves the following steps :

- i) Selecting and defining factors;
- ii) Dividing the factors into degrees;
- iii) Weighting the factors;
- iv) Allocating points to each degree;
- v) Validating the factor plan.

**i) Selecting and defining factors**

While selecting factors it is generally not necessary to introduce or conceive of an entirely new set of factors. In fact, it may be disadvantageous to choose appropriate factors from those widely used in similar enterprises.

Some well-known plans, such as the American NEMA (National Electrical Manufacturers Association) plan for manual jobs, group the specific factors into the following four general factors and 11 sub-factors;

**General factors**  
Skill

**Subfactors**  
•Education  
Experience  
Initiative and ingenuity

Effort	Physical demand Mental and/or visual demand
Responsibility	For equipment or process For materials or product For safety of others For work of others
Job Conditions	Working conditions Hazards

Another plan adopted by many bank institutions in UK uses the following factors:

- A) Experience
- B) Complexity
- C) Discretion and initiative
- D) Supervision of staff
- E) Responsibility for avoiding loss to the bank
- F) Personal contact.

Specific factors are generally selected based on an examination of bench-mark jobs.

### ii) Dividing the factors into degrees

Once the factors are selected they must be divided into degrees to make them operational. Thus, the NEMA scheme divides the subfactor "education or trade knowledge" into five degrees as follows:

- |            |  |
|------------|--|
| 1st degree | requires the ability to read and write, add and subtract whole numbers.  |
| 2nd degree | requires the use of simple arithmetic, such as the addition and subtraction of decimals and fractions; together with simple drawing and some measuring instruments such as caliper scale.  |
| 3rd degree | requires the use of fairly complicated drawings, advanced shop mathematics, handbook formulae, variety of precision measuring instruments, some trade knowledge in a specialised field or process. Equivalent to short-term trades training.                         |
| 4th degree | requires the use of complicated drawings and specifications, advanced shop mathematics, wide variety of precision measuring instruments, broad shop trade knowledge. Usually equivalent to four years of secondary school plus five years of formal trades training. |
| 5th degree | requires a basic technical knowledge sufficient to deal with complicated and involved mechanical, electrical or other engineering problems. Equivalent to four years of technical college training.  |

It is evident that the degree must be clearly defined and graduated. There is no hard and fast rule as to the number of degrees, which is largely a matter of common sense. Too many degrees will complicate the evaluation process unnecessarily, whilst a scheme having only two or three degrees will not sufficiently differentiate jobs from each other. It is not always necessary for each factor to have the same number of degrees, but it is important that the degrees should enable all jobs from the highest to the lowest to be placed in an order of importance that everybody will recognise.

### iii) Weighting the factors

It is unlikely that each factor will be of equal significance. If, for example, four generic factors such as skill, effort, responsibility and working conditions are chosen, the relative importance of each of them will vary a great deal, depending on the work done and occupations concerned. Generally speaking, skills are more important than effort in technical occupations, and responsibility is the most important factor in managerial jobs. Therefore, the relative importance of each of the factors selected has to be determined — in other words, the factors must be weighted.

There is no scientific or readymade method for weighting factors. It is generally done pragmatically and will depend on knowledge of the work of the enterprise.

Weighting will also depend on the firm's objectives and personnel policy — for

example, the importance of working conditions as a factor may well depend on that policy.

One way of arriving at a preliminary weighting is to rank factors in order of importance and allot each of them a percentage arrived at by discussion in the evaluating committee or between the analyst and the persons involved. In addition, some of the implications of different weighting patterns can be considered by preliminary testing on bench-mark jobs. In this way the relative importance of the factors selected can gradually be established.

**iv) Allocating points to each degree**

Once the relative importance of the factors has been determined in a preliminary way and the factors suitably divided into degrees, each degree must be assigned a numerical value. These are the values that will be used in determining the total point values of jobs.

The total points assigned to each factor having been established in percentage terms in the preceding step, it remains to ascribe point values to degrees within the range of points decided on. The actual number of points is a matter of convenience — the maximum number could just as well to 500 be 5,000 — but it is preferable to use high figures in order to avoid decimal points and establish a significant progression with each degree.

The point values ascribed to the degrees may follow an arithmetical, geometrical or variable progression. Table 1 illustrates the difference between these three forms by an example of the "skills" factor.

**Table 1: Methods of points progression for the "skills" factor**

Progression	Subfactors	Degrees (points)				
		1	2	3	4	5
Arithmetical progression	Education	15	30	45	60	75
	Experience	20	40	60	80	100
Geometrical progression	Education	15	30	60	120	240
	Experience	25	50	100	200	400
Variable progression	Education	15	20	30	45	75
	Experience	20	30	45	65	100

The choice of a method of points progression is also a matter of preference. The advantage of arithmetical progression is that it can be simply and easily explained to the workers. Geometrical progression is sometimes preferred because it gives a wider points range at higher levels. Variable progression can be used where there is sufficient difference when moving between degrees. Experience shows, however, that workers are not easily convinced that geometrical or variable progression is fair.

**v) Validating the factor plan**

The factor plan plays a decisive role in all point rating schemes. As a general rule, once it is officially adopted, no major amendment may be made to it. Therefore, it is essential that proposed plans should be carefully tested on a number of job descriptions. These test samples must comprise a sufficient number of jobs in order to verify whether the plan results in the desired spread of points and an acceptable hierarchy. If necessary, the weighting or definitions of degrees must be amended and the test repeated several times until it gives a completely satisfactory result. At this stage, the factors and subfactors must all be precisely defined and the meaning of all terms clarified. The tested factor plan is then submitted to the evaluating committee or other decision-making organ for adoption.

Once the factor plan is adopted, it is usual to prepare an evaluation handbook explaining the procedure to be followed and summarising all the elements required for evaluation, in particular the definition of the selected factors and the points allotted. This handbook, or a summary of it, is usually distributed to all staff covered by the job evaluation scheme.

**The evaluation process and allotting points values to jobs**

In the point rating method the evaluation process involves allotting point values to each job by consulting the factor plan. The evaluation committee or assessor

examines the job descriptions and identifies the degrees of each factor required by them. It is therefore important that the job description should be well planned and so written that the degrees for each factor can easily be determined. This operation is relatively straightforward because each factor is examined in turn, and comparatively little room is left for subjective judgement. Nevertheless, abstract factors such as effort, responsibility or initiative may give rise to some difficulties and, for this reason, it is preferable to examine a group of similar jobs together. Furthermore, if the evaluation is made by several assessors independently, the number of points allotted by each may be compared to ensure that results are consistent. Every evaluation should be checked by a second assessor or by the evaluation committee.

When all the jobs have been evaluated and have had points attributed to them, the jobs are listed in points order, thus obtaining a job hierarchy. To arrive at a wage structure, the job hierarchy has still to be translated into wage rates, either directly by assigning a money value to the points, or by grading.

### Advantages and Disadvantages

#### Advantages

- a) The graphic and descriptive types of rating scales used have been accepted as most reliable and valid. Agreement among raters is usually quite close.
- b) Compensable factors are not limited to any particular number. These factors which the parties decide as important can be used.
- c) Job classes, which is the aim of all job evaluation systems are easily set up. Job classes are simply determined in terms of arbitrary point ranges or on agreed point ranges.

#### Disadvantages

- a) It is difficult to develop a point rating scheme. Defining factors and their degrees in such a fashion that all raters will have the same meaning needs considerable amount of skill.
- b) Assigning proper weightages to each factor and then assigning point values to each degree without being unfair to either the easy or the difficult jobs, requires careful and detailed study.
- c) The point system is difficult to explain. The concept of factors, degrees relative weights and points and relating points to money value cannot be easily interpreted to employees. If the workers do not understand the system clearly it may have adverse effect.
- d) Point rating scheme is certainly a time consuming process. Collecting job descriptions, defining degrees and factors, allocating degrees to each factor of each job, co-relating them with points and then ultimately with money value unanimously by evaluation committee is a long process. Considerable clerical work is also involved in preparing the job descriptions, final table of jobs evaluated, degrees assigned and points scored.

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## 7.6 THE FACTOR COMPARISON METHOD

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This method was originally developed in 1926 as an offshoot point rating. This method therefore incorporates some of the principles of point rating but differs substantially from it in its use of bench-mark jobs and its method of comparing jobs and fixing wage rates.

The first task in applying this method is to select and describe clearly the factors to be used. The choice of factors is generally much more limited than in point rating. For manual workers, the following factors are generally recommended:

- i) Mental requirements;
- ii) Skill requirements;
- iii) Physical requirements;
- iv) Responsibilities;
- v) Working conditions.



For clerical, technical and supervisory staff, all the factors mentioned above except working conditions are generally recommended.

The factor comparison method involves the following steps:

- 1) selecting bench-mark jobs;
- 2) ranking bench-mark jobs by factors;
- 3) allocating money values to factors;
- 4) ranking the other jobs, and wage fixing.

### 1) Selecting bench-mark jobs

The jobs selected as bench-mark jobs must satisfy a number of conditions. Firstly, they should be capable of clear descriptions and analysis in terms of the factors used; secondly, they must be representative of the hierarchy, thirdly, when the rates for the bench-mark jobs are to be used as the standard for fixing the wages, these rates should be regarded as appropriate by all concerned.

### 2) Ranking bench-mark jobs by factors

Once a number of bench-mark jobs are chosen they are ranked successively by reference to each of the factors chosen. When the ranking is done by a committee each member must make his own ranking and the results then being averaged. A typical example of ranking of jobs by factors under the comparison method is given in Table 1.

Table 1: Ranking jobs by factors under the factor comparison method

Job	Skill	Mental requirements	Physical requirements	Responsibility requirements	Working conditions
Toolmaker	1	1	2	1	4
Machinist (grade 1)	2	2	3	2	3
Electrician (grade 1)	3	3	4	3	5
Assembler (grade 1)	4	4	5	5	2
Janitor	5	5	1	4	1

### 3) Allocating money values to factors

The factor comparison method may also be used for fixing up wages in money units by ranking the jobs according to a procedure different from the one shown above. The wage rate for each bench-mark job is broken down and distributed among the factors in the proportions in which these are considered to contribute to the total price paid for each bench mark job in the form of its wage rate. For example, if tool-making is a bench-mark job and its wage rate is 20 money units, it may be decided to assign nine of these to skill, five to mental requirements, two to physical requirements, three to responsibility and one to working conditions. Similarly, if the wage rate for another bench-mark job, for example that of a first grade machinist, amounts to 18 money units, eight of these may be allotted to skill, three to working conditions, and so on. When the rates for all bench-mark jobs have been divided in this way the jobs have implicitly been ranked again with respect to each of the factors. In the example given, the toolmaker ranks above the machinist as regards skill requirements, but below the machinist if the jobs are ranked on the basis of working conditions.

After the results have been averaged by a committee in the manner described above, the allocation of wage rates and the ranking by factors of the jobs covered for Table 1 might work out as indicated in Table 2.

The two rankings of the bench-mark jobs are undertaken independently of each other and need not coincide. Their respective results as illustrated by Tables 1 and 2 are compared in Table 3.

It will be noted that there are differences in ranking revealed in Table 3. These differences have to be removed either by increasing or decreasing the money value of the different factors for the jobs concerned or by examining the job contents again. If it is not possible to reconcile the ranking of a particular job, it is eliminated from

the list of bench-mark jobs.

#### 4) Ranking other jobs

On the basis of job descriptions, each job is analysed and compared with the bench-mark jobs in terms of each of the factors separately.

Table 2: Allocation of money values to the different factors and ranking of jobs under the factor comparison method

Job	Wage rate in money units	Skill		Mental requirements		Physical requirements		Responsibility		Working conditions	
		Money value attributed	Ranking of job	Money value attributed	Ranking of job	Money value attributed	Ranking of job	Money value attributed	Ranking of job	Money value attributed	Ranking of job
Toolmaker	20	9.0	1	5.0	1	2.0	3	3.0	1	1.0	5
Machinist (grade I)	18	8.0	2	4.0	2	1.0	5	2.0	2	3.0	3
Electrician (grade I)	16	6.0	3	3.0	3	3.0	2	1.5	3	2.5	4
Assembler (grade I)	14	4.0	4	2.0	4	1.5	4	1.0	4	5.5	1
Janitor	12	2.0	5	1.0	5	4.0	1	0.5	5	4.5	2

Table 3: Comparison of rankings by factors and by money values under the factor comparison method

Job	Skill		Mental requirements		Physical requirements		Responsibility		Working conditions	
	Ranking by factor	Ranking by money value	Ranking by factor	Ranking by money value	Ranking by factor	Ranking by money value	Ranking by factor	Ranking by money value	Ranking by factor	Ranking by money value
Toolmaker	1	1	1	1	2*	3*	1	1	4*	5*
Machinist (grade I)	2	2	2	2	3*	5*	2	2	3	3
Electrician (grade I)	3	3	3	3	4*	2*	3	3	5*	4*
Assembler (grade I)	4	4	4	4	5*	4*	5*	4*	2*	1*
Janitor	5	5	5	5	1	1	4*	5*	1*	2*

\* Different results obtained from ranking by factor and by money value.

#### Advantages and Disadvantages

##### Advantages

- Factor comparison method permits a more systematic comparison of jobs than the non-analytical methods;
- Evaluation is easier than by the point method, as a set of similar jobs are compared and ranked against each other.
- Analysis of bench-mark jobs is very comprehensive.
- In a scheme that incorporates money values, determination of wage rates is automatic.
- Reliance of the method on bench-mark jobs guarantees that the scheme is tailor-made and that the ranking necessarily reflects the actual structure while eliminating anomalies.

##### Disadvantages

- This method is comparatively complicated to apply and it is difficult to explain to workers.
- The wage rates for the bench-mark jobs are presumed to be correct and definitive and all other rates are determined by reference to them.

- c) It goes against the common belief that the procedures of evaluating jobs and fixing their wages should be kept separate.

## 7.7 RECENT DEVELOPMENTS IN JOB EVALUATION

The question of choosing and weighting of factors is one of the most difficult issues encountered in the basic qualitative methods. Some job evaluation schemes are rejected because of the factors chosen, and others categorised as vague and confused because of too many factors and subfactors. As a result, some researchers and practitioners of job evaluation have proposed and experimented with single-factor schemes which are briefly outlined in the succeeding paragraphs.

### The time span of discretion method

This method was developed by E. Jaques in the 1950s and early 1960s and was tried out in a London Engineering firm. Its special feature is that it uses only one factor, viz. the "time span" at the disposal of each worker.

The time span of discretion is defined as the longest period of time for which a job holder can exercise his own discretion without supervision from his senior of the quality of his work. This time span of discretion is claimed to show the worker's ability and the nature and difficulty of the job and is believed to conform to the norms of equality on which each worker bases his own idea of what should be the job hierarchy.

In Jaques' original method jobs are grouped into five major grades, from grade 1, in which the time-span of discretion is less than one month, to grade 5, in which it is more than five years. Each grade, of course, comprises several degrees, each with its own time-span of discretion. Jaques' approach differs substantially from that of conventional methods by focussing on the individual rather than on the job requirements.

The above method has, in practice, been applied only to a very limited extent and is really still in the experimental stage. It has often been rejected by workers as well as management because no formal proof is offered of any connection between the time span of discretion and the norms of equity accepted by the workers. Moreover, whether time spans can be measured accurately is also controversial.

### Decision-banding

This method has been developed by T.T. Paterson and his colleague T. Husband. This method assumes that the only factor common to all jobs whatever the work involved is "decision-making". Decisions are placed according to their level and nature in six groups known as "decision bands", as indicated below:

Band E — Policy decisions, made by top management in general terms that direct and guide the enterprise.

Band D — Programming decision, taken within the limits fixed by the policy decisions in Band E. Decisions at this level essentially involve the preparation of a plan or programme of action for carrying out policy, but are not concerned with the execution of the plan.

Band C — Interpretative decisions, deciding how to do the work within the limits set at Band D; for example, the kind of machines and number of staff required.

Band B — Routine decisions, concerned with carrying out Band C decisions, that is how the work is to be done.

Band A — Automatic decisions, on the way the worker carries out instructions.

Band O — Defined decision, usually made by unskilled workers. The margin of discretion is very narrow at this level of decision-making.

In recognition that within each decision band there may be a need to coordinate work, each band, except Band O, is divided into two levels. The upper-level job holder in any decision band coordinates the work of the persons in the lower level in that band and has structural authority over them.

theory, the decision-banding method offers the disadvantages of simplicity and universality but in practice it is sparingly used because workers do not readily accept any scheme that does not take into account such factors as skills, experience etc.

#### **The Hay and MSL guide-chart profile method**

This method was developed by a firm of consultants in the United States in the 1950s. Basically, it combines the features of the point rating and factor comparison methods. It is used mainly for managerial, professional and technical jobs in about 30 countries and it is particularly widespread in the United States and the United Kingdom.

This method evaluates jobs by reference to three basic factors, viz. know-how or skill, problem solving and accountability. A fourth basic factor, "working conditions", is also sometimes used for jobs having hazards, an unpleasant working environment and high physical demands.

The basic factors are clarified by reference to a list of 8 elements or sub-factors. Each basic factor is depicted in a guide-chart which breaks down the relevant sub-factor into different degree levels.

#### **The Urwick Orr profile method**

This method was originated by the British firm of management consultants, Urwick Orr and Partners. It is another high hybrid method that combines the features of point rating and ranking methods. In a sense this method is a simplification of point rating that uses paired comparison to determine weightings. The principal disadvantages of this method are that it uses a simple breakdown of factor degree for securing purposes and it stresses the importance of full participation by workers' representatives at various stages.

#### **The direct consensus method**

This method, developed by the firm of Inbucon AIC, relies on the paired comparison technique. An important feature of this method is that members of the valuation panel record their individual assessments of whole job rankings and these assessments are fed into a computer. In cases where the assessors do not agree on the job rankings, the computer programme establishes the best possible correlation between their assessments without the need for prolonged discussion in committee to reach a consensus.

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## **7.8 SUMMARY**

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Job evaluation proceeds job analysis and job description. Quite a few methods are now available for systematic comparison of jobs in order to establish a job hierarchy in an organisation. Depending on its needs and ethos, an organisation could pick up any of the available methods. It is also open to an organisation to develop a method that may combine the features of two or more than two methods. What is important is that, the chosen method should secure the satisfaction of all concerned, namely the management, the employees and the unions, and also ensure the supply of right skills to the organisation for carrying out its operations efficiently and effectively.

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## **7.9 FURTHER READINGS**

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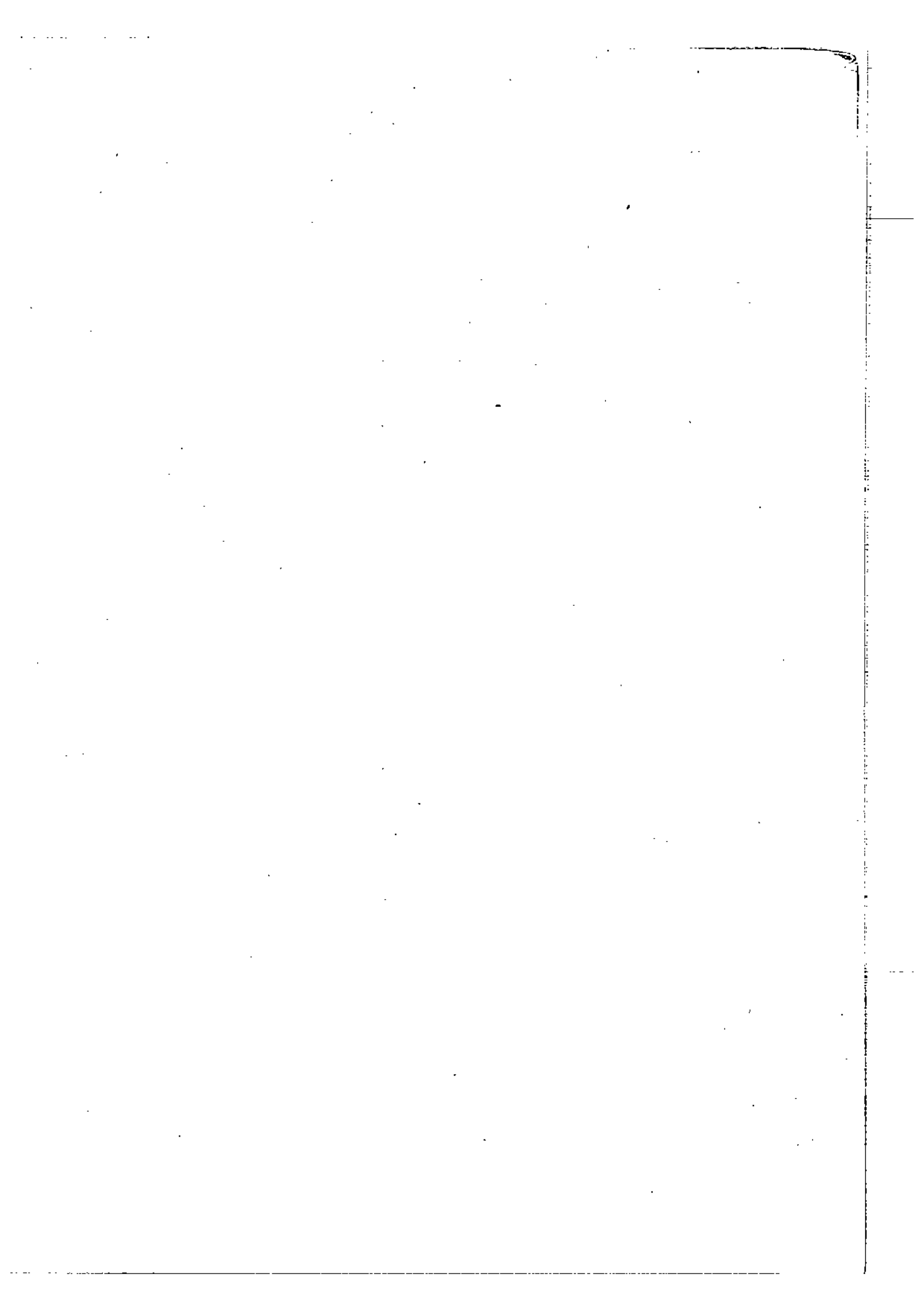
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## NOTES



UTTAR PRADESH  
RAJARSHI TANDON OPEN UNIVERSITY

MBA-3.12

## Human Resource Planning

Block

# 3

### **ACTION AREAS : ISSUES AND EXPERIENCES**

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## **BLOCK 3 ACTION AREAS : ISSUES AND EXPERIENCES**

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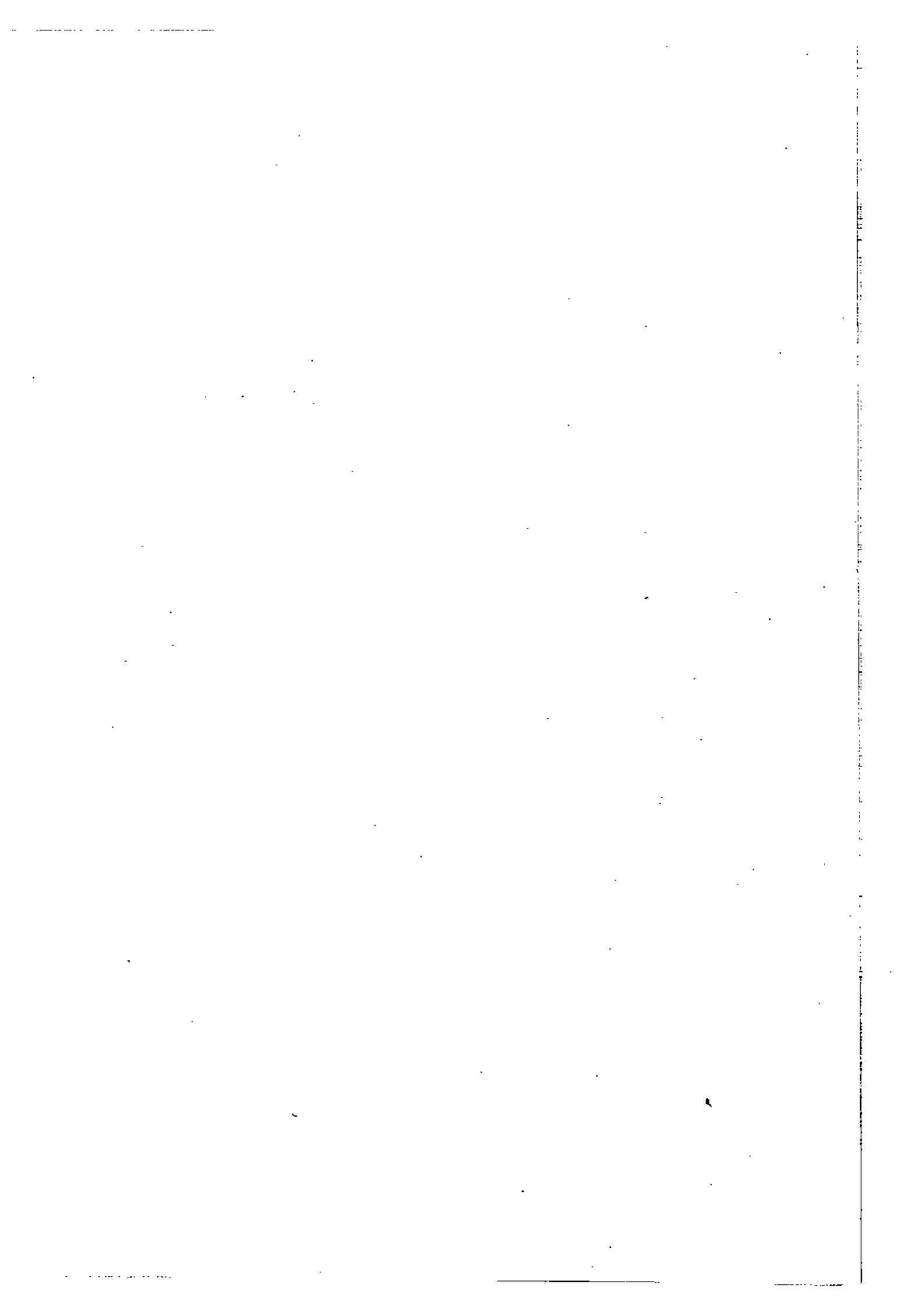
This block comprises five units. The first unit deals with the importance of selection and recruitment giving utmost importance to the human resources of the organisation. It discusses the need for procedures and policies for selection and recruitment and evaluate various methods of recruitment in Indian environment to select the most suitable candidate for the job.

The second unit refers to the next steps after selection and recruitment i.e., induction and placement of the employee creating favourable impression about the organisation and facilitating development of right attitude, sense of belonging and spirit of team work for making a better employee.

The third unit describes in detail about performance and potential appraisal of the employee. It emphasises this to be used as a tool for development of the employee and the organisation, realising the need for selection and training of appraisers to make it more effective.

The fourth unit deals with the problem of transfer, promotion and reward policies, explaining the reasons behind transfer and promotions and appreciating the change required in organisational structure. It also discusses the implications of industrial laws and inherent limitations in government, public sector and other industries, taken over by the government.

The last unit on training and retraining emphasises the need for training at all levels and identifying training needs to keep pace with the fast changing technology and global environment. It stresses on clearly formulating the aims and objectives of training and pleads strongly for continuous training and retraining and formulating measures for evaluation of training programme, so as to find out and adopt most suitable methods for training different types of employees for better development of employees and the organisation.



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## UNIT 8 SELECTION AND RECRUITMENT

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### Objectives

After going through this unit, you should be able to :

- appreciate the value of human resources in organisations;
- realise the need for procedures and policies for selection and recruitment of employees;
- evaluate various methods of recruitment in the Indian environment;
- have knowledge of selection techniques;
- familiarises yourself with the purpose of various types of selection interviews;
- fulfil the ultimate aim of selecting the best human material available;
- select the most suitable candidate in relation to the job in view.

### Structure

- 8.1 Introduction
- 8.2 The Importance and Value of Human Resources
- 8.3 Essentials of Recruitment Policy
- 8.4 Selection and Recruitment Methods
- 8.5 Selection Process
- 8.6 Selection Tests
- 8.7 Selection: Interview
- 8.8 Government Regulations for Industrial Employment in India.
- 8.9 Summary
- 8.10 Further Readings

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## 8.1 INTRODUCTION

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Although the field of personnel management has been with us for nearly seventy years only recently there has been some major re-direction concerning its importance. For many years, personnel management was viewed as a maintenance function for the organisation, a repository of records and information, but not as a function that had any noticeable impact on the productivity and profitability of the organisation as a whole.

Recent researches have developed a perspective of strategic human resources management. This perspective essentially takes a broader, more integrated view of the personnel function. It seeks to link the personnel function to the long-term strategies of an organisation and asks how it can facilitate the accomplishment of those strategies and goals. In this environment the importance and status of personnel management will continue to increase as a field which proactively and creatively responds to changing recruitments and expectations of the human side of any enterprise.

Increasing complexity and size of most organisations has resulted in multiple layers of bureaucracy. All organisations and establishments have realised the increasing costs of manpower. Over-bureaucratization has been operating to isolate employees from both the organisation and the competitive environment in which most organisations must operate.

Geographical diffusion, particularly in the emergence of multi-national firms, presents new challenges in managing human resources in different regions and states where laws and prevailing social values may be quite different.

At the same time, greater government involvement in human resource practices are causing all organisations to re-examine their policies and practices. The legality of costly wage settlements or court awards (as in India) and the increase in collective trade union disputes in most organisations all over the world have increased the growing importance of personnel policies.

Increasing educated elements in the workforce are causing all organisations to re-examine their assumptions about their employees' capacity to contribute, as also to impose limitations on the productivity or profitability of the organisation.

Changing values of the workforce, particularly relating to authority, are causing all establishments to re-examine how much involvement and influence employees can have on organisations and the mechanisms to recognise their voices of protest. More concern with careers and life-satisfaction are also causing organisations to re-examine traditional assumptions about career-planning to provide more alternative career opportunities as also to take into account employees' lifestyle needs when transferring them.

Changes in workforce demography, particularly the infusion of women, minorities, and handicapped persons into organisations, are making them re-examine their policies, practices and managerial values that effect the responsibilities, treatment and advancement of these employees.

You may have studied some aspects of selection and recruitment of human resources under Unit 5 of the course MS-2: Managing Men. However, it is necessary to understand and appreciate the importance and value of the personnel function as it relates to managing the human resources of an organisation, particularly in the Indian context and environment.

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## 8.2 THE IMPORTANCE AND VALUE OF HUMAN RESOURCES

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All organisations need resources to function, resources in form of employees i.e. Man, Money, Machinery and Materials, etc. The employees are the human resources of an organisation which are crucial for its functioning.

The acquisition of human resources and their maintenance involves costs. These costs can be of different types. Man power costs include costs of research and designing of man power programmes i.e., man-power planning, Ergonomics research, work study and designing of personnel policies, etc. Then, there are costs of commissioning man power i.e. costs of recruitment, induction, placement and training, etc. The cost of maintenance of these resources is a very significant component of the total costs of an organisation. Maintenance costs include wages and salaries, welfare and medical benefits, provident fund, gratuity and other retiring benefits, etc. These costs will also include costs of absenteeism, sickness, and costs involved in transfers, etc.

It will be appreciated that these costs form a substantial part of the total costs of an organisation which include costs of building, machinery and other physical assets, which have to be acquired and maintained for the purpose of maintaining the productivity of all organisations.

In the last 20 years, the treatment of man-power costs has been recognised as a separate division in accounting practices wherein human resources accounting has come to be recognised as a new innovation which is essential to maintain the profitability or productivity of any organisation

It should be realised that human resource accounting will have to consider both short-term and long-term costs. The short-term costs may include the cost of advertisement, selection and recruitment, etc., while the long-term costs will include costs of maintenance of the human resources of an organisation. The costs of recruitment and training can be capitalised in principle since returns on these costs will be available to the organisation over a long period of many years, in the form of augmenting the productivity or income-generating capacity of its human resources.

Another important aspect which needs differentiation at this stage is the difference between the other physical assets of the organisation i.e. Buildings, Machinery, Stores stocks, etc. and its human assets. It is common knowledge that most of the physical assets depreciate in value with passage of time by wear and tear, which is provided for in accounts by depreciation. Most of these assets are wasting or depreciating assets. In contrast, the human assets i.e. the employees at all levels, as they grow in age and experience, add to their productivity and capacity to earn for

the organisation and become more valuable. It is clearly visible in their compensation or maintenance costs such as salaries, perks etc. Their increased value is also reflected in their market price which they can command. The employees of any organisation are its appreciating assets in contrast to the other depreciating assets.

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### **8.3 ESSENTIALS OF RECRUITMENT POLICY**

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Policy formulation is an essential managerial function. It is a complicated process which may involve all levels of employees. While formulating a policy an attempt has to be made keeping in view the values and objectives of the different groups involved, so as to raise efficiency of working relationships in an organisation. Moreover, the policy shall have to be in line with the man-power requirements to attain the organisation's objectives.

Recruitment is essentially a process to discover sources to obtain man-power and to employ effective measures for contacting those employees, which will be forming an efficient workforce. It will suffice to understand that the recruitment process involves 5 different elements, which include;

- 1) a recruitment policy
- 2) a recruiting organisation
- 3) a forecast of man-power requirements
- 4) the development of man-power sources, and
- 5) techniques for utilising these sources.

It is a vital function of personnel administration and is an essential pre-requisite for the effectiveness and success of an organisation:

Recruitment policy states the objectives, and provides a framework for implementation of recruitment programme in the form of procedures. A recruitment policy may include several issues such as promotion or transfer from within the organisation (as quotas are usually fixed in government and public sector organisations as also quotas for certain minority groups and relatives of employees). While the system is a function related to the personnel function, in principle recruitment should remain a line-responsibility, who should have the final say in the acceptance of a particular recruit, though, in consultation with the staff or personnel department.

The man-power managers have to constantly review and improve the methods of recruitment in view of the changing times and demand as understood in other organisations. A sound recruitment programme necessarily involves appraisal of each source and the techniques from the stand point of relative quality of personnel which it has provided.

The valuation procedures should consist of existing employees in terms of their jobs—success, evaluation of sources from which good and poor employees were recruited and the methods used in assessing the relative values.

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### **8.4 SELECTION AND RECRUITMENT METHODS**

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The selection process includes all those activities related to the internal movement of people and to external hiring. The essential process is one of matching available human resources to jobs in the organisation. It entails defining the organisation's human needs for particular positions and assessing the available people to determine the best to fill them.

Three strategic selection concerns are particularly salient. The first involves devising an organisation-wide selection and promotion system that supports the organisation's own policy. For example, if a department or organisation will be diversifying over a ten-year period, it is most likely that the types of people needed to run the new organisation will be different than those in the past. Thus, a redesigning of the selection process may be required.

The second strategic concern requires creating internal flows of people that may suit future requirements. Organisations that diversify or change their strategic direction need to alter traditional promotional patterns in order to move new types of people into key positions and train them for new responsibilities.

The third strategic concern is matching key executives to the organisations policy. There is a growing interest in meshing strategic planning with executive skills.

**Selection Method**

'Selection' as opposed to 'recruitment', means the assessment of candidates and the choice of the candidate most suitable for the job. The first consideration is whether there exist internal candidates for the vacant post. Much time and expense can be saved through internal promotions or transfers, and a policy of internal promotion enhances the morale of currently employed staff. Many organisations advertise vacancies both internally and externally, using internal candidate as a standard against which outsiders are compared so that an internal candidate is offered the position provided no outstandingly superior external candidate appears.

Well designed application forms are essential to the selection process. Moreover, the information they contain offers a basis for personnel records which can be used for human resource planning including the preparation of skill-inventories and redeployment programmes. The case for incorporating a wide range of questions into an application form, covering many aspects of the applicant's life, is therefore strong, since the information can be used for developing the successful candidate's future career.

**Selection Procedures**

Selection procedures seek to match the requirements of Jobs with the attributes of candidates. The more detailed the job-description, the easier it is to identify the best applicants. So job descriptions should clearly specify the personal characteristics needed for each job's successful completion as well as provide a comprehensive break down of the tasks involved. All necessary competencies (e.g. the ability to operate equipment, interpret technical data, write reports, mix easily with other people, withstand stress, etc.) should be listed. Job content can be established through work-study or through interpretation of the duties involved.

Next, draw up a 'person specification' to define the background education, training, personality and characteristics of the person best suited to fill the vacancy. In other words, draft a per-portrait of the ideal candidate to provide a list of qualities to look for when preparing a short list. The person you describe may not exist, but will act as a standard against which applicants can be compared.

Activity 1

1. Write a job specification for your own post.

(It might be useful to design a format for job specifications. Not only would this standardise the layout but also act as a blueprint for information needed.)

**Recruitment Procedures**

Recruitment is usually the responsibility of the personnel department, who should be notified whenever a new vacancy arises or one of your workers resign or approaches the age of retirement or when you feel that the value of work in the department justifies the employment of extra staff.

Normally, you will be expected to draft or revise a job-specification for a vacant post, including precise details on the skills, experience and qualifications it requires,

starting date and particulars of any special conditions attached to the position. The personnel department can draft and place a job-advertisement in suitable media: comprehensive job-specifications lead to accurate job advertisement, less time wasted in shifting through unsuitable application.

However, the people within the organisation have also to be considered for transfer or promotion for such positions. In most organisations as a matter of policy, internal mobility is maintained by putting such vacancies on Notice Board or publishing by other means, so that all employees know, and can apply for same. When vacancies are advertised, and large numbers of applications are received, if you are a department head the personnel department might send you all completed applications received, better divided into three categories: 'clearly suitable', for interview, 'possibly' suitable, and 'clearly unsuitable', leaving the final choice of short list to you. You need to look through all the completed applications, through paying most attention to those in the 'clearly suitable' bundle. Difficulties arise in the allocation to these categories of people of widely varying background, experience and paper qualifications.

It is better to examine the relevance of any particular set of qualification to the advertised post and look for evidence of the candidate's interest in attending relevant courses. A willingness to update in one area usually indicate a willingness to acquire further knowledge in others also.

It has also to be carefully examined what responsibility did the applicant carry in his or her previous position? Can you identify a distinct pattern in the applicant's career, and if so how relevant is the vacant post to this career pattern? Did the applicant achieve promotion with previous employers and how long did he or she remain in each job.

Nearly all application forms ask candidates to provide the names and addresses of referees. If you feel that a reference from a past employer would be useful, then try to obtain a reference by telephone, since in this way you will be able to assess the referee's sincerity more accurately (people are often franker when speaking than when writing) and referees are always aware that adverse written comments could fall into the applicant's hands.

In India, writing adverse confidential reports in government, and public sector can be made the subject matter of a grievance or dispute.

**Activity B**

Do you participate in the recruitment and selection of staff to your department?

If the answer is yes, list the tasks you have undertaken and outline the procedures followed.

Recruitment procedures and the degree of staff involvement will vary from firm to firm. In any organisation, only the most senior staff are invited to participate in the process, while in others specialist and junior officers are also included.

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**8.5 SELECTION PROCESS**

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The process of selection also involves placement in effective positions. In order to be effective selections and placement together form a crucial man-power function. It

may be noted that the recruit trends for automation, and computerisation which are fast developing, have increased the significance of these processes.

There is a process known as "differential placement", in these processes efforts are made to compare a job-requirement, qualifications and find as to which job he can be most suitable. While traditionally placement for a job is usually resorted to in those sectors where supply of qualified candidates is available; differentially placing them has been found to be useful in areas where suitable candidates are rare. As a matter of fact differential placing makes the most effective use of human resources.

An organisation can make best use of these techniques if it specifies several positions for which an individual may be suitable, and provides flexibility, if required job-qualifications are met. It also decreases recruiting and selection costs, increases business turn-over as also job-satisfaction and productivity.

The policy of selection and placing should be based on effective planning of professional needs, organisation planning and employee-development goals.

The purpose of the selection process is to make effective use of individual differences with a view to selecting individuals who possess the greatest degree of qualities required for effective performance on the job. As a matter of fact individual differences are the base for the selection and placing process.

All those selection procedures may change from one organisation to another in terms of size, industry, location, etc. The selection process depends upon effective job analyses and differential recruitment and placement. The selection process involves usually 7 steps.

- a) Preliminary Screening of applications
- b) Review of application forms
- c) Physical examination
- d) Checking references
- e) Psychological testing
- f) Interview and
- g) Internal promotion programme.

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## 8.6 SELECTION TESTS

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Only few organisations use selection testing in India, relying instead on candidates' formal educational qualifications and stated experience as evidence of their ability. However, tests can be useful where large numbers of equally qualified applicants have to be considered and substantial interviews with each candidate are not physically possible. Many difficulties are involved in setting tests and correctly interpreting the result. Time and effort is required to devise a test and it might not actually measure the abilities it is intended to measure (intelligence tests, for instance, often measure learned responses rather than 'intelligence'). High or low marks obtained in a test do not necessarily indicate high or low ability to do a job properly, only the capacity to achieve certain marks under test conditions. Tests can give inconsistent result when repeated on people of known equivalent ability, and can fail to discriminate between good and bad candidates (good quality applicants should consistently achieve high marks and vice versa).

The commonest type of test used in employment selection is the Achievement test, which seeks to evaluate the candidate's level of competence in a particular skill (typing, shorthand, driving, machinery, etc) Such tests are intended to discover individuals who claim to possess a skill they do not actually have or who have grossly exaggerated their abilities. An achievement test is directly relevant to the work the successful candidate will do, but necessarily covers only a part of the successful candidate eventual duties. A candidate who fails the test is assumed incapable, a secretary might fail to achieve a predetermined minimum shorthand speed under test conditions but this does not necessarily mean the candidate is an inadequate secretary overall. Tests are undertaken in specific test conditions. Success in a driving test for instance proves that the candidate did well over the test circuit, yet he or she may not otherwise be a good driver. Job applicants feel nervous during tests and this may cause them to do badly. It is a fact that the people who have previously experienced





the vacant post and to assess his or her ability to do the job properly. Candidates may normally be invited to ask questions about the organisations the job and terms and conditions of employment.

The golden rule of employment interviewing is always to put candidates into a state of mind in which they willingly disclose the maximum amount of information. This state of mind is possible only if candidates are comfortable, at ease and do not feel intimidated. Uncomfortable, ill at ease candidates will not be as frank as those who are relaxed, confident and in full control of their response. Hostile, overbearing interview environments with several interviewers aggressively firing complex questions at a candidate who is left groping for words will not encourage responses that are open and sincere. Candidates are prevented from presenting themselves properly and this will reduce the volume of data on which decision can be based. Everyone feels nervous in tense situations. Since fear is a natural innate reaction to external threat. It signals the need for caution in hostile surroundings. Environments that do not frighten or intimidate enable interviewees to express themselves comprehensively and in uninhibited ways. Thus candidates should be interviewed promptly at the appointed time, or, if delay is inevitable due apologies should be offered. Their reception should be friendly and constructive, with comfortable seating etc.

It is better to plan for what you want from an interview, either use a checklist or make a tentative schedule of the topics to be covered according to order of importance and their sequence.

Begin an interview with friendly, supportive and sympathetic remarks. Use the candidate's completed application form as your introduction to the main body of the interview, but do not ask questions that have already been answered on the form. Rather, seek supplementary information to probe the candidate's potential for effective performance in the advertised post. An interview is a matching exercise, comparing job requirements with a candidate's attributes. Checklists, can usefully be devised to guide you through the interview and remind you of the attributes that you are seeking. It is better to assess candidates immediately after their interview and not at the end of a long interviewing session. Important points arising from the early interviews will by then have been forgotten and the last one or two people interviewed might thus be placed at an advantage.

Open ended questions such as 'what made you decide to do that?' or 'why did you enjoy that type of work?' are usually more productive in obtaining information than direct queries. Generally worded questions invite the candidate to discuss feelings, opinions, and perceptions of events. Simple 'yes/no' questions will not draw out the candidate's views. Much of the skill of interviewing lies in listening—interviews should be discussions, not interrogations. Tell the candidate precisely what information is required, and give us much time as is necessary for a comprehensive answer. It is advisable to avoid critical or insensitive remarks during the interview.

Act naturally when interviewing—remember that the person you appoint has to work with you as you are, not as you transitorily appear during the interview. Avoid the aggressive question; it serves only to intimidate and prevent the free flow of information. Candidates naturally feel nervous during interviews. It is unfair for interviewers – who control the situation, are on their home territory and are not subject to stress – to harangue and harass distressed candidates. The deliberate creation of stressful environments, you might argue, is justified if the vacant job involves stress. But the ability to handle an aggressive interview proves only the candidate's ability to handle an aggressive interview, it does not necessarily reveal the capacity to cope with stress and aggression outside the artificially constructed interview situation.

Inquiries should not be put in the forms leading questions, i.e., suggesting a specific answer.

Using the questions and answers as guides, a progressive evaluation can be made of information, obtained during the interview, co-related both with data previously gathered about the person, and his experience during the interview. Thus the primary function of a selection interview is to complete or correct the picture outlines of which are drawn up, in other selection procedures. Details of personality are filled in during an interview depending on the impressions gathered, by use of objective standards and tests, etc.



Moreover, since the terms 'factory', 'Industrial establishment', 'worker', 'workmen', 'industry', etc. have been used in various Acts and Rules in different contexts, one has to be careful in understanding their implications before recruitment for any type of employees.

For instance, the definition of 'workmen' under the Industrial Disputes Act, may be studied carefully.

"Section 26(s) – "Workman" means any person (including an apprentice employed in any industry to do any manual unskilled, skilled, technical, operational, clerical or supervisory work for hire or reward, whether the terms of employment be express or implied," ..... but does not include any such person .....

- (i) who is employed mainly in a managerial or administrative capacity; or
- (ii) who being employed in a supervisory capacity, draws wages exceeding one thousand six hundred rupees per mensem; or exercise, either by the nature of the duties attached to the office or by reason of the powers vested in him, functions mainly of a managerial nature".

It may take epitomes to describe the implications of such an all pervasive definition. Suffice is to mention that the history of Industrial jurisprudence for the last more than four decades includes innumerable disputes as to who is a 'workman' entitled to the protection of law, and security of permanent employment, in spite of serious misconduct and disciplinary action, and who is out of its purview. These laws apply even to Government employment, Railways etc. excluding only the members of the three Armed Forces, and the police, but disputes and strikes take place even there.

The ambit of this definition is so wide, that all staff and officers in any establishment can be covered, except the top management. While realizing the grave implications of recruiting all categories of workers, staff and supervisors etc. (except top management personnel), it is also necessary to comply with the provisions and rules under the "Employment Exchange (Compulsory Notification of Vacancies) Act," 1959, as amended, which applies to all establishments including factories and offices etc. in both public and private sectors.

This law casts an obligation on all employers to notify all vacancies in all establishments to Employment Exchange, but does not impose an obligation to recruit through Employment Exchanges in private sector only. While it is compulsory for Government and public sector (including government companies, corporations, as also co-operatives and local authorities) to recruit from among those referred by Employment Exchange up to a certain stage (excluding senior officers or management personnel). Similarly, the Apprentices Act, 1961, as amended, from time to time, makes it compulsory for all employers to take a number of apprentices in specified trades, e.g. engineering factories etc.

This Act provides for regulation of training of apprentices in designated trade and the Apprenticeship Advisor notified by Central or State Govt. may require an employer to engage a specified number of Apprentices, according to a prescribed ratio of workers to apprentices, who will be treated as trainees. Still the provisions of health, safety, and welfare prescribed under the Factories Act, 1948, as also the provision of the Workman's Compensation Act, 1923, will apply to an apprentice or trainee in case of an accident or injury. It may also be noted that an apprentice is also covered by the definition of 'workman' under the Industrial Disputes Act, 1947, and the Industrial Employment (Standing Orders), Act 1946, and thus gets the protection of these laws and rules.

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## 8.9 SUMMARY

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In this unit we have briefly discussed recruitment process and policy. Beginning with explaining the importance of human resources as an important asset of the organisation, essentials of the policies and various processes have been outlined. Selection and recruitment methods have been discussed adequately followed by selection process, test and interview. These points have also been discussed briefly

in an earlier course i.e., MS-2 on Managing Men, you may refer to Unit 5 of the course on Recruitment, Selection and Induction in Block 2 : Employee Selection, Growth and Productivity. The unit ends up discussing compulsions imposed by government laws and rules, as this knowledge is essential for every manager and supervisor in India.

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## 8.10 FURTHER READINGS

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## UNIT 9 INDUCTION AND PLACEMENT

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### Objectives

After going through this unit, you should be able to:

- creating a favourable impression on a new employee for the organisation;
- promoting right kinds of attitudes towards the organisation in other employees;
- facilitating learning right methods for performing the job;
- developing a sense of belonging to the organisation;
- including a spirit of team work; and
- clarifying terms and conditions of employment to a new employee.

### Structure

- 9.1 Introduction
- 9.2 The Importance of Proper Induction
- 9.3 Induction Process
- 9.4 Induction Programme
- 9.5 Need for Appreciating Escalating Costs and Legal Regulation in India
- 9.6 Placement
- 9.7 Induction as an Integrated Part of Training
- 9.8 Summary
- 9.9 Further Readings

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### 9.1 INTRODUCTION

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As soon as an employee is recruited the first step relates to induction or orientation. Attempts are made to introduce him to his job, his fellow workers and his surroundings.

Induction or orientation may be defined as a process of guiding and counselling the employee to familiarise him with the organisation and his job situation. This exerts a marked influence on his job tenure and effectiveness.

The induction process accomplishes several objectives including formation of a favourable impression of the organisation, attitude development, the feeling of belonging, facilitation of learning and teamwork with other employees. It minimises employee grievances frustration and turnover as also helps in the attainment of numerous training objectives.

The induction programme clarifies the terms and conditions of employment, communicates specific job requirements to the employee and provides confidence in the company as well as in their own ability to accomplish the work assigned effectively.

As regards the contents of the induction programme, it embraces a wide range of items usually embodied in the employee handbook or manual. The contents of the induction programme should be predetermined in the form of checklist specifying the topics to be covered. Attempts should be made to follow-up and assess the programme by interviewing the new employees as a measure to correct the gaps in the knowledge and attitude of the employees.

Explicitly, induction is a line responsibility supported with staff advice and guidance. The Supervisor, foreman or Manager should be trained in the induction process, and care has to be taken that he does not entirely delegate this crucial responsibility to fellow workers. The Personnel Department should be made responsible for training the Manager, Supervisor, or foreman in this respect, and evaluating the programme periodically. Several induction methods can be used depending upon the needs of the organisation. It may, however, be noted that specific methods are effective for specific category of employees which should be determined through intensive research programmes. Several methods of training can be effectively employed for inducting new employees.

## 9.2 THE IMPORTANCE OF PROPER INDUCTION

Induction is the process of introducing new recruits to an organisation and explaining their role within it. It usually begins with a guided tour of the building etc. Induction is important because impressions gained by new employees during this period can influence their perception of the organisation for many years to come. Also, good induction procedures help employees fit into strange and initially uncomfortable environment quickly and without fuss. Newcomers invariably join the organisation wanting to succeed. They wish to do a good job, to be accepted by their colleagues, and generally to become part of the organisation. Induction procedures should help recruits achieve these objectives.

It may be regarded as a positive step, as distinguished from the negative weeding out unsuitable candidates during selection. Placement means the assignment of specific jobs to individuals, and their adoption or assimilation in the working team or family. As a matter of fact, induction is the process by which effective placement is accomplished.

The term "induction" means installation or initiation. The new recruit is installed into a position or job, and initiated into the team that makes up the work-force of the organization.

The process of initiation may be informal, as it generally is in smaller organizations; while in larger organizations it included a services of steps by which a new recruit is aided in fitting into the organization, becoming acquainted with supervisors and fellow employees, and achieving a personal adjustment to working relationships. The first weeks/months involve extensive and difficult problems of personal adjustment, especially for new employees. The whole situation with its time-keeping schedules, new supervisors, informal social systems, hostile group behaviours, social structures, work-load, internal cliques and possible favouritism and vested interests is likely to be very different from earlier experience; and therefore it is a difficult one.

Policy on induction and placement simply proposes that new recruits shall be made to feel and develop themselves as a part of the organization as early as possible. It may involve several steps:

- a) Apart from a guided tour of the premises, it would need formal/informal introduction to supervisors, fellow workers, adopting right methods of performing the job assigned etc.
- b) It may require vocational guidance; for the particular job or trade, or skill or profession, due to either change of job or technology, or environment, to facilitate his absorption into the organization.
- c) The guidance process requires careful balancing of interests and aptitudes of individuals against long-term prospective job-requirements. Those who are made responsible for providing such guidance need the same skills in assessing aptitudes, interests, and related traits that make up human personalities required for effective selection.

### Induction of New Employees Checklist

New employees need certain information to help them settle down and become effective quickly. Induction should be started off in the personnel department, where new employees should be received on their first day at work. Department managers have a responsibility to ensure that their initial training is continued in the workplace. Since a new recruit cannot be expected to absorb all the information he needs in one day, the induction process may take place over a period of two or three days and should be completed by the end of the first week. The extent of induction will depend on the experience or seniority of the new recruit

### 9.3 INDUCTION PROCESS

Initial induction is best undertaken by the manager or supervisor. The recruit should be introduced to the people whom he or she is to work (write their names down on a piece of paper and give it to the recruit-names are quickly forgotten on the first meeting) and to the person to whom the recruit is responsible. This latter individual should be instructed to help the recruit in every way possible and to be a friend and adviser during the newcomer's first couple of week/months. The recruit should feel free to approach this person at any time in order to seek guidance on any problem. Arrange to see the recruit at the end of his or her first day, and again at the end of the first week to discuss progress achieved during induction.

A good induction procedure causes the recruit to feel part of and committed to the organisation and to be partly socialised into its working methods, norms and interpersonal relations. The newcomer should understand the internal communication system and be able to find things out independently. Often, new jobs are associated with new and unfamiliar travel and work routines, new relationships and possibly a change of home and thus might create high levels of anxiety. Recruits can easily feel bewildered and unwanted by the existing staff and much sympathy is needed during this potentially harrowing experience. Adapting to new circumstances and rational decisions can only be taken after a reasonable setting-in period has elapsed.

Recruits need to know where they should go for help if they experience problems. A new entrant should be told what to do if he or she:

- has a problem with money or understanding the wage/salary system;
- has a medical problem;
- feels that working conditions are unsafe or unwelcome;
- does not get on with other people in the department;
- has difficulty with the work;
- is bullied or harassed;
- has a complaint;
- does not receive adequate training.

The problems are lack of time for transmitting this information and the unsuitability of the environments in which induction sometimes take place. No one is capable of absorbing large amounts of (perhaps uninteresting) information in one go, so induction should be staggered. Try to make the recruit feel welcome. Do not repeat points already made at the interview or in the written job-description circulated to candidates at the time of application; expand on the information the newcomer already possesses. Explain the organisation-structure the recruit's duties and responsibilities, training and promotion opportunities and so on. At some point you will have to explain expected performance and quality standards and the norms of behaviour and protocol already established within the organisation. Some organisations issue staff handbooks to employees which detail general health and safety matters, security arrangements, performance appraisal systems, formal grievance procedures, etc. These manuals are particularly suitable for mundane and infrequently encountered problems such as leave, salary scales, gratuity, etc. but not for other more urgent issues such as discipline, overtime requirements and (importantly) the whereabouts of fire exits, fire fighting equipment, firstaid facilities, protective clothing, etc.

#### Activity A

Does your organisation have an induction programme for new recruits? If so, examine the content of the programme, how long it lasts and how useful new recruits find the exercise.

The nature and the duration of the programme will vary from firm to firm. Large firms may arrange for all new recruits to be brought together for a half day, one day or even one week in the training department. It is good practice, in all organisations, to place a newcomer with an experienced member of staff, who can give guidance on procedures etc. and offer support.

The objective of any good induction programme is to help the new recruit to settle into his/her new environment.



## 9.4 INDUCTION PROGRAMME

The following activities should be undertaken by the personnel department and the department in which the new recruit is placed in.

### In the Personnel Department

- 1) Welcome to the organisation.
- 2) Receive any other necessary documents and informations (e.g. details).
- 3) Explain what the company does, its history, and his own place in the group.
- 4) Describe to him the work of the new employee's department, and its relationship to other departments.
- 5) Give the new recruit a company employee's handbook (if one exists).
- 6) Drawn his attention to the rules that need particular emphasis.
- 7) Where appropriate or necessary explain the trade union position in the organisation.
- 8) Employee welfare refer to the retirement benefits, pension and life assurance scheme and any other scheme that he should know about (e.g. sickness benefit; suggestion scheme).
- 9) Ensure that he knows the correct hours of work, rate of pay when payment can be expected and sickness and holiday entitlement.
- 10) Explain the importance of regular attendance.
- 11) Indicate the sort of training that the new employee will receive and his career prospects.
- 12) Answer questions, that an employee may have.
- 13) Take the employee on a brief tour to give an impression of the work of the organisation ending in his department. Hand him over to his manager.
- 14) N.B. A prepared flip-chart showing the sections of the organisation etc., is useful to induction.

### In the Department

- 1) Welcome to the department
- 2) Explain the work of the department
- 3) Explain what the employee will be doing.
- 4) Ensure that he knows:
  - a) The relevance of his & his department's works to the organization.
  - b) The organisations' goals & policy
  - c) The procedures.
- 5) Explain the importance of safety, go through any safety rules that apply, explain what to do in the event of an accident and if there is a fire.
- 6) Introduce the new recruit to the person with whom he will be having training.
- 7) Introduce the trade union representative, where appropriate.
- 8) Introduce other members of the department.
- 9) Start the employee's job-training as appropriate.
- 10) During the first day, check that the employee is progressing satisfactorily.

- 11) At the end of the second day, sit down with the trainee, discuss progress, ask for and answer question.
- 12) On subsequent days, check progress at least once, and at the end of the first week have a through discussion to ascertain whether he is grasping the job, and is satisfied with the organisation.

The induction should be appreciated as a complex process. It cannot be properly concluded with a short orientation programme. Perhaps rapid-fire injections of a concentrated dose of information may not be effective. As the employee picks up on his new job, he may have many questions which he may hesitate to ask in the beginning. Hence the process of induction has to be continued for several weeks or months. The follow-up is a continuing procedure of great importance.

Starting with preliminary counselling interview, many large organisations provide a number of formal orientation sessions, lectures may also be supplemented with literature and also audio-visual programmes such as charts, pictures, slides and films etc.

The induction procedure and orientation problems are more complicated when new employees are to be posted to other offices or branches throughout the country, as the case may be in sales etc.

Induction is not complete without a follow-up which is essentially an audit of the entire procedure, and an appraisal of the success with which a new employee becomes adjusted to the organisation.

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## 9.5 NEED FOR APPRECIATING ESCALATING COSTS AND LEGAL REGULATION IN INDIA

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It appears that barring a few multinational companies/institutions who follow their parent company practices, scientific methods of regular induction and proper and careful placement of new employees is virtually unknown in most Indian organisations. The government, semi-government and public sector and other autonomous organisations spend large sums of money on advertisements, and selection, but after recruitment, new employees are just left on their own to grope their way into the dark and long alley's of huge monolithic organisations, where they are at the mercy of often ill equipped, nonqualified and mostly prejudiced old supervisors and managers.

In this context, the case of a large public sector corporation come to mind which has five factories all over India. A huge government company employing about 25 thousand employees in five factories and a dozen offices. It was enthused with the idea of recruiting first class qualified engineers and Managements graduates to streamline its managerial cadre. Huge advertisements were issued in many All India newspapers, thousands of applications were received, and a firm of psychologists was employed to test and screen and short list most suitable few score candidates, who were interviewed and selected by a high powered selection committee at seven main metropolitan centres. All this entailed an expenditure of many lacs of rupees in terms of fees to consultants, stationery, paper and postage costs, travelling allowances etc., not to mention the tremendous time and other costs incurred by more than a dozen senior managers and directors of the company. The total direct cost of recruiting and engineer worked out to about Rs. 50,000/- per head on a rough estimate and about 150 were recruited and asked to join. More or less the same story is repeated in huge public sector corporations like steel plants and other large organisations.

However, the net result of this costly exercise was that 60% of the new recruits left within 2/3 months of joining since the organizational climate was hostile, employment conditions were inadequate and irksome, the old supervisors and managers were inimical to these highly qualified engineers since they perceived them as a threat to their huge money of mismanagement, and no induction programme was drawn up. Most important of all, the organisation was already overstaffed with nonqualified supervisors and managers, and they could not be responsive to any change.

More or less the same story is repeated in most public sector undertakings.

In the government departments, the case can be worse.

In private organisations, barring a few companies, which may be exceptions, nobody has the time to devote to such unproductive (in their view) activities. The personnel man cannot do much in the absence of cooperation from the line managers and staff.

Through there is acute dearth of properly trained people, who can be deliver the goods, most organisations are either unaware of the need for organising proper induction and placement programmes, or think it is an unnecessary expenditure.

Without proper induction and training an employee can be only partially productive in his assigned job.

### Probation

Apart from all these, more important in the Indian conditions are the legal regulations, which require that after usually the probation period which is 15 days in employment in factories, and 3 to 6 months in other establishments, an employee shall be automatically permanent. In initial employment, within the probation period, which is not more than 3 to 6 months, if a new employee is not found suitable he can be discharged. But after the completion of the probation period he/she becomes a confirmed employee, and if turns out to be unproductive, becomes a liability to the organisation.

The discharge of an employee after his completion of probationary period, is an extremely difficult task, and involves all the steps of disciplinary action, as laid down under the Industrial Disputes Act, which is very cumbersome, time-consuming and frustrating exercise, and if there is any deficiency in following the procedure according to the letter of law at any stage, it can give rise to an industrial disputes which can run into courts for a many many years, involving the organisation in a lot of costs, as well as sometimes contributes to loss of face, since discharged employees are either reinstated or have to be paid compensation for years. The main law having a bearing on this are the standing orders, which have to be framed by the employees and certified by the State or Central Labour Authority and which have statutory force under the Industrial Employment (standing orders) Act, 1946. In India this takes place of a contract of employment.

Moreover, any discharge can give rise to an Industrial Dispute, even by an individual under the Industrial Disputes Act, which under its definitions of "Workman" covers most of the employees and supervisors as explained earlier.

After initial selection and recruitment, in order to train a new recruit to become productive and efficient, proper induction and placement are two very important stages which have to be planned and implemented carefully.

In most establishments/organisations the above Industrial laws and rules are applicable, and it is imperative to take note of the relevant provisions of laws and rules before adding new employees to the work-force.

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## 9.6 PLACEMENT

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Placement or actual posting of an employee to a specific job has an experimental element in it, for most employee is a decisive step. The department head/supervisor should be able to accept him as there is sufficient reason to think that the new recruit can do what the job demands, (job requirements) imposes (in working conditions, strain etc.), and offers (in the form of pay, job-satisfaction status, companionship with fellow workers, and promotion prospects) etc. Though it is very difficult to match all these factors, yet both the personnel department, and the line-staff have to co-operate to achieve it.

For reasons of the new employees' compatibility and his acceptance by the line, he is usually put on probation for a specified period during which he is on trial. It may vary from few weeks or months, and sometimes a year or two as in government.

However, in case during this trial period he is not found acceptable to the line department, he may again be interviewed by the personnel department to explore the possibilities of fitting him into another job, which may be more suited to his

qualifications, aptitudes, or previous experience. Such a second placement is sometimes known as "differential placement", which is becoming more relevant in this country also due to rising costs of recruitment and selection, and obeying employees attitudes, with the spread of higher and better education, and fast developing higher standards of living.

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## 9.7 INDUCTION AS AN INTEGRATED PART OF TRAINING

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As a matter of fact, a properly planned and executed induction programme, forms an integral part of training. The test of follow-up of the new employee lies in the assurance of his and adjustment into the new surroundings, and environment. If the line department/supervisor has taken proper and constructive interest in the new employee, his fitness and acceptability to be a member of the working group/team in which he has to work, is assured.

If this task is viewed by the Industrial psychologist or the sociologist it is likely to be described as a problem in assimilation, which a supervisor may call "team work". The management and supervision should have sensible concern for proper induction of the new worker to produce desirable results in the attitude of the new employee, which is the ultimate aim of training.

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## 9.8 SUMMARY

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This unit explains the importance and need for proper and systematic induction of a new employee in the organisation. It also outlines the process and the need for methodical induction programmes, since they are in a way preliminary to "training". It points out that the escalating employee costs, and legal regulations in India make it imperative to exercise due care in the first few weeks or months, since after the probationary period an employee becomes a permanent member of the organisation.

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## 9.9 FURTHER READINGS

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# UNIT 10 PERFORMANCE AND POTENTIAL APPRAISAL

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## Objectives

After going through this unit, you should be able to :

- understand the need for performance appraisal;
- appreciate importance of performance appraisal;
- learn about performance appraisal methods and procedures;
- adopt result-oriented interview methods;
- realise the need for selection and training of appraisers;
- appreciate the difficulties in the Indian context.

## Structure

- 10.1 Introduction
- 10.2 Types of Performance Appraisal
- 10.3 Objectives of Performance Appraisal
- 10.4 Essential Steps in an Appraisal Programme
- 10.5 Appraisal Process
- 10.6 Methods of Performance Appraisal
- 10.7 Appraisal Interview
- 10.8 Improving the Appraisal Procedures and Forms
- 10.9 Managers should discuss Review with Employees
- 10.10 Potential Appraisal and Review
- 10.11 Self-Appraisal and Peer-Group Evaluation
- 10.12 Some Problems in the Indian Context
- 10.13 Summary
- 10.14 Further Readings

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## 10.1 INTRODUCTION

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Though Scientific Performance appraisal began as a corollary to management by objectives (MBO), today many organisations that do not operate MBO, still have performance appraisal programmes. In performance appraisal Managers opinions of subordinates work are stated openly and officially and may be challenged. Managers frequently make ad hoc judgements about employees, but are loath to discuss the grounds on which they are based. Performance appraisal replaces casual assessment with formal, systematic procedures. Employees know they are being evaluated and are told the criteria that will be used in the course of the appraisal. Indeed, knowledge that an appraisal is soon to occur could motivate an employee into increased effort aimed at enhancing the outcome of the assessment. Other advantages of performance appraisal include the following:

- It generates useful information about employees and the true nature of their duties. Unknown skills and competencies might be uncovered. This data can be incorporated into an organisations human resource plan, and hence assist in avoiding compulsory redundancies, in career and management succession planning and in identifying needs for training and staff development.
- Managers and subordinates are compelled to meet and discuss common work related problems. Appraisees become aware of what exactly is expected of them, and of their status in the eyes of higher authority. Since performance appraisal forces superior and subordinate jointly to investigate problems, it guarantees the participation of lower graded employees in matters that affect their working lives. Subordinates should be better motivated in consequence of such involvement.
- Performance appraisal monitors the feasibility of targets set in management by objectives programmes. Feedback to higher management on problems encountered when implementing policies occurs. It creates a cheap and effective early warning system within the organisation's management information structure.

Fresh targets discussed with and endorsed by subordinate are established for future. The importance of performance appraisal as a valuable and indispensable function in the human resource development programmes has to be properly understood and appreciated by managements. Four main generic functions are performed by human resources development systems in organisation: selection, appraisal, determination for rewards, and development. These four functions reflect a sequential set of management activities that are important in terms of augmenting productivity of human resources. From this perspective, performance is the central value that management tries to inculcate.

Performance is a function of:

- determining job criteria and selecting those individuals who will be best able to perform the required organisational tasks;
- motivating employees through reward systems in appropriate work climates, and;
- developing those employees by improving their job skills and preparing them for higher responsibilities.

The key to adequate employee-selection, motivation, and development are comprehensive matching processes that are capable of providing valid information about employees. From this perspective, the appraisal system is recognized as the crucial human resources activity. The primary functions are:

- 1) To define the specific job criteria against which performance will be measured.
- 2) To accurately measure past job-performance.
- 3) To justify the rewards given to individuals, thereby discriminating between high and low performance.
- 4) To define the development experience the employee needs to enhance performance in the current job, and also prepare for future higher responsibilities.

In the process of fulfilling these four purposes, a well designed appraisal system would also provide, at an aggregated level, a profile of the organisation in terms of its human resources strengths and weaknesses, an inventory of employee's skills and experiences, and an evaluation of the firm's human resources capital.

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## 10.2 TYPES OF PERFORMANCE APPRAISAL

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The main types of appraisal scheme can be broadly divided into group-based schemes and individual-based schemes. Group-based schemes fall into the following categories:

- 1) Management group appraisal
- 2) Staff-group appraisal
- 3) Committee appraisal
- 4) Peer appraisal

In the management group appraisal a manager and two or more others at his level can appraise the manager's subordinate. Such a scheme can eliminate personal bias and, by bringing a broader perspective to bear on the appraisal process, it can result in a balanced evaluation based on several opinions. On the other hand these advantages may be offset by too much time being wasted in attempts to get a number of busy people together on several occasions. This could bring out some key points of performance, noticeable only to a superior, being overlooked in everyday routine.

The staff group appraisal is becoming increasingly common with the rise of the specialist "Management Development Executive". In such a scheme, the staff man regularly sits in with a group of managers appraising subordinates, and coordinates and associated records and other paperwork. The staff group type of scheme can have several advantages. By having an 'outsider' present to coordinate the procedures, the element of proposal bias in the appraisal is likely to be reduced. In particular, if the staff man asks questions of the appraisers the whole process will be more comprehensive and this should lead to a more balanced evaluation than might otherwise be the case. The main disadvantage of this type of scheme is that the staff man may play too prominent a role and thus management will not consider appraisal as part of their job but rather as another personnel gimmick!

Committee appraisal and peer appraisal are less common types of group-based schemes. The committee appraisal is one where the same group appraises all the members of a subordinate group. The advantage of this approach is that it provides an opportunity for uniform comparisons. It is, naturally, more appropriate in those situations where most of the people being appraised are doing the same type of job. The major disadvantages are that it can detract attention from the individual and hence place less emphasis on development than other types of schemes.

The superior/subordinate appraisal is one of the most common types of appraisal scheme. It consists of the superior directly and singly appraising his subordinate (e.g. Annual confidential reports in Govt.) Recognizing the fact that in any organisations this is a regular process, regardless of any formal scheme, where it is formalized it has certain advantages. It is economical in time, it can be kept confidential and it should lead to a clearer understanding between the Manager and the subordinate. On the other hand, it can often be influenced greatly by personal bias, and recent events, good or bad, can more easily influence opinion than would be the case if a number of people were bringing their judgement and experience to bear on the appraisal.

A Multiple appraisal can, to some extent, overcome this danger of personal bias, since it requires several people at the same or different levels of responsibility to appraise an individual separately. The results are coordinated by a staff specialist and then sent to the manager concerned for him to consider the appraised subordinate. However, the lack of an opportunity for discussion can lead to an unbalanced appraisal.

It is important that the manager should share his responsibility for manpower development with others. He can be greatly assisted by staff specialists, provided that it is recognised that the responsibility cannot be fully delegated to the staff man. The two-level appraisal has the merit of sharing the responsibility, since the employee is appraised not only by his manager but also by the next in line above. However, many schemes do not sufficiently involve the most important person in the appraisal and development process be the employee being appraised.

If a scheme is to make a real contribution to self-development, then it is necessary from the outset that it be planned to involve the employee in the various stages of the appraisal process and the determination of the appropriate action required to assist him in his development.

### **10.3 OBJECTIVES OF PERFORMANCE APPRAISAL**

The aim of most performance appraisal programmes is to encourage the employee to set up his own objectives for the next time period—following the review of his past performance, in order to improve his performance on the job. These objectives should be mutually agreed; for the next twelve months. As far as possible, every employee should be made aware of the organisations objectives, since these provide a basis for the individual's performance objectives. The other basis is the aspirations and wishes of the employee himself. A knowledge worker wants a larger say in how he should perform. In order to set worthwhile objectives, it is necessary for both manager and subordinate to be clearly aware of three aspects of performance:

- the main aim to be achieved;
- the key tasks in achieving the main aim;
- the results which have been achieved.

The main aim of a job is what the employee is paid to do, be it production planning, selling products or maintaining accurate accounts or doing some other types of job in an organisation.

The key tasks in achieving the main aim should have been fully considered at the time of completing the Performance Review Form.

Similarly, the results which have so far been achieved should have been rated above or below the required standards. The completed form, therefore, provides a guide to job-objectives in terms of developing current performance and potential.

Performance objectives will be of three main types:

- remedial objectives;
- developmental objectives;
- innovative objectives.

Remedial objectives are those which are aimed at improving performance which is not up to the standard required. The extent to which such objectives should be encouraged will be dependent on the number and nature of the needs which have been recorded on the review form and discussed at the interview.

These objectives are often the easiest to set, but as they are mainly concerned with getting performance up to par they should not be the limit of objective-setting at the interview/discussion.

Developmental objectives may relate to the current job or to a forthcoming job. In some cases they will involve reinforcing the strong points which the individual has displayed in his performance; in others they will require the acquisition of new skills and knowledge to cope with future challenges. Such objectives should 'stretch' a man, but should not be unrealistic and impossible to achieve. These developmental objectives should be one of the main instruments used by a manager to stimulate the growth of his subordinates.

Innovative objectives are the most difficult to set but can bring the greatest rewards to the individual and his organisation. Such objectives are designed to discover ways of dealing with a new task or to develop better ways of dealing with existing tasks.

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## 10.4 ESSENTIAL STEPS IN AN APPRAISAL PROGRAMME

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As in most other personnel programmes, performance appraisal forms a line responsibility to be accomplished with advice and help of the personnel department. Indeed, the appraisal programme is likely to be an utter failure if it lacks the support of top management, if supervisors are not adequately trained or have no trust in its value, if the results of performance appraisal are not discussed with the subordinates, and if the appraisal is not used to serve the purposes it is meant for. Therefore, several steps may be taken to develop and administer the programme effectively:

- 1) The personnel department should attempt to obtain the agreement of line management in respect of needs and objectives of the programme. A choice has to be made among different kinds of appraisal methods judiciously.
- 2) The personnel department has to examine the plans of other organisations as well as the relevant literature in the field to formulate the most suitable plan for the appraisal programme.
- 3) Efforts should be made to obtain the cooperation of supervisors in devising the appraisal form and discuss with them different factors to be incorporated, weights and points to be given to each factor and descriptions or instructions to be indicated on the form.
- 4) The personnel or industrial relations manager tends to explain the purpose and nature of the programme to all the superiors and subordinates to be involved and affected by it.
- 5) Attempt has to be made to provide intensive training to all the appraisers/supervisors with a view to obtaining unbiased, uniform appraisal of their subordinates.
- 6) Care may be taken to acquire line and staff coordination and mutual checking of appraisals with a view to achieving intra-and inter-departmental consistency and uniformity.
- 7) There should be an arrangement for periodic discussion of the appraisal by the superior with each of the subordinates where attempts may be made to stress good points, indicate difficulties and encourage improved performance. Explicitly, in this context the discussion should be in the form of a progress review and every opportunity should be given to the subordinate to express himself, if he feels that the appraisal has been biased and that it should be otherwise.



- 8) As soon as the appraisal has been fully discussed, attempts may be made to recommend for salary increases or promotion, if these decisions seem plausible in the light of appraisals.
- 9) There should be provision for challenge and review of appraisals if the employees or their union representatives are dissatisfied with the personnel decisions which the management has taken on the basis of these appraisals.

## 10.5 APPRAISAL PROCESS

Perhaps the least liked managerial activity is doing the annual performance appraisal. The activity is often only a perfunctory paper exercise. Performance appraisals are like seat belts; everyone agrees that they are important and that they save lives, yet no one uses them. Similarly, the problem with appraisal systems includes poorly designed procedures, a psychological resistance of the managers to give negative evaluations, and a perceived invalidity. The appraisal system, nonetheless, is central to human resource management. It contributes to three essential processes:

- 1) Rewards can be allocated in relation to performance only through the use of an appraisal system by which performance can be measured. Such appraisal systems range from subjective personnel evaluations to impersonal criteria based on profitability, productivity and other quantitative measures.
- 2) Human resource planning relies on valid appraisals. A current inventory of talent can be made only through a valid appraisal process that shows those who have been performing well, those who have not. In addition, future human resource projections must be based on an assessment of the potential of the employees, which is indicated by the appraisal process. Without the data provided by a valid appraisal, such forecasting is impossible, as there is no basis for making predictions.
- 3) The development process is also built on the appraisal process. Based on an assessment of an individual's performance and potential, both the individual and the organisation can plan for future training and development. A weak database may lead to a hit or miss training program and retards development process.

### Performance Appraisal Process

Some Social Psychology Researchers think that performance appraisal has three basic functions. Firstly, it seeks to provide an adequate feedback to each individual on his or her performance. Secondly, it purports to serve as a basis for improving or changing behaviour towards more effective working habits. Thirdly, it aims at providing data to managers with which they may judge future job assignments and compensation. However, the existing systems of performance appraisal do not serve any of these functions effectively and focus on behaviour, but on outcomes of behaviour.

## 10.6 METHODS OF PERFORMANCE APPRAISAL

The narrow interpretation of performance appraisal is considered as a post-mortem of a subordinate's performance by his superior during a predetermined period of time; often, the preceding year. It involves assessment of performance vis-a-vis specified criteria or in terms of a particular method of rating. This is pretty common in government in the form of "Annual Confidential Reports", and also in public sector industries. However in private industry, more systematic performance appraisal, also called merit-rating or employee-rating in some organisations, has been developed to some extent. These appraisals are often needed as a basis for selecting candidate for promotion to better jobs, (hence sometimes called "potential appraisal") or giving merit increases in pay.

Formal appraisal programmes reduce the element of favouritism and snap judgments in promotion decisions by managers. Appraisal is exclusively subjective, but it should be based on a review periodically against specified factors.

Performance appraisal is ultimately a line responsibility, but should be planned with right advice and assistance from the personnel department. It may be necessary to

provide some training to managers and supervisors before they appraise their subordinates in order to get unbiased and constructive evaluation.

Maximum line and staff coordination, and mutual checking and consultation at each stage of performance appraisal process is necessary.

Performance Appraisal Reports are historical in nature. They analyse periodically an employee's past activities with a view to improving future performance. A review will investigate the appraisee's personal strengths and weaknesses and seeks to discover fresh opportunities for improving efficiency. Reasons behind successes or failure are discussed and the factors preventing better performance are identified. There are three major methods of appraisal; the free report, the checklist and the analysis of critical incidents. The first requires assessors generally to evaluate the employee's overall performance without going into detail over specific issues. The appraiser writes in effect an essay about the subordinate, structured in form, length and using criteria selected by the appraiser. Alternatively, an outline structure may be imposed, with suggested headings for such things as technical competence, communications ability, willingness to cooperate with others etc. to direct the appraiser's thoughts and comments. Although a request for a free report compels a supervisor to think seriously about a subordinate's qualities, and although the appraiser can concentrate on those aspects of the appraisee perceived to be most important to his or her work, difficulties remain.

- many managers have difficulty in translating thoughts about a subordinate into a formal written report; they might have forgotten about important aspects of the subordinate's past performance.
- managers are busy people, and might leave undone or treat superficially this time-consuming and troublesome activity,
- the chosen criteria might be ill-defined or inappropriate, so that comparisons between the performances of one subordinate and others are impossible.

The second method requires the assessor to report on each of several characteristics mentioned on a predetermined checklist in respect of each subordinate. Headings for assessment could include punctuality, reliability, enthusiasm, productivity, speed of work, accuracy of work and so on. Often, however, assessors rate nearly everyone as average for most categories. Thus the system might insist that only a specified proportion of evaluations be placed in central categories. The scheme may require that assessors award scores from one to ten for each. Attribute or assessors might allocate workers to various grades of ability (for example : poor, below average, above average, outstanding). Alternatively, assessors may be asked to place a tick alongside one of a number of statements about the appraisee's ability in a certain area. For example, in evaluating an employee's initiative, assessors might select from the following range :

- always needs to be told what to do
- frequently asks for instructions
- requires supervision only occasionally
- rarely requires supervision
- never requires supervision
- offers new ideas, initiates activity.

Without doubt, a prepared list of headings associated with a rating scale that requires the manager merely to place a tick in a box enables appraisals to be undertaken quickly, cheaply and with a minimum of effort on the appraiser's part but the outcomes may not be satisfactory. Hasty completion of such documents might lead to carelessness and unfair assessments and the list of factors considered may not be relevant to the subordinate's work. A vast array of characteristics might be evaluated, yet only some of them should be considered. Office workers for example do not need to be physically strong. Possession of a post-graduate educational qualification is not essential for effective performance in mundane, repetitive assembly line jobs. Apart from the headings for assessment previously mentioned (productivity, accuracy, initiative, and so on), an appraisal form might ask the assessing manager to consider the following attributes and characteristics :

- knowledge, skills and/or formal educational qualifications acquired and/or utilised during the review period,
- abilities to delegate, plan, supervise, establish priorities, assume responsibility, cope with stress, exercise leadership.

- personal qualities : appearance, personality, disposition, enthusiasm, compatibility with colleagues, physical make-up (health strength).
- critical faculties : creativity, judgemental problem solving and decision taking abilities.
- interpersonal skills : verbal and written communication, willingness to accept new ideas, relationships with superiors/subordinates/clients.

## 10.7 APPRAISAL INTERVIEW

As a manager conducting appraisals, he needs to do four things : assess the situation confronting each appraiser, diagnose his or her problems, improve the capacity of the subordinate to improve performance and monitor the success of the action plan upon which they agree. One needs to listen, talk and reassure; use the techniques of counselling (particularly empathy and non-possessive warmth, exude a quiet confidence in ability to help the appraisee).

One should begin the interview with an outline of its purpose and of the assessment criteria the company has chosen to adopt. The discussion should be serious and free from outside interruption. Be friendly : do not threaten, bully or even hint of adverse consequences resulting from the subordinate's behaviour. After some non-controversial remarks designed to put the appraisee at ease. One may offer an opinion of how well he thinks he or she has performed during the review period, focusing on the most positive aspects of the subordinate's work. Then, having congratulated the subordinate on successes achieved, ask whether he or she has any thoughts about how performance might be improved. This, hopefully, will elicit from the subordinate a statement of the problems he or she has experienced without your needing directly to point out that person's inadequacies. If it does not, bring up the topic of poor performance indirectly, concentrating on the issue rather than his or her personal failings.

One should be in a position to be able to diagnose the causes of under-achievement. Do not mention at this stage the potential consequences of continuing poor performance. Instead, root out the histories of specific failures. Ask questions, look for signs of distress or frustration as the subordinate describes particular issues. Always emphasise that your role is to offer constructive support, not condemn or discipline. Give the subordinate lots of opportunities to ask for your help and guidance, to air grievances and discuss anxieties.

Relatively unstructured interviews are probably better for these purposes. The subordinate should be able to challenge the accuracy or relevance of the assessment criteria as well as the fairness of initial target and even your objectives as an assessor. Try to adhere to the following guidelines :

- apply identical criteria to the assessment of each employee in a particular grade. Avoid favouritism, bias and stereotyping (the creation of mental images of certain categories of people,
- and the expectation that all members of these categories will be exactly the same),
- ensure that all information is available and use it all in your appraisal,
- be as objective as you can in interpreting information. Unfortunately managers sometimes interpret data in ways which lead them to conclusions they have already decided to make, seeing only what they want to see, hearing only what they want to hear. Equally, managers can underestimate the difficulty of things they personally find easy and they sometimes notice and magnify in others their own personal faults.

In an ideal situation, more than one assessor would be involved in each appraisal interview. Different managers perceive issues and subordinates differently and a joint assessment would lead to greater consistency in procedures. In practice, however, the overwhelming majority of appraisals are conducted by a single manager, normally the immediate superior of the person being appraised. Immediate superiors should be fully conversant with their subordinates' work. Note that the targets for future activities agreed during appraisal interviews might usefully form an integral part of a department's general action plan. It is essential therefore that the subordinate's

future progress towards achieving these targets be mentioned since unrealistically high targets initially set during performance appraisals will inevitably result in under-achievements.

Appraisal interviewing is difficult. It often involve the discussion of personal matters and, during an interview, both the appraiser and appraisee are likely to adopt roles which differ from the roles they normally adopt. Often, people play psychological games during an appraisal interview. One powerful and increasingly popular mode of analysing role playing behaviour is the method of transactional analysis, introduced in the 1950's by the American psychiatrist E. Berne.

Some researcher's have suggested that less defensiveness and an open dialogue results when the manager splits his or her role as helper from that as judge. This can be done by having two separate performance appraisal interviews : one that focuses on evaluation and the other that focuses on coaching and development. The open problem-solving dialogue required for building a relationship and developing subordinates should be scheduled at a different time of the year than the meeting in which the supervisor informs the subordinate about her or his overall evaluation and its implications for retention, pay, and promotion. Such a split recognizes that managers cannot help and judge at the same without the behaviour required by one role interfering with the behaviour required by the other.

Many performance appraisal systems inadvertently encourage managers to mix the role of judge and helper by providing only one evaluation form that ends up in the subordinate's personnel record. What is needed are two distinct forms and procedures. The evaluation form becomes part of the personnel record while the form that guides the development discussion does not.

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## 10.8 IMPROVING THE APPRAISAL PROCEDURES AND FORMS

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The appraisal interview has multiple objectives. Therefore, it isn't surprising that different objectives are best met by somewhat different interview methods.

**Directive interview :** If the interviews' objectives is to communicate a performance evaluation or pay decision that has already been made the interview should take a more directive form. The manager tells the subordinate what the evaluation is and, to assure the subordinate about its fairness and the process by which it was determined. The manager then listens actively, accepting and trying to understand the employee's reactions and feelings without signalling that the performance evaluations is open to change.

If the manager has already evaluated the subordinate, any attempt to conduct an open and participative dialogue to motivate the subordinate will fail. Such an approach encourages the subordinate to try to influence the manager's rating a move that puts the manager in the position of defending a final decision. In this situation, the subordinate not only has to accept an evaluation that may be inconsistent with his or her self-perception, but may also have to leave the interview frustrated by unsuccessful attempts to influence the manager.

As stated earlier, managers may be drawn into this situation by systems that provide only one form for evaluation. An open dialogue cannot occur because the manager follows the form mechanically in an effort to communicate accurately judgements that he or she has already committed to paper. Corporate procedures that require the manager's boss to review the evaluation before the appraisal interview, only increase the manager's need to defend the rating and reduce even further the likelihood of an open dialogue, & a participative problem solving interview. If the interview's objective is to motivate subordinates to change their behaviour or improve their performance, an open process that includes mutual participation is required. The approach takes the manager out of the role of judge and puts him or her into the role of helper. The objective is to help subordinates discover their own performance deficiencies and help them take the initiative to develop a joint plan for improvement. The problem-solving interview makes no provision for communicating the supervisor's unilateral evaluation. The assumption underlying this type of interview is that self-understanding by subordinates and motivation to improve performance



- 4) performance objectives and personal development plans should be mutually agreed;
- 5) an annual interview is the minimum frequency which should be planned; more frequent interviews are often desirable;
- 6) keep the interview short, private and as uninterrupted as possible.

Hints on 'how to interview' abound. Although these are useful, there is a danger that concentrating on techniques or stereotyped approaches can obscure the purpose of the interview—to listen and then inform, develop and encourage.

The manager should allow a definite period of time for each interview. The actual length will vary considerably, but broadly speaking it should not be less than one hour nor more than two. In some cases it may be preferable to plan for a number of short interviews rather than a single long one.

Selecting an appropriate place will be easier for some managers than others. Every effort should be made to ensure that the interview will not be interrupted. The place selected should be private and comfortable. It should demonstrate to the subordinate the importance which his manager attaches to the interview, but it should not overawe him.

It has always to be kept in mind that improved performance and development are mainly dependent on the subordinate himself. The interview provides managers with an opportunity to stimulate and guide the development.

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## 10.10 POTENTIAL APPRAISAL AND REVIEW

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Current performance as measured by the attainment of results, is not necessarily correlated with potential for promotion. Yet many appraisal systems do not adequately provide for separate evaluations of these dimensions. In the case of a subordinate who rates high in current performance and low in potential for advancement (or vice versa), a manager is placed in the situation of averaging his or her unconscious assessment of these qualities and then defending an evaluation that may be inconsistent with his or her perception and the subordinate's self perception of either performance or potential alone. Even if separate evaluations of these dimensions do not reduce subordinate defensiveness, they can reduce the manager's need to defend a composite rating that he or she cannot justify. Systems that separate assessments of performance and potential increase the likelihood of a constructive dialogue.

The purposes of a potential review are to predict whether an employee is capable of taking on more demanding work and the speed at which he or she is capable of advancing. Potential reviews are necessary to :

- inform employees of their future prospects,
- enable the organisation to draft a management succession scheme,
- update training and recruitment programmes,
- advise employees of what they must do to enhance their career prospects.

The task is to match employee's abilities and aspirations with the firm's organisations' forecast of requirements for managerial staff. A fundamental problem here is the tendency of superiors to assess subordinates according to successes achieved in their current jobs, rather than on their potential for higher level work. Someone who performs quite adequately at one level of management might perform abysmally if promoted to a more senior post. Thus, employees may be promoted on the basis of their achievements in successive jobs to the point where they cease to be effective, and by then they already occupy senior positions where their incompetence causes enormous disruption. Potential reviews should be conducted, therefore, by people who are capable of recognising in others aptitudes for higher management work. Further difficulties arise when selecting the criteria to be used in assessing potential. These criteria should relate to the job specifications of the positions to which those under review hope to succeed.

A negative outcome of a potential review may damage the morale of the employee criticised, and for this reason some organisations conduct such reviews in secret. On

the other hand, knowledge of a negative outcome could stimulate the employee to greater efforts and activities aimed at remedying deficiencies. Also, if the organisations manpower plan does not envisage promotion opportunities for a certain employee, it is really in the employee's own interest to be advised to seek alternative work.

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## 10.11 SELF-APPRAISAL AND PEER GROUP EVALUATION

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Appraisal might be more useful to the subordinate and lead in the long-term to greater efficiency if it is conducted either by that subordinate or by a colleague of equal rank without authority to impose sanctions. Such appraisals may analyse issues more critically than when subordinates fear the career consequences of admitting mistakes. Subordinates state, using any of the methods previously discussed, how they regard their performances, the adequacy of the training they have received, effects of alterations in job content, perceptions of key objectives and future aspirations. They identify their own strengths and account for their failures and weaknesses suggesting ways in which the firms might better use their talents, skills and recently acquired experiences. There are, of course, problems with self-appraisal, including the following :

- many people are quite incapable of analysing themselves. It is unusual for individuals to assess their own competence in other walks of life. At school, college and during the early stages of a career the individual becomes accustomed to being directed and evaluated by others. The transition from appraisal to self-assessor might require skilled and detailed guidance by someone already competent in appraisal techniques. Most appraisees in lower level positions will have received no training in self-analysis or appraisal.
- to the extent that appraisals form a basis for future career development, appraisees might overstate their successes while ignoring their failings.

On the other hand, employees are compelled to think carefully about the adequacy of their contributions, about barriers preventing improved performance, and about their relationships with higher levels of authority.

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## 10.12 SOME PROBLEMS IN THE INDIAN CONTEXT

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As mentioned earlier, in India the compulsions of legal regulations, and the definition of "workman" and "industry", (with their wide coverage) have left very little room for scientific and objective systems of performance appraisal.

It should be properly understood that :

- a) The government and their departments and agencies, public sector and their organisations and autonomous bodies and institutions etc., are the largest employers of manpowers.
- b) The "promotion based on seniority" culture of government has its impact on all other organisations, even in private industry.
- c) All employees, except the managerial one's are covered by the definition of "workman". They have a legal right to question, and raise an industrial dispute on the managements systems and procedures of performance appraisal, assisted by their Unions, Associations and Federations, which they have been doing in the last four decades, taking them to courts.

Since the nineteen fifties, the matter of evaluation and promotion has always been a bone of contention between the employees and employers, though even the Bank Commission Awards as early as 1954 has mentioned that it was not possible to lay down any hard and fast rules for promotion in an Award.

However a large number of industrial disputes over methods of performance appraisal have been raised, and there have been many cases where Industrial Tribunals and courts have gone into such disputes, and given directives to employing organisations interfering with the prerogative of management.

Industrial Disputes have also been taken to the highest court in India. The Supreme Court has held several times that even in regard to promotion to a higher grade, it is desirable in order to obviate any charge of favouritism to devise a scheme for periodical review of employee's work by a properly constituted Board, consisting of a number of members, an employee's representative, an employers' representative from their Union or Association, and an independent officer nominated by government, who should be the chairman of the board.

Similarly the major Engineering Tribunal also made some recommendations. The schemes for promotion in government and public sector have often been disputed, and unions have gone up to the Supreme Court in many cases. In the private sector also, in many companies, matters have gone upto the highest Tribunal or Court year after year. Thus managements rights of performances appraisal have been circumscribed by industrial laws and jurisprudence.

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### 10.13 SUMMARY

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This unit explains various types of performance appraisal and its objectives and various steps involved in an appraisal programme. Further the process and methods of performance appraisal have been explained in length. It emphasises the main purpose of appraisal, and the ways and means to make it constructive for the employer, which would be beneficial to the organisation as the employee should grow in efficiency and productivity. Various measures have been discussed to improve the appraisal procedures and forms. With this end in view potential appraisal and review is also a must for each organisation. Towards the end some problems relating to appraisal have been discussed in Indian context.

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### 10.14 FURTHER READINGS

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# UNIT 11 TRANSFER, PROMOTION AND REWARD POLICIES

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## Objectives

After going through this unit you should be able to understand:

- the purpose of and reasons behind transfers and promotions;
- the changes in organisational structure necessitating transfers and promotions;
- exigencies arising out of expanding activities;
- the implication of Industrial laws in the Indian context;
- the limitations inherent in Government, Public Sector and other Industries, taken over by the government;
- the requirement of retraining on transfers or promotions in view of changing technology, automation, and electronic revolution.

## Structure

- 11.1 Introduction
- 11.2 Some Definitions
- 11.3 Need for a Transfer Policy
- 11.4 Types of Transfer
- 11.5 Implications of Transfer in the Indian Context
- 11.6 Promotion and Promotion Policy
- 11.7 Reward Policies and Processes
- 11.8 Measurement of Performance and Reward Policies
- 11.9 Vehicles for Rewards
- 11.10 Need for Retraining on Transfers or Promotions
- 11.11 Summary
- 11.12 Further Readings

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## 11.1 INTRODUCTION

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In order to conduct business effectively, certain changes need to be made in the organisation's structure which necessitate the regrouping of jobs, changes in departmental functions, repositioning of jobs and status, grade-wise changes in departmental functions, elevation or lowering job categories, and the physical relocation of employees, jobs and departments.

Moreover, the expansion of business and the introduction of new products, services, processes and methods of operation, necessitate the creation of new jobs, and promotion of employees to positions with greater scope and responsibility.

Shifting of personnel is also necessitated by employee-turnover, vacancies are created by resignations, and dismissals, and suitable persons are promoted or transferred to fill the vacant posts. Change in employee status and job is also necessary to satisfy employee aspirations and needs.

Such movements of employees within an organisation are usual phenomenon of internal mobility.

However, in the Indian context, particularly in government, which are the largest employers of manpower, transfer is used as a convenient device to punish, and remove an undesirable employee or officer from his present post, as other disciplinary actions require lengthy procedures under the rules.

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## 11.2 SOME DEFINITIONS

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A transfer is a change in job assignment. It may involve a promotion or demotion, or no change at all in responsibility and status.

It is a change in assignment in which the employee moves to another job at approximately the same level of responsibility, demanding the same skill and at about the same level of pay. Transfer is to be distinguished from promotion and demotion which imply an ascending or descending change respectively, in the hierarchy of positions. A transfer may be either temporary or permanent, depending upon the need, and may occur within a department, between departments and divisions, or between plants or officers within a company/organisation.

Two main conditions generate transfer situations :

- An individual employee may request a transfer in seeking his own preference and benefits.
- Organisations may initiate transfers as a requirement for more effective operations, or as a solution to human relations problems.
- We have noted that the major employment sectors in India, are :
  - a) The government at the centre, states, and other departments
  - b) Public sector corporation and companies
  - c) Government undertakings and institutions.

By virtue of historical reason of the British Government having framed a major portion of rules and regulations for their civil services, they have mostly evolved in government and public sector companies and corporation, and were followed by other undertakings and institutions also. These rules have led to a lot of rigidity in managements' freedom to transfer or promote employees as against the theoretical and valid practices obtaining in the western countries. More over, the discretion to transfer, to promote and reward employees for their performance has been further restricted by legal requirements and the restrictions imposed by the industrial laws applicable to the vast majority or more than 95% of employees in almost all establishments.

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### 11.3 NEED FOR A TRANSFER POLICY

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It is to be appreciated that transfers are made for a number of reasons and are initiated by either the supervisor or the subordinate. If transfers are left entirely to the discretion of either supervisors or employees, a number of problems are likely to occur, such as favouritism or victimization. For example, a few employees would get transfers as and when they want, while the request of many others would be turned down. On the other hand, some may get transferred repeatedly, causing them great inconvenience. Supervisors may transfer their subordinates arbitrarily, just to get rid of them. Some employees, for various reasons, may ask for transfers repeatedly. Some departments may get the reputation of being easy to transfer from, whereas others may be regarded as exactly the opposite.

The absence of a well-formulated transfer policy will undoubtedly breed a state of uncertainty amongst the employees. In cases where a union exists to protect the workers there may be an increase in the number of grievances, or if the issue becomes a larger one in terms of its implications for a number of employees, the industrial relations situation may deteriorate into one of turmoil, conflict, and industrial disputes.

To avoid these problems which would cause considerable inconvenience and disruption in an organization, it is imperative that the personnel department should evolve a transfer policy. Only a systematic policy can ensure a reasonable consistency of treatment throughout the organization.

A transfer policy should consist of the following elements :

- 1) A clear delineation of the conditions and "circumstances" under which an employee can be transferred, i.e., what types of transfers (such as those discussed above) would the organization permit-both in terms of the organization's technology and job-relatedness, and from an individual's point of view.
- 2) The transferability of both jobs and individuals needs to be examined in terms of job descriptions, interdepartmental divisions and plants, and between streams of specialization either on the job or individual background and training. Therefore, policies on these aspects must be clearly stated.

- 3) The third aspect is a consideration on the basis for transfer. Should it be on the basis of seniority and merit tests — especially if it is a production job — or should it be on the basis of seniority alone, assuming minimum ability to handle the job.
- 4) Finally, the pay scales and the exact wage and perquisites that the transferee would receive in the transferred job, if there is any difference it should be specified.

The personnel department should be the monitoring unit facilitating line personnel to redeploy manpower depending on the exigencies of work-situations, or helping employees on compassionate grounds within the framework of the transfer policy. Thus, transfer policy will help effective employee redeployment and protect, to some extent at least, employees from arbitrary transfers.

Maximizing employee effectiveness by increasing the utilization of available manpower is one of the important intended consequences of job reassignment. Position reassignments have motivational force, and an impact on employee attitudes. For instance, promotion or upgrading maintain organisational effectiveness through maintenance of employee morale, and favourable attitudes towards the organisation. Promotion of employees also enables the organisation to utilize expertise to the optimum level by providing adequate opportunities to those who have developed it through training and experience within the organisation.

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## 11.4 TYPES OF TRANSFER

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### Personal Transfer

Personal transfers are those occasioned by desires of the employee and are primarily in his interest.

The reasons for such requests could be :

- 1) To correct erroneous placement.
- 2) To relieve the monotony of a job, acquire better working conditions and join friends/spouse.
- 3) To provide an outlet from blind alley jobs.
- 4) To avoid interpersonal conflicts.

In such case there is a need for some probing because if it is found that a number of employees want a transfer from a unit, the real issue may be a difficult supervisor, a promotion or some other ulterior motive. In such cases simple transfers would not solve the problem and other measures might have to be taken.

- 5) In consideration of the interests of age/health, education of children, housing difficulties and to join immobile dependents.
- 6) A search for creative opportunities.
- 7) To avail of training elsewhere to facilitate later advancement or promotion
- 8) Financial gains like higher frequency or overtime payments, or the feeling that opportunities for advancement are better in another department.

### Organisation Initiated Transfer

A company may initiate transfers for the following reasons :

- 1) The need for temporary adjustments for the convenience or benefit of the organisation or the employee, such as leave replacement or very short assignments.
- 2) To meet emergencies or changes in operations, to deal with fluctuations in work requirements, necessitated either by volume of output or separations.
- 3) To make use of the increasing versatility and competence of key employees.
- 4) Where there is more than one shift and shift assignments are not rotating, transfers are also made from one shift to another on the same type of work.

The nature of transfer should be taken into account while determining the type of transfer, keeping in view the purpose for which it is made. One major type, the discipline-transfer is a remedial transfer, which is extensively used in governments and public sector etc.

The second type of personal convenience based transfer is also pretty common in India, mostly in government, in banks, and some departments.

## 11.5 IMPLICATIONS OF TRANSFER IN THE INDIAN CONTEXT

While studying the theoretical basis of personnel policies it is essential to understand the implications of existing Indian Laws on same. The application of industrial laws, in major employing sectors such as government, public sector and private sector industry, has also restricted their prerogatives to transfer. While employment in Industry, in Government and private industry has been governed for almost half a century under the Industrial Disputes Act and Rules all over India, some major amendments were made to this law in 1982 by an amendment act which has further widened the scope of its application.

All personnel managers in India dealing with manpower and the line managers have to be conversant with the implications of these laws and rules.

Some of the principle definitions may be noted :

'Industry' means any systematic activity carried on by co-operation between an employer and his workmen (whether such workmen are employed by such employer directly or by through any agency, including a contractor) for the production, supply or distribution of goods or services with a view to satisfy human wants or wishes (not being wants or wishes which are merely spiritual or religious in nature), whether or not.

- i) any capital has been invested for the purpose of carrying on such activity; or
- ii) such activity is carried on with a motive to make any gain or profit."

It will, therefore, be clear that all activities carried on for production, supply, or distribution of goods or services employing manpower are governed by this definition, whether they are owned or controlled by government, or by any government company, or by any other institution, or are even a department of government. Since the Central and State governments, the local self-government institutions, autonomous bodies, corporations, companies, institutions and undertakings are the largest employers of manpower in India, most of their employees are covered by definitions of 'Industry' and 'Workman'. Therefore, they will be governed by the Industrial Disputes Act, and Rules thereunder.

Though, the employees, governed by these laws are defined as 'Workmen' the scope of this term is so wide that vast majority of the employees will be covered by the definitions :

"Workman means any person including an apprentice employed in any industry to do any manual, unskilled, skilled, technical, operational, clerical or supervisory work for hire or for reward, whether the terms of employment to be expressed or employed ....."

The only exception granted is for the employees of the armed services and the police and prison services. Almost all the others have been brought under the purview of this definition, except :

- i) who is employed mainly in a managerial or administrative capacity; or
- ii) "who, being employed in a supervisory capacity, draw wages exceeding one thousand six hundred rupees per mensem or exercises, either by the nature of the duties attached to the office or by reason of the powers vested in him, function mainly of a managerial nature".

However, a study of some decisions of the courts makes one realise that it is very difficult to prove whether one is employed mainly in managerial or administrative capacity, and the court decisions have mostly favoured the employees including officers and their Trade Unions/Associations. This definition covers almost 95% of all employees in most establishments except those few who are employed as managers and who are receiving salaries exceeding 1600 rupees per month basic. This limit is also likely to be revised since due to inflation, salaries in industries are going up very fast.

Another area which effects the transfer of 95% employees of most establishments is the area of "Unfair Labour Practices". The Industrial Disputes Act in the 5th schedule lays down specific provisions, practices :

**Article 7 :** of the 5th schedule provides: to transfer a workman malafides from one place to another, under the guise of following management policy.

**Article 9 :** to show favouritism or partiality to one set of workers regardless of merit.

**Article 13 :** failure to implement an award, settlement, or agreement.

The impact of these restrictive provisions on the management's right to exercise their discretion in the interest of efficiency of the organisation/enterprises, or institutions can be realized after seeing the volume of Industrial Disputes after 1982 arising, after these provisions were inserted in law.

Even if an undertaking or part of its establishment or plant is closed down at one place, and the organisation is opening another establishment, or plant is opened at another place, it is not easy to transfer "Workman" (which includes supervisors and even officers) is not easy. The provision of the Industrial Disputes Act & Rules make it very difficult. It specifically provides :

#### **Compensation to Workmen in case of Transfer of Undertakings**

"Where the ownership or management of an undertaking is transferred, whether by agreement or by operation of law, from the employer in relation to that undertaking to a new employer, every workman who has been in continuous service for not less than one year in that undertaking immediately before such transfer shall be entitled to notice and compensation in accordance with the provisions of Section 25-F, as if the workman had been retrenched :

Provided that nothing in this section shall apply to a workman in any case where there has been a change of employers by reason of the transfer, if—

- a) the service of the workman has not been interrupted by such transfer;
- b) the terms and conditions of service applicable to the workman than those applicable to him immediately before the transfer; and
- c) the new employer is under the terms of such transfer or otherwise legally liable to pay the workman, in the event of his retrenchment, on the basis that his service has been continuous and has not been interrupted by the transfer."

It has to be appreciated how the restrictive provisions of law have restricted management's freedom to operate. However, since most employees in government, companies or corporations are in permanent service, transfer is used as a disciplinary action to shift him from the post and it is considered as such.

A lot of restrictions have also been imposed by courts in various decisions for time to time in case of subordinate staff for instance in banks and other undertakings in case of workman.

In some government departments and banks etc. personal transfers are made for the convenience of husbands and wives to work in the same station. Therefore, there are innumerable instances where transfer cannot be used in its appropriate application of personnel policy in the interest of the organisation.

## **11.6 PROMOTION AND PROMOTION POLICY**

### **Promotion**

- 1) Promotion is recognition of a job well done by an employee.
- 2) Promotion is a device to retain and reward an employee for his years of service to the company.
- 3) Promotion is to increase individual and organisational effectiveness.
- 4) Promotion is to promote a sense of job satisfaction in the employee.
- 5) Promotion is to build loyalty, morale and a sense of belongingness in the employee.

- 6) Promotion is to impress upon others that opportunities are open to them also in the organisation, if they perform well.

#### Promotion Policy

Organisational policy on promotion helps to state formally the organisation's broad objectives, and to formulate both the organisation's manpower and individual career plans. Such documents are being increasingly issued by Indian organisations in keeping with the changed environment of employee awareness and the accent on career planning.

One of the first requirements of a promotion policy is a statement of the ratio of internal promotions to external recruitment at each level, the method and procedure of selection (trade-test, interview), and the qualifications desired. Such a statement would help individuals as well as manpower planners to project numbers of internally available candidates for vacancies. In some organisations, such a ratio is fixed by a collective bargaining agreement, or in government and public sector it is laid down in rules.

The second exercise is to identify the network of related jobs and the promotional channels of each job, taking into account job relatedness, opportunities to interact with higher-placed executives to foster job learning, and the qualifications—both academic and work experience required. Such an exercise will help in succession planning and also help aspirants to acquire the necessary formal qualifications or on-the-job training, and encourage them to attend suitable external development programmes. The network of related jobs can be established by job analysis. This process would also help in identifying promotion channels and stepping-stone jobs, which once finalised should be made known to the employees concerned.

Such channels and training leading to promotion are well defined, for instance in the Armed services. While exercising the right of promotion, the criteria of seniority (length of service) has to be given the highest weightage along with eligibility and suitability, due to influence of government's administrative culture, which has permeated into public sector companies and most other establishments, as also in privately owned industries.

Seniority is given very heavy weightage in government, and also industry and this has led to the law also providing for its consideration.

The fifth schedule of the Industrial Disputes Act lays down "Unfair Labour Practices", where it specifically provides that :

- 4 c) changing seniority rating of workman, because of Trade Union activity.
- d) refusing to promote workman to higher posts on account of their Trade Union activities.
- e) giving unmerited promotions to certain workman, with a view to creating discontent amongst other workman, or to undermine the strength of their Trade Union".

To show favouritism or partiality to one set of workers regardless of merit will be considered to be an Unfair Labour Practice and under the law, trade unions or officer's associations can take it to courts as an "Industrial Disputes". It is pretty common in government and also frequently resorted to even by officer's associations in public sector and private sector.

It can be appreciated that once a matter of management policy becomes a dispute in court, how difficult it is to justify each step or action.

Therefore, in India promotion also does not remain only a matter of rational personnel policy, and is subject to legal disputes and unfavourable court awards.

Yet there are other more important elements of a sound promotion policy which should be spelled out by Managements :

- a) A clear statement of policy that all higher jobs, as far as possible shall be filled in by 'promotion with in' as far as practicable, would assure existing employed to work better, and aspire for a promotion.
- b) Establishment of 'lines of progression, or ladders of promotion' within the organisation. It may be called "career planning" or succession planning or by any

other name, should be chalked out by the personnel department or top management.

- c) Job analysis and other techniques can be resorted to as aids, and the competence and experience of existing employees together with their educational background and training may be considered while plotting out a career graph for each one of them as far as practicable.
- d) The line manager's should also be made responsible for planning out careers of people working with their and should be encouraged to transfer them to better openings in other departments also in the overall interest of organisational efficiency.
- e) Simple provision should be made by managements for training as a means of preparation for promotion to higher posts. Special on the job training, special institutional training or, other avenues should be made available to deserving employees.

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## 11.7 REWARD POLICIES AND PROCESSES

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Performance follows the selection process. Once people are in their jobs, they need to be rewarded for good performance. The list of rewards that exist in organisational settings is surprisingly long. The following is a partial list of potential rewards :

- Pay in its various forms : salary, bonuses, stock options, benefits, and perquisites;
- Promotion : both upward mobility and lateral transfers into desirable positions;
- Management praise;
- Career opportunities : a long-term chance for growth and development;
- Appreciation from customers and/or clients of the organisation;
- Personal sense of well-being : feeling good about one-self for accomplishing objectives;
- Opportunity to learn : a chance to expand one's skills and knowledge base;
- Security : a sense of job and financial security;
- Responsibility : providing individuals with a sense of organisational responsibility;
- Respect from co-workers;
- Friendship from co-workers.

Most organisations, however, find it difficult managing these rewards to produce desired organisational behaviour. As a result, the reward system is one of the most underutilized and mishandled managerial tools for driving organisational performance. Rewards are a major factor in influencing performance. Assuming that the organisation can appraise performance, the organisation has a rationale for allocating rewards based on how well people perform: many times organisations think of rewards only in terms of managing pay.

As against promotion, a wage/salary increase, with a possible change of designations, is usually referred to as an upgrading of a post.

Frequently, status symbols are attached to the higher positions such as a more important job-title, a bigger desk, more expensive office decor, less supervision, and greater freedom of movement.

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## 11.8 MEASUREMENT OF PERFORMANCE AND REWARD POLICIES

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Successful strategy implementation depends, in part on a well designed measurement and reward policy. A measurement and reward policy services not only to demonstrate senior management's interest and investment in attaining strategic goals, but also to motivate managers to make strategic business decisions.

Strategy formulation, organisation structure, human resources, management process, and culture are the five elements that drive an organisation to implement strategy. A performance and reward system is a supplement of an organisations management process. Successful organisational performance occurs when an appropriate strategy is implemented through the rationalization of these five key elements along with the measurement and reward system.

Measurement and reward systems send powerful signals to a company's people about their performance. Rewards should motivate people to take action that moves the organisation towards its strategic goals. By necessity, the size, nature and diversity of organisations, influence the type of performance measurement and reward systems that should be utilized.

Reward systems can be designed to motivate both short-term and long-term performance. The organisation that rewards exclusively on the basis of today's performance may well be hindering the achievement of its long-term strategic goals. Several approaches to reward systems work to integrate strategy with management incentives without sacrificing short-term performance: weighted factors, long-term evaluation, strategic and a combined approach that utilizes features of the other three.

Some organisations do a good job of developing strategy, managing culture, organizing, and developing other management processes, but do not achieve a well-implemented strategy because their measurement and reward system is not in tune. Successful implementation of strategy requires a very carefully designed measurement and reward system. If you measure and reward managers on the appropriate management tasks, their "hearts and minds will follow".

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## 11.9 VEHICLES FOR REWARDS

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As we have seen, the behaviour of groups of managers and individual managers can be measured, and such behaviour does affect the organisation's performance. Managers and groups of managers can be rewarded in various ways on the basis of their performance measurement. Compensation is the most obvious and tangible means of reward. It includes salary, bonus, benefit packages, perquisites, insurance, pension plan, stock-options and grants, deferred income, and so forth. Obviously, this is a very direct reward and is a very powerful motivator in many cases. However, people's psychological needs often go beyond pure compensation.

Two other important factors need to be considered. The first power. Power can be granted through promotion, organisational placement, recognition, title, or even simple visibility within the organisation. For some individuals this is an extremely powerful motivator. A second factor at the disposal of management is personal development and career planning. Education and personal growth and development are rewards that can be used to motivate a desired performance. These alternative factors may become more important in the less hierarchical, "atomized" organisations in future.

For the reward system to work well, it must complement the measurement system and, in turn, be complementary to all of the other elements. The reward system must balance the organisations long-and short-term behaviour incentives to managers

From an internal point of view, the reward system needs to be consistent within the environment. Obviously, this means that, to be fair, rewards must be aligned along the continuum from best performance to worst. They must also be aligned within the organisation to maintain a competitive position.

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## 11.10 NEED FOR CONTINUAL RETRAINING ON TRANSFERS OR PROMOTIONS

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In the end of the 20th Century, the impact of rapid technological changes, increasing automation, computerization, and other changes are the most prominent factors affecting government, public sector and private sector. However the need for continual training, and retraining at many levels for employees is imperative.

As most of the routine, repetitive and clerical jobs are being remodelled by Electronic Data Processing machines, it is necessary for managements to give more and more thought to retraining employees for changing over to jobs, or remodelled ones.

As we are witnessing in India in the present decade, and electronic revolution is taking over, and there are rapid far-reaching changes taking place, in government, railways, public sector and private sector industry, which is making it imperative for



all organisations to retrain their employees for these new techniques, as under the Indian Laws, it is not possible to retrench or discharge existing employees without tremendous effort, costs, and industrial disputes.

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## 11.11 SUMMARY

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This unit gives some definitions of transfer, the types of transfer, and pinpoints the need for a positive transfer policy. It also outlines, the implications of transfer in the context of restrictions imposed by law in India, which creates problems, and restricts management prerogatives.

It also emphasised the need for defining a clear promotion policy to ensure employees that they have a foreseeable future with the organisation, it underlines the need for retraining on transfer or promotions.

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## 11.12 FURTHER READINGS

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- Beach, Dali S., "*Personnel*" (Mac Millan, New York, 1980)
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## UNIT 12 TRAINING AND RETRAINING

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### Objectives

After going through this Unit, you should be able to understand :

- Appreciate the need for training of employees at all levels;
- learn about methods of identifying training needs, for different levels of employees;
- formulate aims and objectives of training programmes;
- build-up a training organisation;
- adopt suitable methods for training different types of employees;
- know more about different methods and techniques;
- realize the need for continuous training and retraining of employees;
- formulate measure for evaluation of training programmes.

### Structure

- 12.1 Introduction
- 12.2 Identifying Training Needs
- 12.3 Training Principles
- 12.4 Setting Up a Training Organisation
- 12.5 Training Methods and Techniques
- 12.6 Some Standard Types of Training
- 12.7 The Need for Retraining
- 12.8 Chalking out a Training Plan
- 12.9 A Training Evaluation Plan
- 12.10 Summary
- 12.11 Further Readings

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### 12.1 INTRODUCTION

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Training is a major manpower management function. No organisation can afford not to train its employees, regardless of his previous education, training, and experience. He has to be introduced into the work environment of his new employer inducted and taught to perform his assigned tasks in a new milieu.

Moreover, changing technology, increasing automation in offices and factories, and in almost all institutions is bringing about redesigned or altered jobs. It cannot be limited to retraining for new or altered work-methods. People are constantly being "trained" and retrained by the way their superiors and other employees associate them with work, and find that they are also appraised formally or informally by their peers and superiors.

Training is a part of management development and also a form of organisational development. The most effective managers are those who can best develop the human resources of an organisation, for the purpose of achieving organisational goals and objectives. If the employees perceive training as a means to achieve their personal goals at work, they will welcome such opportunities.

Some essentials may be borne in mind. First, those who have to be trained should want to learn, must have motivation to improve their job performance or to learn new skills and techniques of a higher degree. Second, motivation to learn is always increased by the prospect of some reward like promotion or a better job after the conclusion of training. Third, the process of learning has to be guided by a trainer or teacher whether he is learning correctly or not; sometime known as "feedback". Fourth, learning is best accomplished by doing, rather than by listening or reading. Fifth, the contents of learning programme should be systematically evolved in stages, with feedback and correction at each stage, if necessary.

While learning theory is much more complex, these are some elementary principles which underly training generally in all organisations.

It has been noticed that the capacity of the human mind and brain to develop are very high, and only a portion of it is used in most jobs

Many researchers have estimated that the average employee in organisation is working at much less than his capacity potential. If these employees can be properly motivated, they could work at 80% to 90% of their capacity. Behavioural science concepts like motivation and good human relation should be used. Training could be one of the main instruments to attain such improvement.

While employee-training to improve skills and knowledge to make them better equipped or individual growth is not an end in itself; organisational growth needs to be integrated with their individual growth. The main concern should be for the viability of the organisation or the enterprise.

An effective organisation should have such individuals who are able to take up increased responsibilities since the organisation has to develop their capabilities for higher jobs and contribution towards organisational-goals.

Behavioural scientists have suggested that organisational effectiveness is dependent on three objectives ;

- 1) To achieve its goals
- 2) To maintain itself internally
- 3) To adopt its environment.

Apart from these goals there are other circumstances which underline the need for training. While the present output can be improved by enhancing skills and knowledge and by improving efficiency of the enterprise, sometimes the technology of the organisation also changes. For instance, there have been tremendous advances in industrial technology in recent decades. To keep up with advanced industrialisation, mechanisation and automation also make it necessary that employees be trained in new skills, processes and production techniques, etc.

## 12.2 IDENTIFYING TRAINING NEEDS

The increasing pace of technological change is perhaps the biggest single impetus for training programme. In the first half of this century, skilled workers acquired their abilities through apprenticeships, and college courses which equipped them with knowledge and skills sufficient for their entire working lives, while unskilled employees did jobs requiring little or no training. Today, however, few people can expect to do the same work in the same way for more than few years, and the number of jobs available for totally untrained workers are limited. You should be able to identify training needs from :

- underperformance by subordinates, evidenced by low output, lack of initiative, bad decisions or general incompetence,
- the acquisition of new and unfamiliar equipment or the introduction of new working methods,
- perusal of subordinates' job specifications to identify gaps between what they are doing and what they should be doing,
- analysis of the strengths and weaknesses of your organisation.

Further information should be available from the organisation's human resource plan (if it has one), which should incorporate forecasts for the supply and demand of various categories of staff and labour. The plan will compare employee's current skills with those expected to be needed in the future and highlight deficiencies. Some organisations prepare 'skills-inventories' classifying employees according to their qualifications, technical knowledge, experience and special abilities. Such data needs to be comprehensive, detailed, held in a form that allows easy cross-referencing and regularly updated.

While training could be useful in improving any transformation process that takes place in terms of present inputs and outputs, the training has to be related, both to the needs of the organisation and those of the individuals; for instance diversification of product lines, new types of skills that jobs may require, individual employee development through induction, training or job-orientation, etc.

For identifying training needs, some researchers emphasize three factors:

- 1) Organisation analysis
- 2) Task analysis
- 3) Manpower Analysis.

**1) Organisation Analysis**

It is a systematic effort to identify and understand exactly what types of training shall be required. It involves a total analysis of the organisation structure, objectives, its human resources and future plans etc.

The first step in organisation analysis is achieving a clear understanding of the short-term and long-term goals and objectives of the organisation or enterprises.

The management would have to examine what are the specific training inputs that would contribute towards the achievements of these objectives.

For organisation analysis, there are three essential requirements :

- 1) Whether adequate number of personnel are available to ensure the fulfilment of the goals?
- 2) Whether the personnel performance is upto the required standards?
- 3) Whether the organisational environment in different departments etc., is conducive to fulfilment of tasks?

**2) Task Analysis**

Here the focus is on the job or task. Analysis of the job and its various conditions will indicate the skills and training required to perform the job according to the standard. The standards of performance have to be set for each job so that it is performed at the desired level of output and quality.

Moreover, the methods, and the components of the job, have also to be properly designed. The main object is to obtain all possible information that is available about the nature of the task, its components and standards of the performance to be set. This information would be useful in designing the training programme for employees.

**3) Manpower Analysis**

The total manpower environment of the organisation has to be carefully analysed. In fact, there are three major aspects: The internal environment of the organisation, the environment of the sector of economic activities i.e., government, public sector or private sector, and the environment of the economy, which influences the training needs of manpower in that organisation.

If the organisation has a skill inventory of the manpower, i.e., a detailed write up of education, experience and job performance of its employees, it can analyse same, and draw up a plan, depending on its own projections for future requirements.

**Questions like**

What are performance standards? What shall their training cost in terms of time, effort and money? Have to be investigated for a fruitful manpower analysis of any organisation.

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## 12.3 TRAINING PRINCIPLES

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- a) As mentioned earlier, there should be a stimulus which is explicit to the learner. In training situations, the stimuli are the words both written and spoken, a machine or a picture or a demonstration, etc. Training cannot be effective unless the relevant stimulus is known and understood by the trainees.
- b) The response refers to the activity which is intended to be taught during the training. The responses may be such as saying a string of words or operating a machine. The learner must be able to accomplish the activity. He should be encouraged to practice the activity.
- c) There must be motivation or drive for the learning to take place motivation involves interest-in and aptitude for learning. Accordingly, if an individual does not want to learn, he shall not learn, despite the fact that he understands clearly what is being taught and has the capacity to respond appropriately. This implies that only those trainees should be selected for training who have the requisite

motivation for it. Attempts should be made to maintain their motivation through leadership.

- d) There should be proper reward or incentive for learning to take place. The trainees must perceive that they will be rewarded through training at least in the foreseeable future. If they do not have the confidence that they will be rewarded, the learning will cease, and they may even unlearn the skills which they have already acquired.

Although in most situations the first two factors (that is clear stimulus, and known response) are present the trainers ignore the last two factors (that is, motivation of the learner and a reward that the learner wants). Usually, the trainees in several programmes do not want to learn because they have not perceived that the reward or hope of reward is adequate for them. These principles are very important, and have to be borne in mind if training has to lead to desired results.

However, while planning training for specific job, a detailed analysis of the job can be of great help. In regard to a particular job it is possible to analyse four levels of general job-knowledge which may be required; these range from knowing facts to being capable of evaluation, and can be categorized :

- 1) **Basic knowledge of facts :** The job may require simply the ability to identify basic facts and terms about the general subject area.
- 2) **Knowledge of principles :** The job may requires the ability to explain relationship of basic facts and to state general principles about the subject.
- 3) **Analytical ability :** The job may require the ability to analyse facts and principles and to draw conclusions about the subject.
- 4) **Ability to evaluate :** The job may require ability to evaluate conditions and make proper decisions about the subject.

Similarly, specific job-knowledge can be categorized into four levels :

- 1) **Knowledge of nomenclature :** The job may require the ability to identify documents, forms, parts, tools and simple facts about the job.
- 2) **Knowledge of procedures :** The job may require the naming of steps in doing the job and the ability to tell how it is done.
- 3) **Knowledge of operating principles :** The job may require the ability to explain why, when and what must be done at each step in the job.
- 4) **Knowledge of complete theory :** The job may require the ability to predict, identify and resolve the problems relating to it.

There are, of course, many more factors to be considered than the knowledge requirements only. In order to approach the planning of training, which is particularly appropriate to complex jobs, it requires developing a plan.

The training of high level manpower is an expensive exercise. The manpower development system of an organisation should ensure that the training is planned in such a way that it will achieve its objectives in a manner that is cost-effective. The various training requirements stemming from manpower development activities in the organisation should be summarized in a training proposal.

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## 12.4 SETTING UP A TRAINING ORGANISATION

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It should be recognised that training is a management function and accordingly, every individual manager is a trainer. The staff trainer should not exert authority over the line but provide advice and guidance. Training has to be supported by all levels of managers. Either a committee or an individual from top management should be eventually responsible for training.

Attempts should be made to differentiate between staff and line training functions. The training should be aimed at the attainment of objectives of the enterprise by providing proper knowledge, skills and attitude. The objective and scope of the training should be defined at the very outset of the programme. Attempts should be made to employ tested principles of learning. As far as possible, training should be imparted in the real work environment. Moreover everything has to be measured and proper yardsticks like standard, time, costs etc. have to be developed.

For effective implementation of the plan attempts should be made to sell the training plan to different levels of employees and managers, establish relationships with various outside agencies, determine the nature and extent of training facilities required and estimate costs of training programmes. The line organisation can be persuaded for the training programmes by inviting line personnel to participate in the programmes engaging them as conference leaders, obtaining their guidance in programme-planning, forming a training committee consisting of line personnel, sending them to other organisations having effective training programmes for observation, devising programmes to meet the needs of their manpower, showing effective results from training in terms of improved quality and higher quantity of production at lowered costs etc. Some of the mistakes in this respect include overtraining, least reliance on actual practice and utmost stress on films and lectures, failures to use production personnel as trainers, imitating training programmes of other companies, concentrating on skills irrelevant of the job involved employing unskilled instructors, and improper application of testing programmes, etc.

The opinion of the trainees regarding the training programme should be given considerable importance in revising the contents of training.

Most important is that for drawing up training programmes for various levels of employees, and their effective implementation, a formal organisation has to be set up with in the personnel department or separately, with well defined responsibility. A chief of training has to be designated as incharge of that section or department and he may be given requisite staff support to plan and carry out continuous or one time training programmes, as per the size of the organisation and its manpower.

In any case, the training unit-like all manpower management development is regarded as a staff department. Members of the training staff may be specialisis in various phases of training. They develop training programmes, administer and execute them and check their results. They have to coordinate closely with line departments officers and supervisors.

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## 12.5 TRAINING METHODS AND TECHNIQUES

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General training methods may be used with different categories of personnel and include (1) lectures, (2) conferences, projects, panels, and "buzz sessions", (3) case studies and incident method and (4) role playing, demonstrations and skills.

The lecture method forms a quick means of providing facts to a large number of individuals at a point of time. It may improve attitudes, but fail to develop skills. Lectures can be effective if they are planned and prepared in advance and the group is ready to listen. However, lectures are criticised for lack of participation on the part of trainees. Other methods have been developed to ensure trainee participation.

Conferences projects, panels and "buzz sessions" invite group participation. Conference method is suitable for a group consisting of 12 to 25 members who are required to discuss and share a problem common to them. Although it provides little information, it may encourage analytical thinking. Conference may be of two types, guided and unguided. Both types of conferences necessitate the role of a leader and should not exceed two hours in duration. The conference provides a pooling of ideas to solve problems. The conference leader should encourage discussion, stimulate competition, enhance ego and reflect the feelings of participants.

The "project method" forms a variant of the conference method and requires trainees to learn by 'doing' and 'talking'. Projects are akin to small research projects. The trainees discover the facts of a problem raised; discuss them and reach a solution. For instance, there may be a problem as follows : 'How can we minimise accidents?' The project method differs from case-study. While in the former, participants have to discover the facts, in the latter facts are already provided.

The 'panel method' provides a substitute for the conference method where the group is large. The efficacy of this method lies with the panel leader whose role consists in moderating, clarifying points, controlling questioning and summarising the discussion.

"Buzz sessions" involve break-up of conference group in several small groups of four to five participants.

Each small group discusses the problem and reports its views to the entire group subsequently.

Case-studies provide facts regarding a business situation summarising experience and raising problems. They teach trainees to handle similar situations arising in future. This method is associated with Harvard Business School. It is claimed that the method enables the trainees to diagnose business problem and analyse critical factors, conceptualise the dynamic nature of business and attain confidence to look for alternative measures for solving the problem and taking decisions with full understanding of their outcome in the totality. It is criticised that case-studies provide a series of unconnected incidents instead of a general pattern of behaviour.

The incident method relates to the practical problem solving process. In this method an incident is given for discussion, and trainees are requested to discover facts and find solutions. Later on, the trainees are told the actual solution to compare it with their own solutions. This method develops among trainees an understanding of how to procure the proper data for analysing a situation as well as permits them to learn how to use the data effectively. This method is associated with Prof. Pigors of MIT.

Role-playing stresses modification of behaviour through practice in doing instead of verbal behaviour. Explicitly, role-playing is most suitable for human relation problems and least appropriate for technical problems. The advantages of role playing arises in so far as it encourages participation and involvement, improves wrong pattern of behaviour, enables trainees to see themselves in other fellows' shoes, and stresses diagnosis of the problem and reactions of other individuals. This method enables the trainees to understand the problems of other individuals. Like role-playing, demonstrations and skills are other dramatic methods of training. Demonstration involves presentation of the wrong way first and the right way afterwards by coached actors. Skits or short plays are also used to stress desired practices.

In addition to the above general methods of training, several training aids and audio-visual devices are also utilized in training programmes. These aids and devices include blackboards, projectors, charts, moving pictures, graphs, video tape recordings (VIR), filmstrips, slides and drawings. They make learning easier and more effective.

#### Simulation Methods

Real life situations are simulated for imparting training. The methods falling in this category are:

- 1) Role-play
- 2) Case method
- 3) Management games
- 4) In-basket exercise

#### Role-Play

As mentioned, the role-play method requires participants to enact roles on the basis of a written script or an oral description of a particular situation. The enactment process provides insight and understanding of the demands and situations of the assigned role. The main emphasis in management training is in facilitating a better understanding of interpersonal problems and attitude change.

#### Management Games

The game is built around the model of a business situation and trainees are divided into teams representing the management. They simulate the real life process of taking operating decisions.

#### In-basket Exercise

This is a simulation training techniques designed around the "incoming mail" of an executive. A variety of situations presented which would usually be dealt with by an executive in his working day. His reactions and responses are taken down in writing and then analysed. Feedback on his decisions forces him to reconsider not only his administrative actions but also his behavioural style. A variation of this is the incident method where significant incidents having behavioural implications are analysed and used as a training method.

**Experimental methods**

The focus in this category is on achieving through group processes and dynamics, a better understanding of oneself and others. To that extent this method is a here-and-now situation, where individual members talk about themselves and others, and by mutually supportive roles generate greater understanding and skills in interpersonal competence. It has been asserted that attitudinal training helps an individual to improve his comprehension of self, others, group-behaviour and personal interaction. Such knowledge and understanding helps an individual to understand the problems of human relationships in a work-situation, including at times his managerial style (a framework found in the managerial grid). Some of these methods are :

- 1) Sensitivity training 'T-L Groups
- 2) Transactional analysis
- 3) Achievement-motivation workshops

**Programmed Learning**

This consists of the presentation of instructional material in small units (called 'frames') followed immediately by a list of questions that the trainee must answer correctly before progressing to more difficult work. The questions are an integral part of the scheme, and are usually designed in such a way that it is not possible to complete the programme without answering them. If an answer is incorrect the trainee is immediately referred back to the appropriate point in the instructional material (usually a study manual) for revision. Frames are carefully ordered into a logical progression of knowledge and levels of difficulty.

The advantages of programmed learning are that trainees can move at their own pace, become actively involved in the learning process and can do their training independently without the presence of an instructor. Schemes can be tailor-made to suit particular training requirements and most trainees find the method interesting. However, there is no instructor immediately available to spur them on if they do lose interest and the preparation of good instructional materials can be extremely expensive especially when its subject matter is constantly changing so that regular updates are needed.

**Computer Based Training**

As more firms employ computer assisted management methods it becomes increasingly attractive to base training on computer software packages. The program supplied in such a package will provide for instantaneous interaction between the package and its user and contain numerous exercises for testing the trainee's comprehension of the material it contains. Most programmes are menu-driven, meaning that users must themselves select, by choosing among options that periodically appear on the VDU, how they wish to progress. Thus, each section will be followed by a list of questions and multiple choice answers. If the trainee makes a mistake, the program scrolls back to the relevant part of the preceding text. Some 'adaptive testing' packages enable trainees to predetermine how much of the material they wish to learn. You might, for instance, only be interested in acquiring a brief over-view of a subject, so that you would in this case select the option that provides just the fundamental principles of the subject, ignoring technical detail. Someone else might need to study the same package in depth and thus would choose an option to generate more extensive coverage. Training activities are therefore directly related to individual training needs.

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## 12.6 SOME STANDARD TYPES OF TRAINING

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While a wide variety of training programmes is used in different organisations according to the requirements and size of their manpower, the types of persons to be trained, some standard practices are followed by most organisations.

Some of the principal common types can be mentioned :

- a) **Apprenticeship training** : is used by most organisations for skill or craft training has also been made compulsory by law as mentioned earlier; in engineering and other industries and undertaking.



- b) **Job training** : usually uses on-the-job or school methods.
- c) **Supervisory training** : usually emphasizes conference and group procedures, as also other method.
- d) **Understudy practices** : are commonly used for middle management and even senior executive positions.
- e) **Interships** : are used for training in staff departments.
- f) **Training programmes** : carried on by special institutions etc. for proficiency in various branches of management. They can be short-term programmes, or full time 2/3 years courses.

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## 12.7 THE NEED FOR RETRAINING

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When an employee is considered for transfer or promotion to a new job; or when the job enlarges; new skill and techniques may have to be imparted to him, due to rapid changes in job method, technological change, factory and office automation, and other Hi-tech developments. In most cases of this type a retraining or refresher course may be necessary to make him more competent and more productive on the new assignment.

Usually with rapid developments in the economy and technologies affecting all organisations even in India during the last decade, the need for continual retraining existing employees and executives is becoming more and more pronounced and imperative.

For instance, all of you are well aware that in the last decade or two, technical changes in the form of computers, and various other instruments of information technology are displacing many middle levels of manpower, and management personnel.

There are forecasts that these changes will take place more rapidly over the next two decades, than they have in the past two. In fact it is rapidly becoming difficult to think of a job, skill or profession that will remain unaffected or unchanged for next 20 years. Who would have thought ten years ago that the jobs of "information technologist" or "computer programmer" would become so important and so common as they already have. Today's engineers are also going to be a different breed from the one's that turned out a decade ago. Not have new jobs opened up in fields that did not even exist in the early seventies or even eighties, but most industries are resorting to more automation and computerization in manufacturing and also the services sector. These rapidly occurring shifts in the job-profiles have profound implications which underline the need for continual training and retraining both for new as also existing employees at all levels.

Training and manpower development must be a continuing function, with more emphases on the retraining of present employees to meet changing job picture. Even professionals, as well as managers at all levels need mid career retraining to keep them abreast of the rapidly changing body of knowledge. Computerization, and office automation require considerable retraining of the employees who have to use new information as well as those who process it.

Retraining will also be needed for those who are likely to be posted to foreign assignments. A number of large and medium companies are opening up plants, or rendering technical and other services in many countries abroad. It is becoming more and more important not only to select the right people, but also to train them to work effectively with the nationals of these countries to which they are assigned. This can be done by retraining.

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## 12.8 CHALKING OUT A TRAINING PLAN

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A training plan should contain all the information necessary for management to make decisions for implementing training programmes. It should give details of :

- training analysis
- costs and administrative data

- recommended training programmes with duration
- time phasing
- training evaluation

#### Training analysis

The purpose of this part of the training plan is to justify the training that is recommended in the training proposal. This requires the determination of job-training standards. Such standards provides a means by which the scope and depth of required internal training may be identified and verified. Each job should be analysed into its key tasks and training levels established in accordance with a graduated scale of abilities and involvements.

When job training standards have been devised for all major occupational categories, they provide a detailed guide to the training which has to be provided. Decisions have then to be made on the most appropriate means of providing it. For this reason, a training plan should include an analysis of each training source and method for satisfying the training need.

Possible sources of training are likely to include :

Polytechnics/Engineering Colleges  
Business schools/Universities  
Specialized Training Institutions  
Government Training Centres  
Industrial Training Centres

The various methods range from on-the-job training to formal classroom training with such media as :

Lectures  
Programmed text  
Group discussion  
Audio-visual aids  
Simulation  
Work projects  
Computer-assisted learning

An internal training course must recognize that the trainees are individuals, and so the learning materials must be designed so as to adapt to the individual. The course objectives should be defined in terms of specific training objectives which will result in behavioural changes. These changes in a trainee's behaviour will be best brought about by careful presentation of information which results in the trainee's discovery of principles and concepts. If the desired results are not achieved, then the learning materials or methods are likely to be at fault.

#### Course content

This part of the training plan should contain a summary of the training programme as planned. It should be based on the training needs and objectives. Course contents should be included in outline form and contain the areas or topics of technical content necessary to indicate the scope of the training. It should also indicate the tentative time-in hours that will be used in training on each of the major areas or topics.

#### Administration

This section of the training plan should include the appropriate statistical information about the conduct and support of the recommended training. It should cover such details as :

- 1) Training length the number of hours trainees will be in training.
- 2) Class size the optimum size for classes, plus the maximum and minimum class sizes.
- 3) Number to be trained.
- 4) Class frequency
- 5) Facilities and equipment specify classroom and training equipment required, indicating availability of current resources.
- 6) Instructional needs specify the number and speciality of instructors.

#### Costs and administrative data

Having carried out a training needs analysis, it is desirable to develop cost estimates and basic administrative data for each alternate training source, method or combination analysed in the plan, so that the most effective and economical training

approach may be selected. Such estimates should include the following basic cost and administrative data :

- 1) Total length of course in hours
  - 1.1 Classroom hours
  - 1.2 On-the-job training hours
  - 1.3 Other hours, e.g., for specified study
- 2) Number of trainees
- 3) Course development costs
  - 3.1 Developer(s) manhours
  - 3.2 Developer(s) salaries
  - 3.3 Developer(s) travel costs
  - 3.4 Clerical manhours
  - 3.5 Clerical salaries
  - 3.6 Training material development and reproduction
- 4) Costs to conduct each class
  - 4.1 Instructor manhours
  - 4.2 Instructor salaries
  - 4.3 Student training material and supplies
  - 4.4 Clerical manhours
  - 4.5 Clerical salaries
  - 4.6 Course revision costs
- 5) Trainee costs
  - 5.1 Trainee manhours
  - 5.2 Trainee salaries
  - 5.3 Trainee travel
  - 5.4 Trainee accommodation costs
- 6) Equipment costs
  - 6.1 Capital expenditure on equipment
  - 6.2 Maintenance costs

These details, worked out properly, will be of great help to the top management in approving a budget for training programmes.

## **12.9 A TRAINING EVALUATION PLAN**

The goal of the evaluation is to determine whether or not the training objectives are being met, if training is being accomplished in the most effective and economical way, and, if not, what changes should be made.

In considering the evaluation, there are three main areas to be covered by any plan. These are :

- 1) the items to be evaluated
- 2) the methods of evaluation
- 3) the responsibility for evaluation

The items to be evaluated should include the following :

- 1) the job/task analysis
- 2) the training proposal
- 3) the training plan
- 4) the training course
- 5) on-the-job training
- 6) the training objectives
- 7) performance on-the-job

The methods of evaluation which can be used will of course depend on the nature of the items being evaluated. However, it is likely that at least one of the following methods will be employed :

- 1) interview with trainees
- 2) written test
- 3) oral test
- 4) observation
- 5) study of records

- 6) questionnaire
- 7) comparison with a control group
- 8) Comparison with job requirements

The responsibility for evaluating the training should be shared by two or more of the following :

- 1) instructor
- 2) training officer
- 3) line supervisor or manager
- 4) trainee
- 5) specialist adviser

A training evaluation plan is necessary to eliminate off beat remarks that there is no return on such exercises; or that sending officers or supervisors to outside training courses, is granting a paid holiday.

Training has to be evaluated and accounted for as an investment in manpower, which is likely to bear fruit during many future years.

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## 12.10 SUMMARY

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Training is essential to cope up with the changing environment and automation. The unit emphasises the need for training for both existing and new employees at all levels. Training is also a form of organisational development. It underlines the importance of identifying training needs, and formulates aims and objectives of training to keep with the pace of technological change. It suggests building a training organisation, and pinpoints the need for drawing up a detailed training plan, and methods of evaluation of training, in terms of time, effort and costs.

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## 12.11 FURTHER READINGS

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## NOTES

## NOTES



UTTAR PRADESH  
RAJARSHI TANDON OPEN UNIVERSITY

MBA-3.12  
**Human Resource  
Planning**

Block

**4**

**MEASUREMENTS IN HUMAN RESOURCE  
PLANNING**

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**UNIT 13**

**Human Resource Information System** 5

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**UNIT 14**

**Human Resource Audit** 17

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**UNIT 15**

**Human Resource Accounting** 24

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## **BLOCK 4 MEASUREMENTS IN HUMAN RESOURCE PLANNING**

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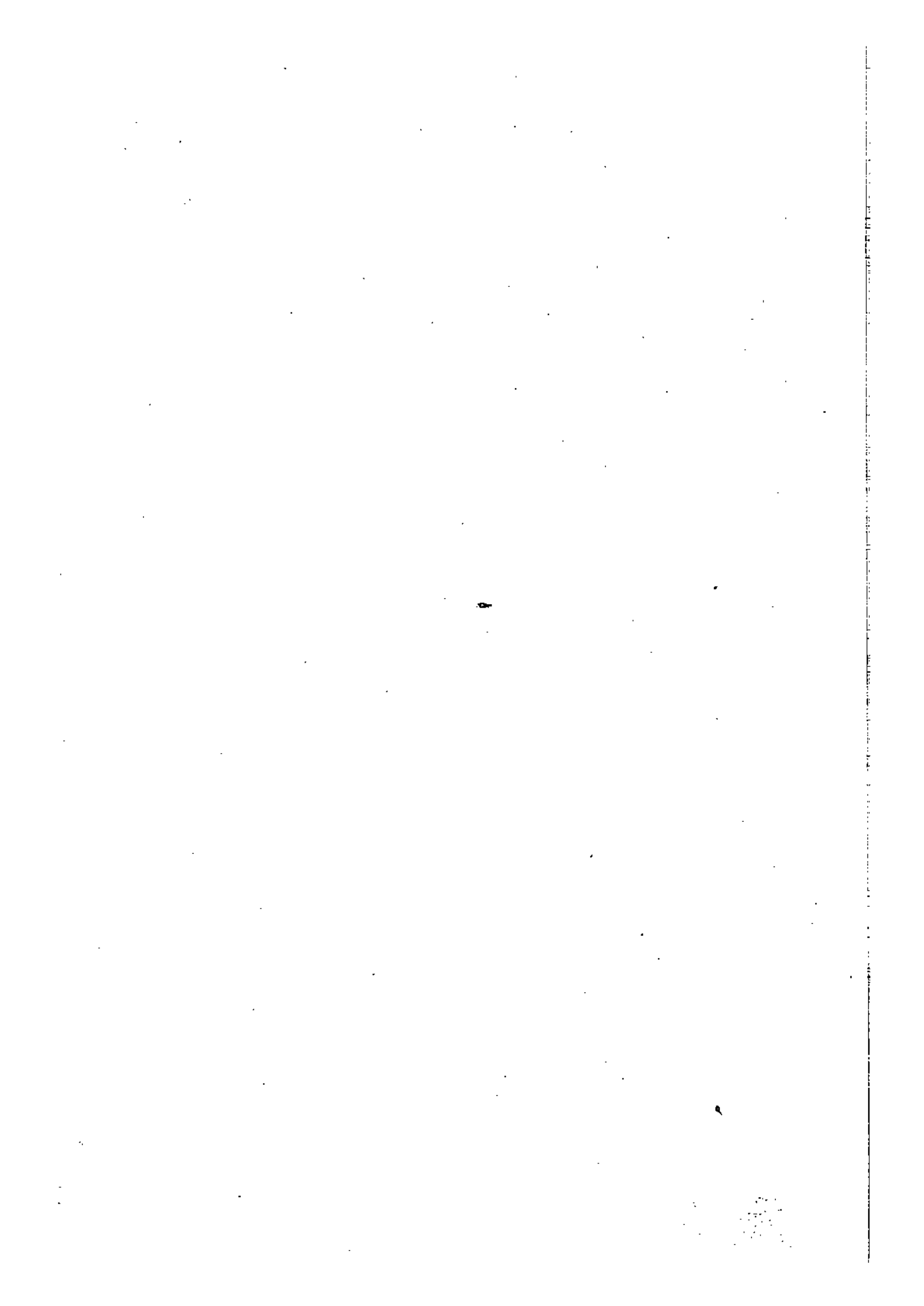
This block comprises three units.

The first unit deals with the Human Resource Information System, considered to be the 'very stuff' or the 'strategic backbone' of human resource planning in human resource management.

The second unit deals with the subject of Human Resource Audit as the first step in human resource planning. It also considers a broad framework of planning for human resource audit.

The third and the last unit is designed to help the student in understanding the comparatively new concept of Human Resource Accounting as a level for measurement of human resources.





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# UNIT 13 HUMAN RESOURCE INFORMATION SYSTEM

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## Objectives

After going through this unit, you should be able to:

- understand the dynamics of information system and its use as a tool for measurement;
- examine the significance of information in human resource management;
- appreciate the approaches to the information system at the macro and micro levels;
- consider the shortcomings of manual information system;
- discuss merits of computerisation and its applications in effective Human Resource Information System.

## Structure

- 13.1 Introduction
- 13.2 Information : Some Basic Guidelines
- 13.3 Human Resource Information at Macro Level
- 13.4 Human Resource Information at Micro Level
- 13.5 Effective Human Resource Information System : Some Approaches
- 13.6 Why Computerise Personnel Records and Information System?
- 13.7 Computer Applications in Human Resource Management : An Overview
- 13.8 Summary
- 13.9 Self-assessment Questions
- 13.10 Further Readings

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## 13.1 INTRODUCTION

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Human Resource Planning is concerned with the controlled utilisation of human resources to achieve pre-set objectives, both short-term and long-term. It has three main features:

- 1) **Demand work** involving analysing, reviewing, and attempting to forecast the number in terms kind, level, functions, etc.
- 2) **Supply work** attempting to predict what action is, and will be needed to ensure that the required numbers are available.
- 3) **Designing** the interaction between demand and supply, so that skills are utilized to the best possible advantage, and aspirations of the individuals are duly considered.

To state briefly, planning process aims to bring supply and demand into balance at the levels most consistent with the needs of the projected requirements and with the assessments of the economic and social environment—prevailing and expected.

The basis of all manpower planning is information. You will need the know-how to gather relevant data, analyse manpower demand and supply, and how to apply this information to improve job efficiency and manpower utilisation. Whether you are auditing the current situation or looking forward, you will need information and reliable data, any way, in order to make best decisions or to move into new direction. Gone are the times when decisions about future could be based on hunches. Now you need to collect hard data in order to make the future events more manageable than before. Increasingly, human resource professionals and specialist managers wanting to introduce a new manpower planning system or improve an existing one, use information as an invaluable aid in decision making. This tool is developed by systematising the processes of collecting, maintaining, analysing and reporting information.

### HRIS defined

From the above, a general definition of Human Resource Information System (HRIS) is developed. Thus Human Resource Information System provides a method

by which an organisation collects, maintains, analyses and reports information on people and jobs. It applies to information needs at macro level as well as to the micro level.

In this unit whereas human resource information at the macro level is considered briefly, rest of the discussion is devoted to the human resource information at the micro level i.e., the enterprise level.

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### 13.2 INFORMATION : SOME BASIC GUIDELINES

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It has already been noted that without information, it is very difficult to think of planning taking place at all. Information can be power for whoever controls it. Hence in order to make information useful and effective, important note needs to be taken of the following key points:

- 1) **Adequacy of information** : Lack of information hinders planning and will leave unfilled gaps.
- 2) **Specificity of information** : If the information is for decision making, then which decisions are to be made and what information is needed therefore, must be made specific.
- 3) **Over-estimating information** : It is desirable to follow a conservative approach. It is better to understate the need than to waste resource on unused mass of information.
- 4) **Identifying need levels** : There is a need for different levels of detail of information.
- 5) **Mechanism for addition/deletion** : The how and when of information to be added/deleted should be considered.
- 6) **Management support** : Information systems need constant management support for maintenance.
- 7) **Quality of information matters** : Otherwise, the famous GIGO (garbage in/garbage out) principle will be found at work.

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### 13.3 HUMAN RESOURCE INFORMATION AT MACRO LEVEL

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The Data base required for purposes of making forecasts of manpower at the macro level is indicated below:

Forecasting at Macro Level	
Data Base for Demand forecasting	Data Base for Supply forecasting
i) Population statistics	i) Age at entry and Age at exit
ii) Economic parameters	ii) Annual enrolment and outturn
iii) Existing technologies	iii) Attrition rates
iv) Emerging technologies	iv) Retirement
	v) Migration
	vi) Mortality
	vii) Labour force participation rates

We have discussed in earlier units (Unit 3.4 and Unit 4.4) the limitations and complexities in generating appropriate data for demand forecasting and supply forecasting of manpower at the macro level. The fact is that a totally reliable

data base for macro forecasting is not always available, and quite often specific studies have to be conducted to generate the needed data.

### **Institutional arrangements at the macro level**

Let us now briefly look at the institutional arrangements for providing data at the macro level. The main agencies and institutions are:

- The Planning Commission
- The Ministry of Labour
- The National Sample Survey Organisation
- The Institute of Applied Manpower Research
- The National Labour Institute
- Universities
- Other institutions at the state level.
  
- At the apex of the institutional machinery for plan formulation regarding employment and manpower sectors, is the Employment Manpower Planning Division of the Planning Commission. This Division works closely with the Perspective Planning Division of the Planning Commission.
  
- The Labour Ministry collects the data on employment through the Directorate General of Employment and Training.
  
- Employment data is also collected through the National Sample Survey and the Annual Survey of Industries.
  
- The Institute of Applied Manpower Research conducts studies on employment strategies and estimates at the sectoral and project levels.
  
- The National Labour Institute has conducted major studies at the sectoral and project levels on institutional conditions on rural employment.
  
- Researchers in the Universities and other research systems also participate.
  
- The state level employment market information scheme departments collect data on local labour markets through employment market information schemes.

There are very few attempts at the regional delineation of the employment strategies of the Five Year Plans.

- The Asian Employment Programme (ARTEP) of ILO undertook several studies as a part of the preparatory phase for the launching of the Asian Network of Human Resource Development (HRD) Planning Institutes. These studies were discussed at a Workshop convened in Bangkok (1986). Y.K. Alagh from India (in his paper on employment and structural changes in Indian Economy, Bangkok, Dec. 1986) expressed the need for more careful integration of the new education policy documents with the quantitative work of an introductory nature done on manpower forecasting models for the Indian economy. Although this aspect has been highlighted in the policy document, but needs to be articulated in detail as listed in the follow up action on the new education policy.

Article 1

It is stated that the "national strategy of education has to ensure the availability of highly educated, trained and motivated manpower for dealing with the challenges which are inherent in the modernisation and globalisation of the economy." Study the National Education Policy Document "Challenge of Education—A Policy Perspective" (Ministry of Education, Govt. of India, 1985) and examine what directions does it provide towards attainment of the stated objective.

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**How to improve the effectiveness for Human Resource Planning and policy at the macro level?**

An essential step in improving the effectiveness of manpower planning and policy at the macro level lies in taking decisive measures to raise the quality and reliability of labour market information. Existing sources of statistical information suffer from serious gaps and inadequacies, redundancies, etc. So long as these deficiencies continue, meaningful manpower research required for National Employment Policy would be extremely difficult to undertake.

Thus the quality and effectiveness of future manpower policies at the macro level would depend most significantly on the accuracy and adequacy of the information inputs in the formulation of the plans and policies. The need is not only to build computer-based data banks, but no less importantly, to improve the quality of current bench-mark data sources viz., at the institutional levels such as the apex level institutions referred to above.

### 13.4 HUMAN RESOURCE INFORMATION AT MICRO LEVEL

With regard to data needs at the micro level, we have noted earlier (Units 3.4 and 4.4) the need for a well-defined and detailed manpower information system within the organisation. For this purpose, the data modules and the particulars of information that each such module should carry are noted below:

Data Module	What it should contain
Personal Data module	<ul style="list-style-type: none"> <li>• Identification particulars</li> <li>• educational particulars</li> <li>• technical qualification, if any</li> <li>• special privileges category such as: ex-service man, handicapped, scheduled caste/scheduled tribe, etc., if any</li> </ul>
Recruitment module	<ul style="list-style-type: none"> <li>• Date of recruitment</li> <li>• grading in aptitude tests</li> <li>• grading in leadership tests</li> <li>• overall grading</li> <li>• job preferences and choices, if any</li> </ul>
Job experience module	<ul style="list-style-type: none"> <li>• Placement history</li> <li>• grade promotions</li> <li>• tasks performed grade-wise</li> <li>• significant contributions, etc.</li> </ul>
Performance Appraisal module	<ul style="list-style-type: none"> <li>• Performance appraisal at each job held</li> <li>• job experience evaluated in the light of job description</li> <li>• communication rating of inter-personal relationships</li> <li>• ratings of behaviours in a group</li> <li>• Commitment to corporate goals, etc.</li> </ul>
Training module	<ul style="list-style-type: none"> <li>• Nature of training received at each level</li> <li>• individual's evaluation of effectiveness of training</li> <li>• current training assignment, if any.</li> </ul> <p>Record of compensation and benefits received health status personal problems calling attention, if any special needs, etc.</p>

**Activity B**

In your organisation, analyse existing records, reports and forms to determine the

**HRM as a total system**

Murdick & Ross consider the human resource management as a total system that interacts with other major systems of the organisation viz., marketing, production, finance, and the external environment. So, as a service function, to these major systems, its main responsibilities can be enumerated as forecasting and planning human resources planning, maintaining an adequate workforce, and controlling the manpower policies and programmes of the enterprise.

Basically, a system consists of several inputs and outputs, and a number of related subsystems, processes and activities, all operating through the medium of information. Fig. 1 depicts the Murdick & Ross model on human resource information systems—followed by a brief description of the objectives that each subsystem is designed to accomplish.

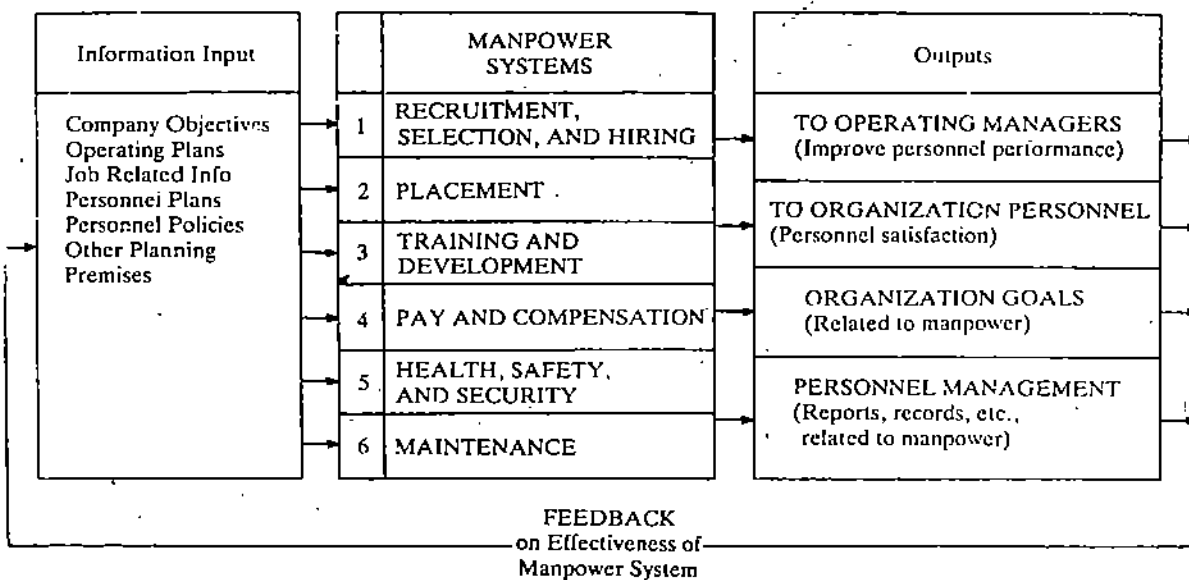


Figure 1: Human Resource Information systems

Source : Murdick, Robert G. & Joel E. Ross, Information Systems for Modern Management, Prentice Hall of India, New Delhi, 1979, p 216-17

**Objectives of the subsystems**

Information Subsystem	Objectives/Requirements
Recruitment	<ul style="list-style-type: none"> <li>skills required</li> <li>inventory of skills available</li> <li>job specifications</li> </ul>
Placement	<ul style="list-style-type: none"> <li>matching available personnel against requirements</li> <li>enabling use of tools and techniques to identify human capabilities for placement against properly organised work requirements.</li> </ul>
Training and development	developing talent requirements from within the organisation meeting demand for new skills developing and maintaining a continuing skill inventory
Pay and compensation	maintaining traditional pay and financial records compliance with government, union and other requirements

Health safety and  
security  
Maintenance

health of personnel, safety of job practices in  
during operations, plant security classified information  
ensuring success of personnel policies and procedures  
control over work standards measuring performance  
against financial plans and programmes.

We have seen that Human Resource Information Systems serve multiple management needs, and that its objectives also are very broad based. In this, the human resource staff has a major role to play in the collection, storage, retrieval and analysis of personnel data. In fact, a carefully designed information system can provide better control over human resource functions, and create a positive climate where the value of human resources of the organisation is clearly understood and recognised at various levels of management decision making. We shall now consider the several approaches and design aspects in establishing an effective human resource information system.

**Activity C**

Study the existing human resource information system (HIR (HRIS)) in an organisation, and comment on the procedure followed for maintaining the security of confidential data.

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**Activity D**

If there is not an existing human resource information system, carry out a rudimentary investigation to identify what data are available in personnel files, dossiers, etc., which could be easily collected for purposes of Human Resource Planning.

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**13.5 EFFECTIVE HUMAN RESOURCE  
INFORMATION SYSTEM : SOME  
APPROACHES**

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To begin with an effective information system, there are two basic questions to be answered.

- 1) What is the information need?
- 2) How can it be met most effectively?

These posers are important, whatever be the size of the organisation.

As far as small organisations are concerned, there is unlikely to be need to undertake elaborate manpower planning. In such organisations the information needs are likely to be few and simple, as can be met by a manual human resource information system. The manual system consists of a set of forms and manual files. The manual files consists of a set of records. There is a folder for each employee with the employee's employment history, appraisals, and salary record maintained in the personnel department. Another set of records pertaining to compensation and benefit information may be maintained in the pay roll section. The employee's manager may also like to maintain a separate file for his exclusive use. Entries on forms and addition/deletion in the existing records is carried out manually. (The manually operated information systems suffer from several defective deficiencies which we will consider later.)

Organisations—not small, and not having a comprehensive HRI systems — can take recourse to several other alternatives:

- 1) **Expand the existing computer based payroll system.** Since most firms now use a computer for payroll purposes, this system itself includes many basic employee data elements which may be expanded to include other elements necessary for human resource planning.
- 2) **Establish a supplemental system.** Alternatively, a separate supplemental system could be established and interfaced with the payroll system to provide the additional data elements required. If planned intelligently, this could be a step toward a modular approach to building a comprehensive HRIS.
- 3) **Set up a wholly separate information system:** This is the third alternative which suggests the establishment of a wholly separate information system for human resource planning purpose only. The trend is clearly. In large and modern organisations, the trend is clearly toward establishment of comprehensive systems. For example, ITC has a comprehensive information system used by management to store, change and report personnel information. It is a centralised information source in a company that is diverse in its organisation, products and locations.

Now before we move over to the design considerations and steps involved in establishing a comprehensive human resource information system, let us also take note of several inadequacies in the manual HRIS and significant features of computerised system.

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## 13.6 WHY COMPUTERIZE PERSONNEL RECORDS AND INFORMATION SYSTEM?

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We have noted that a periodic and systematic analyses of the personnel records can be used for a variety of purposes such as—

- provide data essential to human resource planning;
- aid the evaluation of current personnel policies and practices; and
- enable to produce an inventory of manpower.

besides preparation of several reports and returns for submission to various government/non-government agencies, etc.

In manually operated personnel record systems, entries on forms and insertion of changes from time to time in the relevant records often fall behind so that the records are not showing the current position always. This leads to a fresh exercise toward collecting and compilation of original data elements, everytime the information is required. All that can be very time consuming.

However, let us look at some of the shortcomings inherent in manual personnel records systems so that the perspective of potential benefits of going in for a computerised personnel record and information system becomes clearer.



### Deficiencies and drawbacks of the manual system

- i) cost
- ii) accuracy
- iii) fragmentation
- iv) duplication
- v) difficulty of analyses

**Cost :** Manual systems involve significant clerical and routine administrative work load, the maintenance and updating of records being labour intensive and costly. In addition, the documentation being relatively non-standardize, the same have to be pro time and again, the same have to be produced separately.

**Accuracy :** The manual transfer of data from one record to another increase the chances of error. It is not uncommon to find the data collected from the same sources at different times or by different people giving almost a different picture. As a result, the accuracy and reliability of the manual system is held to be very much in doubt.

**Fragmentation :** Manually stored information is frequently held in a fragmented manner with different pieces of information being kept in separate files at different places. Thus many manual systems are unable to provide a single comprehensive picture of an employee on one record.

**Duplication :** As it happens, some of the information held in the personnel records may be needed simultaneously by a number of other user departments such as payroll department/salary group, training department may like to keep duplicate records to meet their respective needs. Such practices are not only prone to duplication but add to the costs.

**Difficulty of analyses :** The manual analyses of data is time-consuming and quite often not available on time for purpose of decision making. As a result the difficulty in extracting information promptly from manual systems may put the personnel function in a backstage position where it may be overlooked or bypassed for as a source of useful information for decision making. So much so, the role and opportunities of the personnel function to influence manpower planning decisions may get consequently reduced. In the ultimate, in that event, it is likely to creat scope for decisions being taken on ad hoc basis—so very prejudicial to systematic planning and decision making leave aside any meaningful control and measurement mechanism being available to the management. The problems need to be considered in the context of one's own organisation. Moreover, as organisations grow larger, the manual systems tend to break down under the burden of manual processing.

### Computerised personnel records/information system : Some potential benefits

While it would be presumptuous to assume that computerisation would automatically solve all the problems associated with manual systems, in the fast changing technological and information processing environment, it does present several potential benefits.

**Cost effectiveness :** Taking into consideration the factors of time, speed and the enormous amount of data which a computer can process, the computerisation offers an option. When personnel function faces conflicting pressures to provide more information while at the same time to reduce administrative overhead costs, the computerised system can become increasingly cost effective because in the long run the costs of computer hardware fall relative to the cost of employing ever-increasing clerical staff. But let it be understood clearly that it would be a false analogy to draw a straight cost comparison between a manually operated system and a computerized system because the computer is capable of performing a fundamentally different job. Thus to put the concept of cost-effectiveness in the right perspective, the improvement in the quality of human resource decision making which is made possible through computerization, need also be taken into consideration.

**Effective human resource information :** Perhaps more than the cost effectiveness is the potential provided by computerization for establishing an effective human resource information system. The following table makes it clear:

Manual system	Computerized system
<ul style="list-style-type: none"> <li>Retrieving information is slow and cumbersome</li> </ul>	<ul style="list-style-type: none"> <li>Retrieving information is fast and simple</li> </ul>
<ul style="list-style-type: none"> <li>Personnel function is bypassed as a source of useful information</li> </ul>	<ul style="list-style-type: none"> <li>Personnel is considered as a reliable source of information useful for decision making</li> </ul>
<ul style="list-style-type: none"> <li>Identity of personnel function is lost</li> </ul>	<ul style="list-style-type: none"> <li>With information as a power tool, the personnel function is in a position to influence policies and decisions</li> </ul>
<ul style="list-style-type: none"> <li>Not able to respond to ad hoc enquiries for information and complex data needs</li> </ul>	<ul style="list-style-type: none"> <li>Information can be readily manipulated, merged and disaggregated in response to special and complex demands and presented promptly</li> </ul>

#### Improved accuracy

In addition, a computerised human resource information system can eliminate the shortcomings of manual system noted earlier. Significantly, computerized systems do not depend upon constantly copying out data from one record to another as in the manual system. That means the data is entered only one with provision for updating at regular intervals. Therefore, once the relevant data have been fed accurately, they will remain in pure form and accurate until any item is changed.

#### Validation of data-error detection

Further, availability of good software systems should enable validating and editing data and detecting errors in a number of ways such as:

- criterion checks for particular fields, for example, an error warning if a post is reserved for a certain category of person, if a salary is above or below a certain minimum/maximum, or if exceeds 58 years and, so on.
- link checks for example that salary is incompatible with grade, date of joining is at least 18 years after date of birth, etc.

Finally, a computerized system can greatly reduce fragmentation and duplication of data. All data can be stored in a single system to enable retrieval of complete picture of each employee or of each defined parameter in a desired number of permutation and combinations. In advanced systems, other user departments outside the personnel function can be provided with an on-line link into the data base from remote control terminals programmed with pass words to restrict access and update only those parts of the data base which are necessary for meeting out specific needs.

## 13.7 COMPUTER APPLICATIONS IN HUMAN RESOURCE MANAGEMENT: AN OVERVIEW

In the earlier section the potential uses of computers as against the manual human resource information system were considered. It has enabled us to develop a preamble to the subject of applications of computers in human resource management as follows:

A computer based human resource information system is

a computerised personnel record system

a generator of personnel information

an aid to personnel administration, and

an aid to various specialist techniques in personnel management where a strong and reliable data base provides the key to greater effectiveness.

This section sets out a list of potential applications of computers in personnel function. The list is intended to provide an overview of the applications; yet not to be treated as exhaustive. Because once the system is established, possibilities of new applications in specific need areas can be explored.

- a) **Personal record keeping** : The fundamental functions of computers in personal work is keeping employee records. A good personnel system should enable the personnel department to store all information currently held manually about employees on a computer. In addition, it should be possible for the user to keep historical files of past employees for purposes of identifying trends and making projections when developing human resource plans.
- b) **Report generation** : Report generation is the capability which enables the user to manipulate any of the items stored on the data base as required by means of software referred to as 'report generator'. That would mean facility for producing the more common standard reports, ad hoc enquiry facilities, and a diary facility. The diary facility can be called up to cover a certain period of time such as the forthcoming month, and will produce a list of action required by the personnel department on the basis of information held in the data base.
- c) **Word processing and integrated letter writing** : With this facility it is possible to store in the word processor a range of standard contracts of employment or a variety of standard clauses which can be selected and merged without together in order to reduce the typing effort individually. Linking word processing to the computerized personnel system provides further opportunities to automate standard administrative procedures.
- d) **Recruitment** : When organisations are engaged in recruitment campaigns, these can generate a considerable amount of administrative work. Under a computerised procedure, the basic details of applicants can be put into the computer and their progress through the recruitment procedure can be fed into the computer in the same way. Such a system can provide management with progress reports on the filling of vacancies and the status of the pending applications.
- e) **Wage and salary planning** : Planning of wage and salary increases which otherwise a time consuming process and fraught with discrepancies in a manual system, can be easily handled by a good computer system.
- f) **Absence and sickness** : The data on sickness and absence—duration, reasons, etc., can be stored against the record of each employee. For purposes of reporting this information can be summarised periodically according to the variables stored on the data base.
- g) **Human Resource Planning** : We have noted earlier that information is the strategic backbone of human resource planning. Computers are capable of assisting the process of human resource planning in several ways. Firstly, they greatly enhance the scope of the personnel department to analyse the structure and composition of the current labour force, and to provide useful information for human resource planning purposes. Secondly, by using specially designed packages it would be possible to make projections and raise issues which can simulate future patterns of the organisations human resource system. Further, the system will be readily able to identify weak spots and strong points through the process of generating information and its analysis. Additionally specialised modelling packages can be used for such applications as (i) for predicting wastage patterns, (ii) for simulating manpower flows into, within and outside the organisation, and (iii) for simulating career structure against a range of assumptions about organisational growth or contraction.
- h) **Personnel costing and control** : It is now possible to provide through a computerised information system line management with regular reports on staff numbers and costs against budgets or targets, including information on turnover, absenteeism, overtime levels and costs to serve as indicators of the organisations extent of efficiency in the utilisation of its human resources.
- i) **Training and development** : A computerized personnel records system provides organisations with speedier and ready access to information about the skills.

education, qualification, appraisal ratings, career history etc., of employees. This will help talent search within the organisation as well as identification of training and developmental needs of employees at different levels.

- j) **Other application packages** : Include job analysis, job evaluation, staff scheduling rostering and shift modelling, etc.

Finally, as one of the most significant uses and applications of computers in personnel work is the capability of computers to produce output in the form of graphs, bar charts, histograms, pie charts, etc., through the use of appropriate software and peripherals.

#### Activity E

Your organisation proposes to establish a wholly separate Information System for Human Resource Planning purposes only. As personnel manager, you are required to prepare a note setting out several uses and applications of computerized personnel records system to be used for purposes of staff orientation in Human Resource Information System concepts.

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### 13.8 SUMMARY

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Human Resource Planning draws heavily on information. Appropriate and accurate information is thus essential to planning of human resources as well as to different facets of the human resource management function as such. There are certain basic requirements up to which the information must conform.

At the macro level, although there do exist institutional arrangements for providing manpower data, but the need for improving the effectiveness of human resource planning and policy has been articulated at several fora.

At the micro level the importance of having a well-defined and detailed manpower information system within the organisation has been emphasised. The point has been made that at the enterprise level, there is need for a comprehensive human resource information system. In this context, the deficiencies and shortcomings of manual human resource information systems have been noted in order to develop a clearer perspective for going in for a computerised personnel records system. Several advantages and applications of using computerized information system have been brought in to focus. Those of you who may be interested in the design process of a computerized human resource information system would be well advised to read further the subject itself being so specialized in nature.

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### 13.9 SELF-ASSESSMENT QUESTIONS

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- 1) Why is it that information is called the very "stuff" of planning?
- 2) Trace the essential steps and processes involved in developing a Human Resource Information System.
- 3) Discuss the factors which should be considered before taking a management decision on establishing a computerised Human Resource Information.

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## 13.10 FURTHER READINGS

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Evans, Alastair, *Computerising Personnel Systems : A Basic Guide*, IPM, London, 1986.

Murdik, Robert G., and Joel E. Ross, *Information Systems for Modern Management*, Prentice Hall India, New Delhi, 1979.

Cascio, Wyne F., *Managing Human Resources : Productivity, Quality of Work Life, Profits*, McGraw-Hill, New York, 1986.

Walker, James W., *Human Resource Planning*, McGraw-Hill, New York, 1980.

Amjad, Rashid, (ed), *Human Resource Planning : The Asian Experience*, ILO/ARTEP, New Delhi, 1987.

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# UNIT 14 HUMAN RESOURCE AUDIT

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## Objectives

After going through this unit you should be able to:

- understand the concept of human resource audit as distinct from financial and statutory audits;
- appreciate the need, purpose and scope of human resource audit;
- develop a perspective on the know-how of human resource audit.

## Structure

- 14.1 Introduction
- 14.2 Definition of Human Resource Audit (HRA)
- 14.3 The Need and Purpose of Formal Human Resource Audit
- 14.4 Information as the Key Factor
- 14.5 Scope of HRA
- 14.6 Approach to Human Resource Audit—Who Conducts?
- 14.7 Auditing Process : Essential Steps in Human Resource Audit
- 14.8 Summary
- 14.9 Self-assessment Questions
- 14.10 Further Readings

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## 14.1 INTRODUCTION

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Conventionally, the independent accountant, after completing an audit, is in a position to render a certificate covering his findings. Mention is made of the period covered by the audit. An assertion is included in the certificate, that a review has been made of the company's internal control system and of the accounting procedures followed. A brief statement of the scope of audit is made. Any qualifications that are applicable to the execution of the assignment or to the company's accounts are prefaced. Finally, the independent accountant renders his opinion regarding the company's financial statements and the basis on which the accounts have been kept. Professional ethics is observed by independent accountants. Material facts are neither missed or misstated.

Again, conventionally, during manpower audit disbursements made on account of payrolls are checked to underlying records. This may even require verification of employee's signatures on payroll receipts to the extent considered necessary. Record of the time of arrival and departure of employees is checked; so also the reports of the number of pieces turned out by piece workers. Payroll records covering bonuses and commission on sales to employees are subjected to scrutiny. Also, certain payroll deductions and contributions in accordance with several social security and welfare laws is checked to compliance and accuracy.

Other areas selected for scrutiny are:

- authorisations of additions to a company's personnel;
- sanctions to the grant of special bonuses and profits sharing distributions, and payment of compensations;
- compliance with wage regulations.

In the matter of quantum of audit and manner of selections, the auditor may introduce the elements of test check and surprise being left to his sole discretion.

It is a general practice for independent accountants to analyse the changes which took place in the company's personnel during the period covered by the audit. The net increase or decrease in the number of employees in any one function or function occupation is discussed with one of the company's senior executives in order to obtain the benefit of his comments regarding the situation.

Careful consideration is given by the independent accountant to the company's system of internal control and check, while determining the scope of the programme of audit. Obviously, much of the quantum and thrust of audit can be directly related to effectiveness of the company's internal control system.

The Managerial control implies two things :

i) checks, and ii) measurements. Checks imply monitoring the working of various parts of the organisation by observing the working/by getting feedback information, and take corrective action wherever necessary. In the measurement process, control refers to standards measurement which are set in advance to determine how well the assigned functions are being performed.

While management can use a variety of means and measurement in control, in human resource management, audit is one of the most important devices and a significant step in the human resources planning process. Rather, it is considered as the first step in planning of human resources.

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## 14.2 HUMAN RESOURCE AUDIT DEFINED

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Human Resource Audit is a systematic assessment of the strengths, limitations, and developmental needs of its existing human resources in the context of organisational performance. (Flamholtz, 1987)

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## 14.3 THE NEED AND PURPOSE OF FORMAL HR AUDIT

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The commonly understood audits are the established and regular accounting audits carried out in accordance with specific statutory regulations. However, in the case of human resource audits, there is no legal obligation, but enlightened managements have voluntarily accepted its usefulness depending upon the circumstances. The following circumstances may be cited as examples :

- felt concern by top management
- compulsions of the external forces necessitating a situational audit
- business changing significantly influenced by international business decisions affecting human resource management
- an urge on the part of human resource management professionals towards advancement of the practices and systems.

**Human Resource Audit (HRA) : What it does?**

One premise on which the human resource audit is based is that opportunities are being missed by staying with the current approaches. It considers the human resource process as dynamic and that it must continually be redirected and revitalised to be responsive to the ever changing needs.

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## 14.4 INFORMATION AS THE 'KEY FACTOR' IN HRA

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Human Resource Audit is the critical analysis of the existing human resource within the organisation. To be able to do that, the audit will have to be served with the data that is quantitative, qualitative, as well as comprehensive. In other words, the success of this stage of human resource planning solely rests upon the manner in which personnel records and other information are maintained. It is from the base of the current situation that the human resource audit is to take in order that the future must be planned. Hence the information needs of such a critical exercise must be met.

## 14.5 SCOPE OF HUMAN RESOURCE AUDIT

Every time a human resource audit is to be taken up, the scope is decided. The audit need not be exhaustive but may focus on a particular function of human resource management such as training and development, compensation, performance appraisal, etc. Nevertheless, the objective and approach of HRA—more or less—remains the same, regardless of scope.

## 14.6 APPROACH TO HUMAN RESOURCE AUDIT : WHO SHOULD CONDUCT?

In routine audits, auditors are engaged to verify the accuracy of financial information and the reasonableness of the accounting practices followed by an organisation. In the course of these audits, the auditors at times provide inputs that may serve as pointers to the state of affairs with regard to financial planning and accounting procedures, inviting attention of the top management.

Essentially, human resource audits are not routine. These are in fact, studies of an unusual nature. The manner of conduct can be self-directed surveys, or task forces within the organisation, or reserved for intervention by outside consultants.

The audit can be either a one time affair or an ongoing audit function for operating units within the organisation. For example, in one company, the focus of audit was on analysing the extent to which managers and supervisors complied with established personnel policies and practices.

### Outside Consultants and HRA : Some perceived advantages

Many firms prefer to have independent consultants conduct the audit in order to obtain greater objectivity and impartiality in reporting. Consultants who have wider experience and specialisation in the particular field. Most of them possess an uncanny eye on details and data that might otherwise be looked as insignificant. They are supposed to act with impartiality and make judgments on what they review and analyse without risk of prejudice.

## 14.7 AUDITING PROCESS : ESSENTIAL STEPS IN HRA

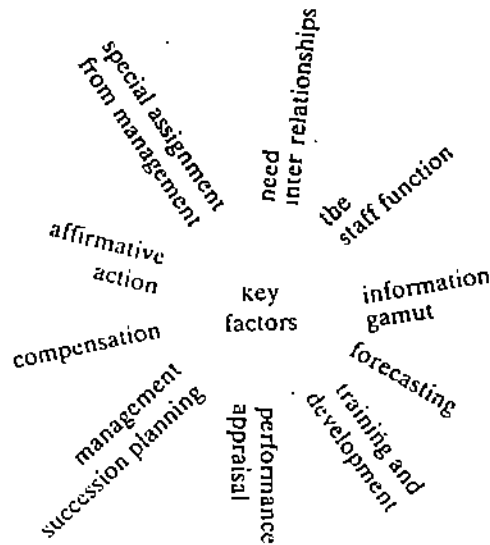
Though the process would vary from organisation to organisation, generally it involves the following steps

- 1) **Briefing and orientation** : This is a preparatory meeting of key staff members to
  - i) discuss particular issues considered to be significant,
  - ii) chart out audit procedures, and
  - iii) develop plans and programme of audit.
- 2) **Scanning material information** : This involves scrutiny of all available information pertaining to the personnel, personnel handbooks and manuals, guides, appraisal forms, material on recruitment, computer capabilities if a computer and all such other information considered material.
- 3) **Surveying employees** : Surveying employees involves interview with key managers, functional executives, top functionaries in the organisations, and even employees' representatives if necessary. The purpose is to pinpoint issues of concern, present strengths, anticipated needs and managerial philosophies on human resources.
- 4) **Conducting interviews** : What questions to ask? The direction which audit must follow is based on issues developed through the scanning of information gathered for the purpose. However, the audit efforts will get impetus if clarity is obtained as to the key factors of human resource management selected for audit and the related questions that need to be examined.



The following model depicts the various key factors on which information needs during human resource audit need to be focussed. It is developed from the interview guide used in an electronics company. It covers a wide range of topics of profound interest relating to human resource management practices in the organisation.

The questions to be asked on these topics need to be framed very carefully. These questions may be developed by the interviewer/audit team on the following aspects as indicated against each topic.



HUMAN RESOURCE AUDIT:  
key factors in  
human resource management

Topics for Interview Questionnaire and the aspects to be covered

Topic	Related aspects to be covered
1) INFORMATION	Coverage Source Adequacy Gaps
2) FORECASTING	Methodology Reliability Testability Budgeting Time orientation Technology perspective
3) TRAINING AND DEVELOPMENT	Need assessment Selection criteria Levels covered and frequency Internal vs external training Quality consciousness Changing needs Climate for self-development
4) PERFORMANCE APPRAISAL	Validity of appraisal process

- Fitness
- Benefits and/or drawbacks/problems
- Know-how of appraising
- Clear objectives
- Uniformity in process
- Underlying benchmarks
- Consistency in ratings
- Linkages with pay
- Feedback to employees
- Changing needs

5) MANAGEMENT SUCCESSION PLANNING	<ul style="list-style-type: none"> <li>Policy formulation</li> <li>Identifying key positions</li> <li>Availability of successors</li> <li>Matching future needs</li> <li>Responsibility for grooming and developing</li> <li>Handling non/poor performers</li> </ul>
6) COMPENSATION	<ul style="list-style-type: none"> <li>Appropriateness of policies</li> <li>Company philosophy</li> <li>Adequacy of rewards</li> <li>Nature of job descriptions</li> <li>Flexibility in job evaluation systems</li> <li>Control over costs</li> <li>Rationale of reward system</li> <li>Opportunities for improvement</li> </ul>
7) AFFIRMATIVE ACTION	<ul style="list-style-type: none"> <li>Efficiency of action programmes</li> <li>Lessons for future</li> </ul>
8) SPECIAL ASSIGNMENT (other human resource functions)	<ul style="list-style-type: none"> <li>Clarity</li> <li>Comments</li> <li>Activities' jurisdiction</li> </ul>
9) NEED INTER-RELATIONSHIPS	<ul style="list-style-type: none"> <li>Uniqueness</li> <li>Distinctiveness</li> <li>Presence and awareness of about company's human resource policy</li> <li>Clarity on objectives of human resource audit</li> <li>Future outlook on philosophy</li> <li>Capabilities of implementation</li> </ul>
10) THE STAFF FUNCTION (the human resource staff)	<ul style="list-style-type: none"> <li>Expectation from human resource staff</li> <li>Degree of satisfaction</li> <li>Adequacy</li> <li>Attitude and approach</li> <li>Capability and potential</li> <li>Suggestion for change</li> </ul>

The process of the interview and the sequence of questions is often as important as their content. Another effective method is the 'focus interview'. A focus interview involves meetings between a trained interviewer and selected members of the organisation. Here the interviewer asks a variety of questions planned and prepared in the same fashion as the interview questionnaire explained earlier.

- 5) **Synthesising** : The data thus gathered is synthesized to present the
- current situation
  - priorities
  - staff pattern, and
  - issues identified.

Similarly, future needs are identified and appropriate criteria developed for spotlighting the human resource priorities and specific recommendations made.

**6) Reporting :** Just as the planning meetings of briefing and orientation, the results of the audit are discussed within several rounds with the managers and staff specialists. In the process, the issues that get crystallized are brought to the notice of the management in a formal report.

In conclusion, human resource audit is an important approach to human resource planning. It is practical because if correctly conducted, it should increase the effectiveness of the design and implementation of human resource policies, planning and programmes. A periodic and systematic audit helps human resource planners develop and update employment and programme plans.

Now if you are required to conduct a Human Resource Audit Interview in your organization. Prepare a suitable questionnaire covering Training and Development.

Identify the major issues or concerns of your organisation by talking widely to employees. This will help you to gather employees with useful knowledge. Before conducting the audit, the following questions are to be asked.

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## 14.8 SUMMARY

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Human Resource Audit is the critical analysis of the existing human resources within the organisation. It is a systematic review and assessment of human resource management philosophies, policies, systems and practices. In terms of need, approach and procedures, human resource audit is different from the commonly understood accounting audits carried out in compliance of certain mandatory or statutory requirements. Similar to the case of Human Resource Planning, the success of Human Resource Audit is dependent. The reason for conducting a human resource audit is that it is from the base of the current situation that the future must be planned. Thus an enormous amount of information needs to be available. But similar to the case of human resource planning, the success of this audit is dependent upon the availability of the quantitative as well as qualitative information and its use by the auditor\*. The purpose of human resource audit is to gather data about the

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\* The term auditor in the present context refers to any person – not necessarily a chartered accountant – who may be assigned the task of auditing human resources

organisation's human resource management and to use those data to make judgments about how its functioning, effectiveness, and requirements for future planning and development. The decision to conduct a human resource audit and its frequency would be guided by the top management's felt concern or, amongst other considerations, a desire on the part of the human resource professionals to advance the current practices and systems prevailing in the enterprise. The audit may be conducted by the management either 'in house' or by engaging an outside consultant in order to obtain greater objectivity in reporting.

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## 14.9 SELF-ASSESSMENT QUESTIONS

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- 1) Compare and contrast the following :
  - Statutory Audit and Human Resource Audit, Quantitative information and Qualitative information. Give examples to illustrate your answer.
- 2) Identify and explain which dimensions of training and development are likely to come into focus during a human resource audit.

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## 14.10 FURTHER READINGS

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- Walker, James W., *Human Resource Planning*, McGraw-Hill, New York, 1990.
- Washbrook, H., *The Board and Management Audit*, Business Books, London, 1978.
- Sheibar, Paul, *Personnel Practices Review—A Personnel Audit Activity*, Personnel Journal, March, 1974.
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- Eggleston, DeWitt C., *Auditing Procedure*, John Wiley and Sons Inc., New York, 1947.

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## **UNIT 15 HUMAN RESOURCE ACCOUNTING**

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### **Objectives**

After going through this unit, you should be able to:

- understand and define the concept of human resource accounting;
- describe the main objective and the managerial role of human resource accounting;
- appreciate the role of information as a key factor in human resource accounting system;
- understand the basic concept and the measurement aspects of human resource costs;
- follow the concept and various methods of monetary and non-monetary valuation of human resources;
- understand the process and problems of designing and implementing a human resource accounting system.

### **Structure**

- 15.1 Introduction and Early Developments
- 15.2 The Concept of Human Resource Accounting
- 15.3 Human Resource Accounting : Objectives in Relation to the Process of Human Resource Management
- 15.4 Information as a Key Factor in HRA
- 15.5 Human Resource Cost : Concepts and Methods of Measurement
- 15.6 Human Resource Valuation : Concept and Determinants of Value
- 15.7 Human Resource Value : Monetary Measurements
- 15.8 Human Resource Value : Non-Monetary Measurements
- 15.9 Developing a Human Resource Accounting System : Some Design Considerations
- 15.10 Phases in the Design and Implementation of a Human Resource Accounting System
- 15.11 Human Resource Accounting : Need for Further Validation and Research
- 15.12 Summary
- 15.13 Key Words
- 15.14 Review Questions
- 15.15 References and Further Readings

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### **15.1 INTRODUCTION AND EARLY DEVELOPMENTS**

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Effectiveness is best measured by comparing inputs with the desired output. This gives a direct and positive measure of effectiveness as well as providing comparative information to show how effectiveness has altered over a period of time. It requires a common base for measuring inputs and outputs. Measurement is the process of representing the properties or qualities of objects in numerical terms. In our control systems, measurement has a dual function. It provides information that can be used for evaluating performance, and to make corrections in goal directed behaviour. This is the informational function of measurement. The accounting system, with its measures of financial and managerial performance, is a part of overall measurement system that contributes to the informational function. The informational function also draws on non-financial measures of performance such as product quality and organisational climate. It may be noted that the very act of measuring something has an effect on people's behaviour because people tend to pay more attention to the aspects of jobs or performance that are measured.

In human resource planning, unlike other functions, there is still the problem of measuring itself; how can personnel inputs be measured using some common

standard inevitably financial? This presents serious difficulty for the personnel function itself if it has to measure that output in financial terms. One attempt to apply financial denominators to human resources is the human asset or human resource accounting which endeavours to measure both the cost and the value of people to organisations.

The subject of approach to measurement of human resources through human resource accounting has tempted personnel specialists and academics alike. The early development of human resource accounting was carried out by a team of researchers from the University of Michigan's Institute for Social Research under the guidance of Rensis Likert. Likert felt that the failure to show the human resources of the firm as an asset on the firm's books caused management to undervalue these resources in its decision making. Early development work by the research team at the R.G. Barry Corporation at Columbus, Ohio emphasised the capitalizing of expenditure on employee recruitment and development, using the historical-cost approach. The money spent on recruiting and training of employees was treated as a capital investment to be amortized over several years, since the benefits were presumed to continue over that period. R.G. Barry Corporation presented the human resource accounting information as an addendum to its regular financial statements in its report to stockholders. However, the primary use of information is for managerial control and decision making.

Several other firms, including the accounting firm of Touche Ross & Company and Lester Witte & Company, Bank of America, A.T.&T. and several others have experimented with various forms of human resource accounting, but for internal reporting only.

In India, several companies in the 1970s began to reflect the value of their human resources in their annual reports—not forming part of the audited financial statements; BHEL, Engineers India Ltd., Cement Corporation of India, and ACC—to name a few. Significantly, ONGC has drawn up for its human resources a 20-year plan frame ending in the year 2005 AD. It reflects the value of its human resources in the social balance sheet appended as supplemental information to the annual report.

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## 15.2 THE CONCEPT OF HUMAN RESOURCE ACCOUNTING

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The subject of offering measures of the values of people to the organisation through human resource accounting has tempted human resource professionals and academics alike. Flamholtz and Lacc (1981) have defined this approach in the following way :

“Human Resource Accounting may be defined as the measurement and reporting of the cost and value of people as organisational resources. It involves accounting for investment in people and their replacement costs, as well as accounting for the economic values of people to an organisation.”

They go on to describe the value of an employee to the firm as ‘the present value of the difference between wage and marginal revenue product. An employee's value derives from the ability of the firm to pay less than the marginal revenue product.

According to the American Association of Accountants (AAA), human resource accounting is “a process of identifying and measuring data about human resources and communicating this data to information to interested parties”. This definition considers human resource accounting to be an extension of basic functions of accounting namely, identification, measurement and communication of data related to human resources.

In an earlier definition, Flamholtz refers to human resource accounting as “accounting for people as an organisational resource”. According to him, it involves measuring the costs incurred by business firms and other organisations to recruit, select, hire, train and develop human resources. It also involves measuring economic value to of people to organisations. Eric Flamholtz's definition makes it clear that the term ‘human resource’ recognizes people who form organisational resource.

To quote Davidson, "Human resource accounting in the measurement of the cost and value is a term used to describe a variety of proposals that seek to report and emphasise the importance of human resources knowledgeable, trained and loyal employees in a company's earning process and total assets".

In the words of R.L. Woodruff Jr., Vice President, R.G. Barry Corporation the company which undertook pioneering work (1960s) in developing human resource accounting—"human resource accounting is an attempt to identify and report investment made in resources of the organisation that are not presently accounted for under conventional accounting practice." Woodruff further considers it to be an information system that tells management what changes over time are occurring to the human resources of the business.

In the foregoing definitions one may not find unanimity on what human resource accounting is but one point should not escape notice : the significance of information. Human resource accounting system requires and produces a great deal of information.

### 15.3 HUMAN RESOURCE ACCOUNTING : OBJECTIVES IN RELATION TO THE PROCESS OF HUMAN RESOURCE MANAGEMENT

The point has been made that human resource accounting is a tool designed to assist in the effective and efficient use of management of human resources. Let us now consider the managerial role of human resource accounting more fully. The model shown in figure 1 indicates that human resource management is a system designed to convert human resource inputs into output in terms of human services.

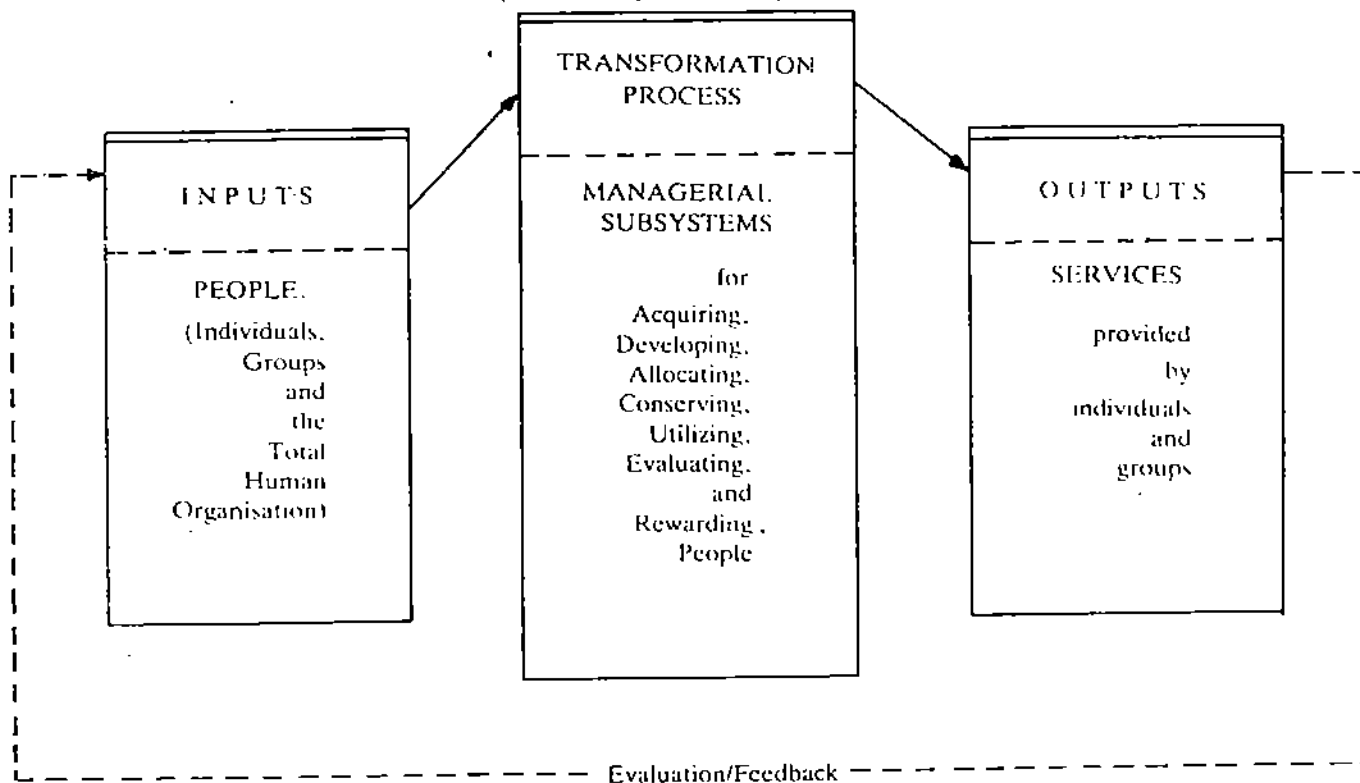


Figure 1 : "Raw" Human Inputs transformed Into Valuable Human Output

The inputs are people : individuals, groups, and the total human organisation. The transformation process refers to the managerial sub-systems for acquiring, developing, allocating, conserving, utilizing, evaluating and rewarding people. The outputs are the services provided by individuals and groups. In other words, the model "transforms" "raw" human resources into valuable human services.

Now let us briefly examine each sub-system : what it covers and its enabling features

Sub-system in the transformation process	What It Includes	Enabling Features
1) Acquisition of Human Resources	Recruiting Selecting Hiring	Forecasting manpower requirements, Cost estimation, and Manpower budgets  Provides non-monetary surrogate measures in order to test management potential while choosing the person possessing the greatest future value to the organisation.
2) Development of Human Resources	Training to enhance technical, administrative & intellectual skills	Facilitates decisions involving the allocation of resources by measuring the expected rate of return in proposed investments in training

(Human resource accounting information can greatly influence the acquisition and development of policy for human resources in more than one way, such as :

- review of budget proposals,
- employment decisions with regard to
  - level of entry
  - outside experience
  - extent of training
- provide estimates of historical and current costs in order to help management
  - assess trade offs between the costs of recruitment from outside or development from within.)

3) Allocation of Human Resources	Assigning people to various organisational tasks and roles	Helps management to allocate people to jobs in a way that will optimize job productivity, human resource development and individual satisfaction.
4) Conservation of Human Resources	Maintaining Mechanical capabilities of individuals and functional effectiveness of management teams.	Provides early warning signals to suggest the need for special attention to conservation and prevent their depletion.
5) Utilization of Human Resources	Process of using human services to achieve organisational objectives	Provides a unifying framework to help managers utilize human resources effectively and efficiently.  It makes managers think of strategies designed to influence the value of people
6) Evaluation and Reward of Human Resources	Assessing the value of people to an organisation with respect to performance and their promotability	Helps human resource evaluation process by developing valid and reliable methods of measuring the value of people to the organisation.  Rewards include compensation, promotion and symbolic 'rewards'. The sub-system enables administration of organisational rewards in relation to a person's value to the organisation.



To conclude, human resource accounting from a managerial perspective offers a way of thinking about the management of an organisation's human resources. It is based on the notion that people are valuable organisational resources. Another aim of human resource accounting is to help investors obtain information about an organisation's human assets. It may be noted that current financial accounting practice treats all expenditures for investment in human resource as 'expenses' rather than as 'assets'. This convention results in a distorted measure of an organisation's return on investment. Therefore, it does not offer a clear picture to the investor who attempts to value an organisation's human resource on this basis alone. Nevertheless, the point is established that human resource accounting does have a potential role for management and investors.

Figure II presents a model which contemplates the aims and objectives of human resource accounting.

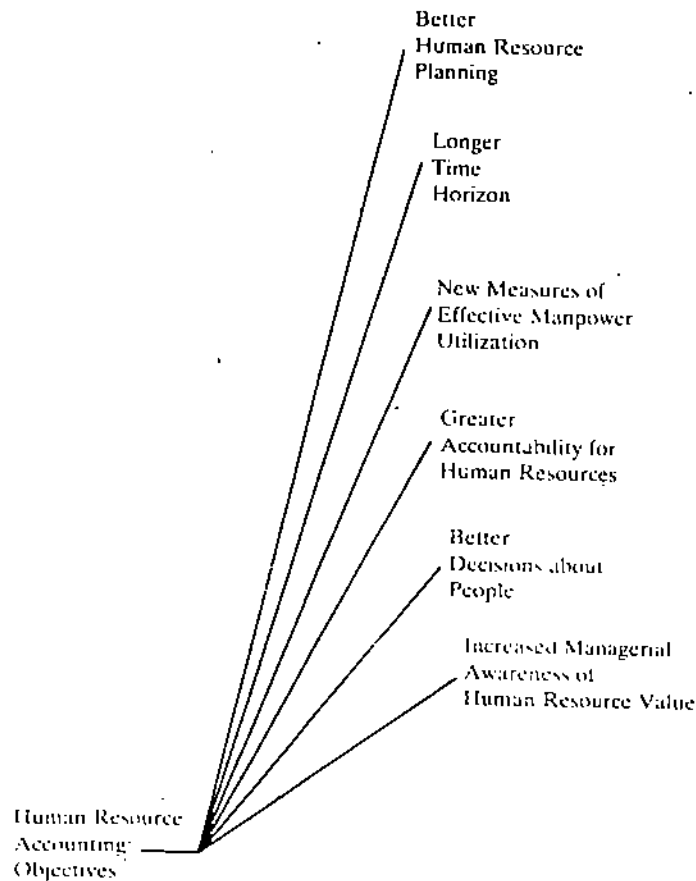


Figure II. Objectives of Human Resource Accounting .

To conclude, we can say that human resource accounting aims at (1) increased managerial awareness of the values of human resources, (2) better decisions about people, based on improved information systems, (3) greater accountability on the part of management for its human resources, (4) developing new measures of effective manpower utilization, (5) enabling a longer time horizon for planning and budgeting, and (6) better human resource planning.

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## 15.4 INFORMATION AS A KEY FACTOR IN HUMAN RESOURCE ACCOUNTING

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Let us consider an example.

One sales organisation operating through its several regional offices, numerous branches and employing a sizeable field work force, during the review of its operations is confronted with the following 'reported' problems concerning the planning and effective utilization of its manpower :

Nature of the problem	Basis of report
1) High turnover among its field operatives (salesmen)	General impression (no data available)
2) Rising administrative cost : the personnel costs accounting for a very high component.	Based on opinion
3) Lack of attention on the part of managers towards developing their people.	Viewed as apparent Only one or two branches monopolized in offering promotable manpower causing heartburning amongst the remaining branches.

A close look at these problems through an outside consultant brings out three basic lacunae in the organisation system :

- a) absence of a measure of planning of manpower beyond a short-term (one year),
- b) obvious lack of information about the firm's manpower, and
- c) absence of a position of senior executive in the corporate office for overseeing and coordinating various human resource activities and effective utilization of the company's manpower.

The criticality of (b) can be easily understood because without reliable system of information, effective planning and control is just not possible.

The primary purpose of human resource accounting is to help management plan and control the use of human resources effectively, and efficiently. In that process, it must require a great deal of information that can serve the management, the investors and other outside agencies. Basically, the information it involves measuring the costs incurred by business firms and other organisations to recruit, select, hire, train and develop human assets, besides measuring the economic value of people to the organisation.

In the example given above, the organisation identified the following kinds of informations and their use :

#### Information needs in human resource accounting

Kind of information	Purpose of information
1) Information for Human Resource Planning :	To facilitate manpower planning To gather data on actual costs of recruitment and selection, training, etc.
	Collection of figures over the past period provide reasonable basis for projecting future expenses.
2) Information for control of personnel costs;	To provide reasonable means of evaluating the performance of management in controlling costs.  The information helps develop a system of standard costs for personnel recruitment, selection and training. That would help further in analyzing costs.
3) Information for control of turnover costs :	To increase management's awareness of the costs of turnover and to devise steps to control it.
4) Information for evaluation of management effectiveness :	To increase the accountability of management in providing measurements that were effective in developing and utilizing people over a longer period of time.



- 6) **Indirect Costs :** Costs that can not be traced directly to a specific activity, product or activity process, but which are incurred for general use in more than one activity, etc.
- 7) **Actual Costs :** Costs actually incurred to attain some specified end.
- 8) **Standard Costs :** Costs that ought to be incurred to attain some specified end under certain pre-defined conditions.
- 9) **Opportunity Costs :** The income or revenue foregone or sacrificed in order to acquire or replace a resource.

The several accounting concepts of costs just defined have significant applications in human resource accounting. The concept of human resource cost has its roots in the general concept of cost. Human resource costs are costs incurred to acquire or replace people. Like other costs, they have expense and asset components. Similarly, other descriptions of costs viz, outlay and opportunity costs, direct and indirect costs, actual and standard costs—all fit into the costs framework of human resource accounting.

There are two ways to measure costs through human resource accounting : (1) the original or historical cost of human resources, and (2) the replacement costs of human resources.

**The concept of original cost**

The original cost of human resources may be defined as the sacrifice that was actually incurred to acquire and develop or replace people. It includes costs of recruitment, selection, hiring, placement, orientation, on-the-job training.

It has elements of direct costs as well as indirect costs. For example, a trainee's salary is a direct cost, while the time spent by the supervisor during training contributes to the indirect cost. For managerial uses of the cost data, it is desirable to include the opportunity costs incurred in the original costs of human resources. However, since the reliability of the opportunity costs can always be questioned, it should not form part of reporting to investors and external users.

**Measurement of original cost of human resources**

The definition of original cost of human resources refers to the sacrifice that would have to be incurred to acquire and develop people. This means that any attempt for measurement of original human resource costs essentially requires measurement of acquisition costs and training costs. These costs will include both direct costs and indirect costs of acquiring and developing human resources. Figure III presents a model for the measurement of original human resource costs :

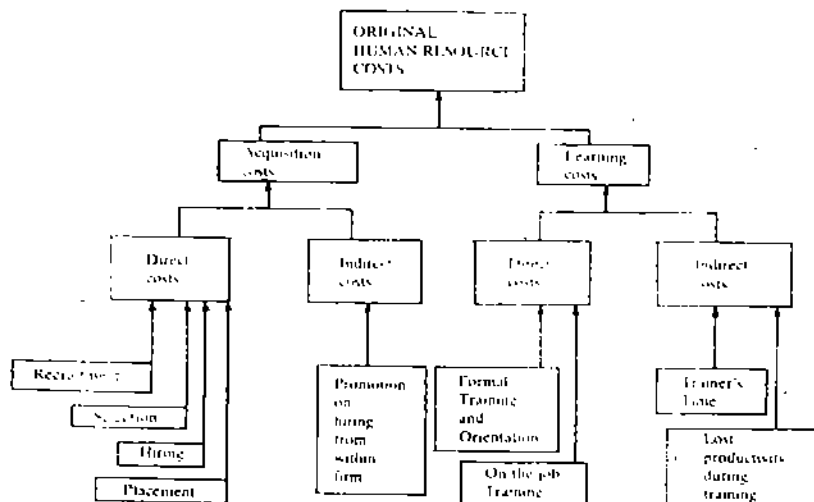


Figure III. Measurement for Original Human Resource Costs : A model

### Replacement cost of human resources

The Replacement Cost of Human Resources may be defined as the sacrifice that would have to be incurred today to replace human resources presently employed. It included the costs attributable to the turnover of a present employee as well as the cost of acquiring and developing the replacement. From individuals, the scope can be extended to include the groups of individuals and the human organisation as a whole. Replacement refers to acquiring a substitute capable of rendering an equivalent set of services for a single specified position, meaning thereby that the context is the positional replacement.

There is another notion of replacement cost : personal replacement cost. It refers to the sacrifice that would have to be incurred today to replace a person presently employed with a substitute capable of rendering an equivalent set of services in all the positions the former might occupy. Here the context is the person, and the replacement cost is the cost of replacing a set of services provided by one person with an equivalent set of services to be provided by another.

#### Measurement of replacement

The concept of replacement cost of human resources is defined as the sacrifice that would have to be incurred today to replace human resources presently employed. The context of replacement cost measurement can be positional as well as personal.

There are three basic components of positional replacement cost : (1) acquisition costs, (2) learning costs, and (3) separation costs. While the first two components have been reflected in the earlier model, the separation costs refer to the costs incurred as a result of a position holder leaving an organisation. It may have both direct and indirect components and may include such costs as (i) cost of a vacant position while search for replacement is on, (ii) opportunity cost because of loss of services, and (iii) cost of lost productivity prior to the separation of an individual from the organisation if such tendencies were apparent.

Figure IV presents a model for measurement of human resource replacement costs (positional replacement cost)

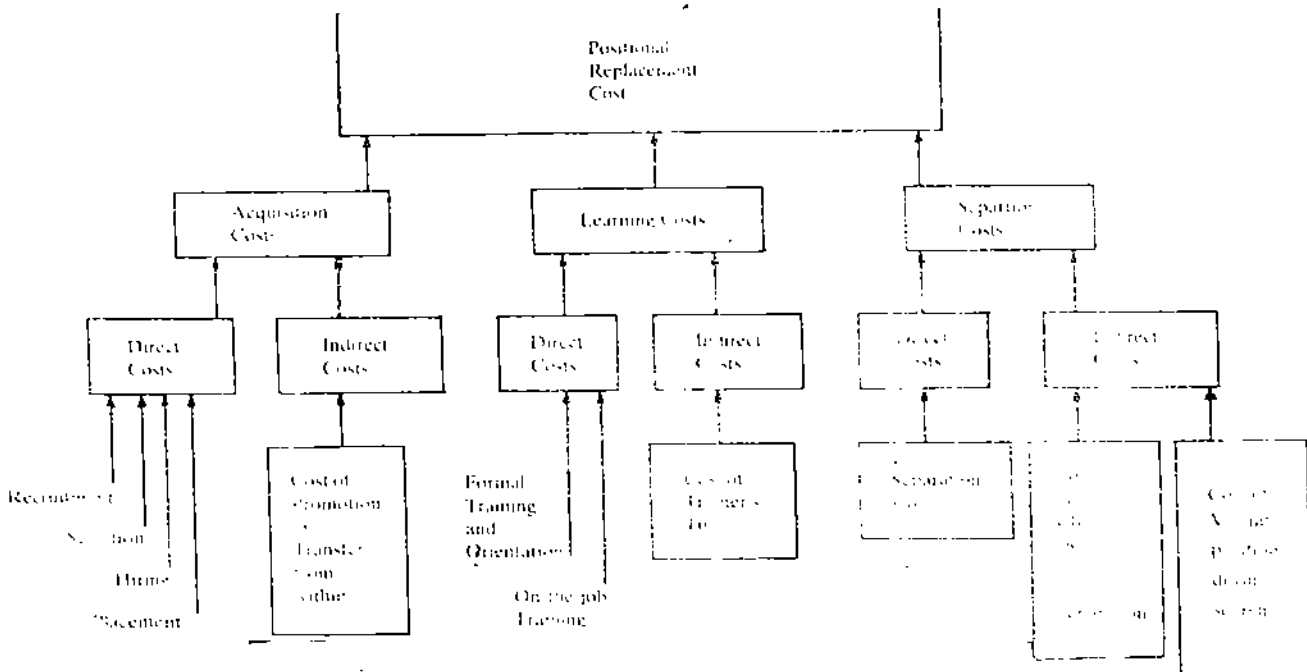


Figure-IV: Measurement of Human Resource Replacement Costs - A Model  
 (Adaptation from Eric G. Hammel's "Human Resource Accounting - A New Approach to  
 Replacement Costs", *Human Resource Management*, Spring 1973, p. 11)

#### Personal replacement cost

The concept of personal replacement cost refers to the sacrifice that would have to be incurred today to replace a person with a substitute capable of providing a set of

services equivalent to the individual being replaced. The notion refers to the cost of replacing a person with a functionally equivalent substitute rather than the cost of replacing him with the best available substitute. The notion of personal replacement cost is quite similar to the concept of economic value.

15. Study the following information and make an attempt to work out the human resource accounting figures.

- a) Recruitment and Selection
- b) Training for a period of one year.

Compare the cost figures worked out by you independently with the accounting figures maintained by the organisation. Analyse the differences and comment.

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## 15.6 HUMAN RESOURCE VALUATION : CONCEPT AND DETERMINANTS OF VALUE

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One of the major objectives of human resource accounting is to develop reliable measures of effective manpower utilization. Both monetary and non-monetary measures are needed for use in (1) decision making involving the acquisition, development and allocation of human resources, and (2) monitoring and evaluating the degree to which the management has effectively and efficiently utilized the human resources.

For the sake of conceptual clarity, let us first take a look at some of the terms used in the context of human resource value with their simple definitions :

**Value :** The present worth of the services an object is anticipated to render in the future.

**Value of human organisation :** Present worth of its expected future services to an enterprise.

**Individual's value to an organisation :** The present worth of the set of future services a person is expected to provide during the period he is anticipated to remain in the organisation.

**Group's value to an organisation :** The present value of its expected future services.

**Individual's expected conditional value :** The amount the organisation could potentially realize from his services if he maintains organisational membership during the period of his productive service life.

**Individual's expected realizable value :** The amount actually expected to be derived, taking into account the person's likelihood of turnover.

**Productivity :** The set of services an individual is expected to provide while occupying his present position.

**Promotability :** The set of services the individual is expected to provide if and when he occupies higher-level positions in his present or different promotion channels.

**Individual skills :** The currently developed potential of an individual to provide services to the organisation.

**Rewards :** The benefits derived by the system.

**Instrumental individual rewards** : Rewards which are administered in relation to individual effort.

**Instrumental system rewards** : Rewards which accrue by virtue of membership in the system.

**Activation level** : The neuropsychological counterpart of the notion of motivation.

**Human resource valuation** : The process of assessing the value of people to an organisation. It involves measuring the productivity and promotability of people.

**Causal variables** : Independent variables that can be directly or purposely altered by the organisation and its management.

**Goal emphasis** : Behaviour that stimulates an enthusiasm for meeting the group's goal or achieving excellent performance.

**Intervening variables** : Variables that reflect the internal state, health and performance capabilities of an organisation.

**Managerial behaviour** : The dimensions of supervisory behaviour effecting influencing group effectiveness.

**Organisation structure** : The structural relationship among organisational roles.

**Peer group behaviour** : The support, interaction, facilitation, work facilitation, and goal emphasis provided by the subordinate peer group.

**Support** : Behaviour that enhances someone else's feeling of personal worth and importance.

**Team Building** : Behaviour that encourages members of the group to develop close, mutually satisfying relationship.

**Work facilitation** : Behaviour that help achieve goal attainment.

**End-result variables** : Dependent variables that reflect the results achieved by an organisation.

#### **What is human resource value ?**

The concept of human resource value is derived from the economic concept of value. The economic concept of value has two dimensions :

- 1) Utility i.e., value in use, and
- 2) purchasing power i.e., exchange value.

Value is the present worth of the services an object is anticipated to render in the future. Thus if an object has no future use, it has no value.

Similarly, human resource value is the present worth of people's expected future services. The concept can be applied to individuals, groups, and the total human organisation.

In the preceding definitions we have noted that an individual's value to an organisation is the present worth of the set of future services he is expected to provide during the period he is anticipated to remain in the organisation.

#### **What determines the individual's value ?**

Unlike other resources, human beings cannot be 'purchased' or owned by organisations, and hence relatively free to either serve or turnover. From the organisation's viewpoint, this suggests a dual aspect to an individual's value : one aspect is the amount that organisation could potentially realize from his services if he stays with the organisation (maintaining organisational membership) during the period of his productive service life, and the other aspect refers to the amount actually expected to be derived, taking into account the person's likelihood of turnover.

Two models of the determinants of human resource value are relevant here : one by Flamholtz that identifies the determinants of individual value and the other by Likert, that explains the determinants of group value.

In Flamholtz's model—Fig. V the ultimate measure of a person's value is expected realizable value. This is comprised two variables : conditional value (potential value) and the probability that the person will remain with the firm during his expected service life. The conditional value of a person depends upon both the skills and the activation level that ultimately leads to his promotability, transferability and productivity. The organisational determinants of a person's conditional value include the degree to which the role assignment corresponds with the employee's skills and personal goals, and the reward system used by the firm. Then, the probability of a person staying in an organisation (maintaining organisational membership) is directly related to the degree of job satisfaction that the employee feels.

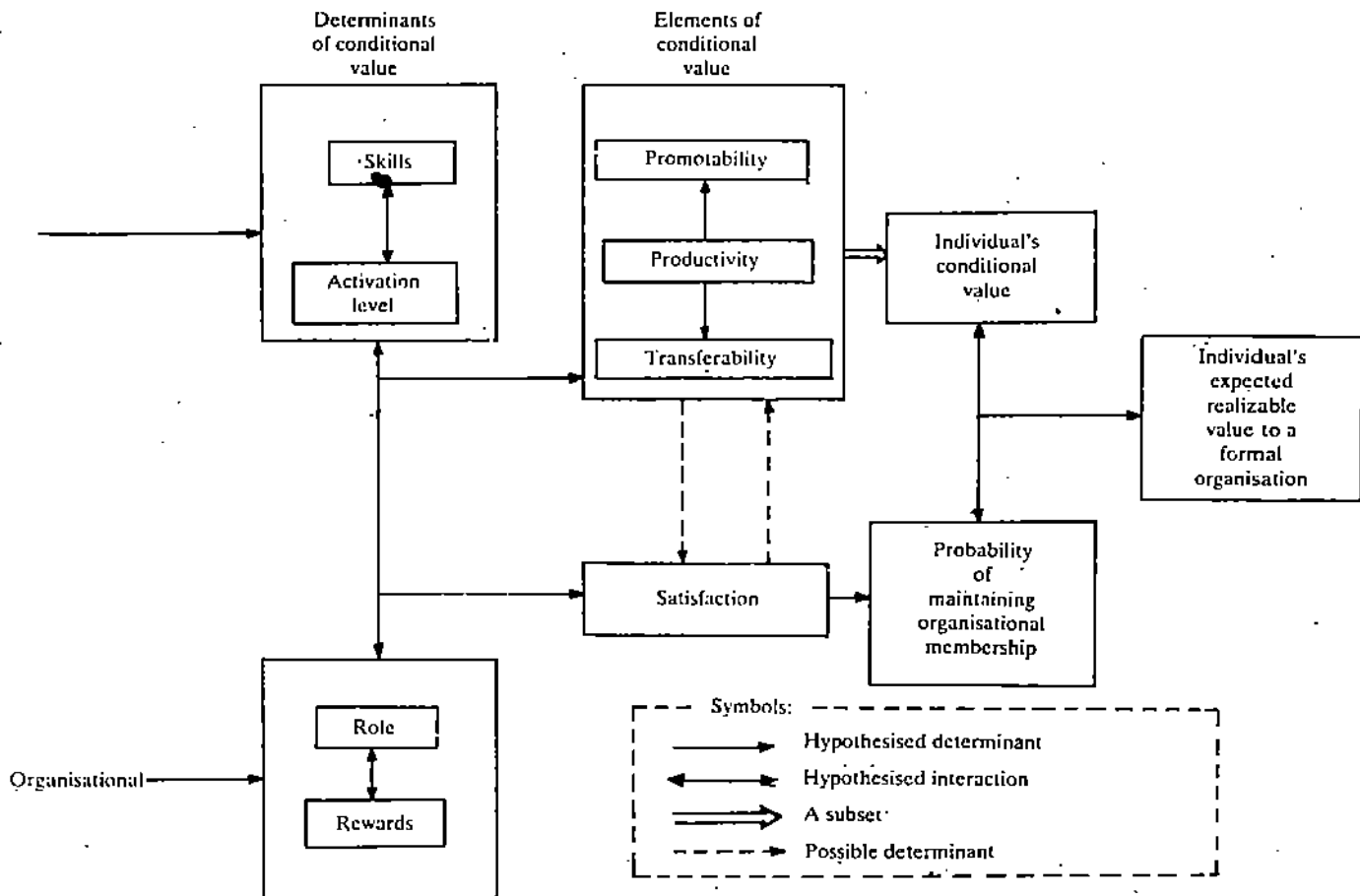


Figure V : Flamholtz's Model of Determinants of an Individual's Value to Formal Organisation

#### The Likert and Bowers model; Causal, intervening and end-result variables

Likert and Bowers propose causal, intervening, and end-result variables which affect the group's value to an organisation. Causal variables are those which are controllable by the organisation, while intervening variables reflect organisational capabilities. Both these variables determine the end-result variables of the organisation. Fig. VI presents the lists of elements used to measure human organisational causal and intervening variables.

The causal variables include managerial behaviour and organisational structure.

The intervening variables include group processes, peer leadership, organisational climate, and the subordinates' satisfaction.

The end-result, dependent variables reflect the achievements of the organisation or the total productive efficiency in terms of sales, costs, earnings, market performance, etc.

Each of these models identifies variables that determine the value of people to organisations. These variables must be taken into account in measuring the value of people as organisational resources, as we move on further, to consider human resource valuation methods.



Fig. VI

Elements used to measure human resource organisational causal and intervening variables.

**MANAGERIAL LEADERSHIP**

- Support: Friendly; pays attention to what you are saying; listens to subordinates' problems.
- Team building: Encourages subordinates to work as a team; encourages exchange of opinions and ideas.
- Goal emphasis: Encourages best efforts; maintains high standards.
- Help with work: Shows ways to do a better job; helps subordinates plan, organise and schedule; offers new ideas, solutions and problems.

**ORGANISATIONAL CLIMATE**

- Communication flow: Subordinates know what is going on; superiors are receptive; subordinates are given information to do job well.
- Decision making practices: Subordinates are involved in setting goals; decisions are made at levels of accurate information; persons affected by decisions are asked for their ideas; know-how of people of all levels is used.
- Concern for persons: The organisation is interested in individual's welfare; tries to improve working conditions; organises work activities sensibly.
- Influence on department: From lower-level supervisors, employees who have no subordinates.
- Technological adequacy: Improved methods are quickly adopted; equipment and resources are well managed.
- Motivation: Differences and disagreements are accepted and worked through; people in organisation work hard for money, promotions, job satisfaction and to meet high expectations from others and are encouraged to do so by policies, working conditions, and people.

**PEER LEADERSHIP**

- Support: Friendly; pays attention to what others are saying; listens to others' problems.
- Goal emphasis: Encourages best efforts; maintains high standards.
- Help with work: Shows way to do a better job; helps others plan, organise, and schedule; group shares with each other new ideas, solutions to problems
- Team building: Encouragement to each other to work as a team; emphasis on team goal; exchange of opinions and ideas.

**GROUP PROCESS**

- Planning together, coordinating efforts.
- Making good decisions, solving problems.
- Knowing jobs and how to do them well.
- Sharing information.
- Wanting to meet objectives.
- Having confidence and trust in other members.
- Ability to meet unusual work demands.

**SATISFACTION**

- With fellow workers; superiors; jobs; this organisation compared with others; pay; progress in the organisation upto now; chances for getting ahead in the future.

Ref: Rensis Likert and David G. Bowers, "Improving the Accuracy of P/L Reports by Estimating the Change in Dollar Value of the Human

## 15.7 HUMAN RESOURCE VALUE : MONETARY MEASUREMENTS

Monetary measures of human resource value are needed in order to translate manpower resources into a common denominator on which many organisation decisions are based. These decisions pertain to individuals, groups, and the total human organisation. For this purpose, different methods of valuation are needed because each of these aggregations of human resources is a distinct unit of organisational decision making, and as yet there is no single valuation measure presently developed that can be validly used for all the three.

We have seen earlier that the main aspects of a person's value to an organisation are :

- 1) Expected conditional value, and
- 2) Expected realizable value.

There are two related approaches to measuring the expected conditional value, and expected realizable value : direct and indirect. In the direct approach, there is an attempt to derive a direct or principal measure of a person's value. The indirect approach involves application of various possible surrogates or proxy measures of economic value in order to obtain measures of expected conditional and expected realizable value.

### Flamholtz's Stochastic rewards valuation model

One method proposed for measuring a person's expected conditional value and expected realizable value directly, is Flamholtz's Stochastic Rewards Valuation Model. The process of movements of people through organisational 'states' or roles is known as stochastic process. The Stochastic Rewards Valuation model is based on the assumption that an individual generates value as he occupies and moves along organisation roles and renders service to the enterprise. The model presupposes that a person will move from one state (role) of the system (organisation) to any other state during a specified time period. Exit also is considered a state.

In order to follow the model, the following steps are necessary :

Step 1	Define the mutually exclusive set of "states" and individual may occupy in the system.
Step 2	Determine the value of each state to the organisation.
Step 3	Estimate a person's expected tenure in the organisation.
Step 4	Find the probability that the person will occupy each possible state at specified future times.

In principle, a person's expected conditional value and expected realizable value can be equal, provided the person is certain to remain in the organisation in the predefined set of states throughout his expected service life. However, the basic problem in applying this model in actual organisations is the difficulty of obtaining valid and reliable data inputs of (1) the value of a service state, (2) the individual's expected tenure, and (3) the probabilities of occupying each defined state at specified times—although Flamholtz continues to explore the various possibilities of measuring these dimensions.

There are a number of other valuation models which have been developed over the past two decades and more. We will consider some of these here. The methods suggested throw considerable light on the possible approaches to the problems of human resource valuation.

### Lev and Schwartz's present value of future earnings model

Lev and Schwartz model is based on the economic concept of recognising humans as wealth-providing sources of income, and relies on measurement of such wealth as a present value of future income streams. The exercise involves (1) classification of employees into homogenous group profiles, (2) estimation of earnings for each such

group, and (3) calculation of the present value of earnings of each group, using an appropriate discounting rate. Thus the discounted future expected income stream represents the present value of services. The model has some limitations : firstly, it ignores the possibility of the individual making exit from the organisation for reasons other than death, and secondly, it ignores the likelihood of role changes beyond one's normal career channel. Further, by simply aggregating individuals into groups on the basis of age, qualification, etc. is no guarantee of aggregate measures in value because of synergism.

#### **Hermanson's adjusted discounted future wages model**

In this method the approach is to adjust the discounted future salary wage payments to people by performance efficiency factor (which is a ratio based on the return on investment derived by the specified firm relative to all other firms in the economy for a specified period).

Apparently, compensation measures such as salary are considered potentially useful to develop a surrogate valuation model. However, in reality they may not necessarily bear a significant relation either to an individual's value or to his current productivity. There are several other limitations such as organisational compensation policy, wage and salary structure, influence of unions which may not accurately reflect the individual value.

#### **Hekimian and Jones competitive bidding model**

In this model Hekimian and Jones propose a method whereby the concept of opportunity cost is applied by establishing an internal labour market within the organisation through the process of competitive bidding. Under this approach, all managers will be encouraged to bid for any scarce employee they want and the one who is able to acquire his services put the bid price as his investment base in respect of that employee.

However, this method also has problem of valuation such as to the adoption of a procedure by a manager to decide the amount of bid.

#### **Validation of surrogate valuation**

In a review of the several methods discussed above Flamholtz observes that it is not sufficient to assert that the various methods bear an identity or close correspondence between the true unknown economic value of individuals or surrogate measures. Nevertheless, according to Flamholtz "at best these assertions should be reviewed as testable hypotheses" pointing to the need of validation through further research.

#### **Monetary measurements : Valuation of groups**

Earlier, the point has been mentioned that the value of a group may not be equal to the values of the individuals comprising the group. Mainly, the differential is attributed to synergism. It is not valid merely to apply methods for individual valuation to group valuation, and vice versa. Hence the need to develop methods for the valuation of groups per se.

In organisations, there are several types of groups. For example, one classification is departments, plants, divisions, levels, or just work groups. Another way of grouping is based on the consideration whether the group comprises an expense centre or a profit centre. The methods for valuing groups constituting profit centres include :

- 1) The Economic Value Method,
- 2) The Unpurchased Goodwill Method, and
- 3) The Human Organisational Dimensions Method.

Methods for valuation of expense centers include :

- 1) Capitalisation of Compensation,
- 2) Replacement Cost Evaluation, and
- 3) Original Cost Evaluation.

#### **Brummet, Flamholtz, and Pyle's economic value model**

The Brummet, Flamholtz, and Pyle model follows the principle that a resource's value is equal to the present worth of the future services it can be expected to

provide, and therefore, it can provide a basis of measuring the value of a group of people. According to this method, groups of human resources should be valued by estimating their contribution to the total economic value of the firm. Thus a firm's forecasted future earnings are discounted to determine the firm's present value, and a portion of these earnings is allocated to human resources according to their contribution.

#### **Hermanson's unpurchased goodwill model**

According to Hermanson, the unpurchased goodwill notion is based on the premise that "the best available evidence of the present existence of unowned resources is the fact that a given firm earned a higher than normal rate of income for the most recent year". To rephrase the statement, Hermanson is proposing that supranormal earnings are an indication of resources not shown on the balance sheet, such as human assets. Even though his method of valuing human resources is explicitly intended for use in a company's published financial statements rather than for internal consumption, this would necessarily involve forecasting future earnings and allocating any excess above normal expected earnings to human resources of the organisation. However, the assumptions would be subject to the uncertainties involved in any forecast of future events.

This method suffers from several limitations: Firstly, since the method limits recognition of human resources to the amount of earnings in excess of normal, the human resource base that is required to carry out normal operations is totally ignored, leading to the result that human assets will be understated so to say. Secondly, the method only uses the actual earnings of the most recent year as the basis for calculating human assets which limits the scope of making very much discounts the reliability of forecasts of future earnings that could be more relevant for managerial purposes.

#### **Human organisational dimensions method**

Based on the Likert-Bowers model of group's value to an organisation discussed earlier, the method follows the assumptions on relationship among causal, intervening and end-result variables. The assumptions are that the causal variables influence the intervening variables, which in turn determine the organisation's end-result variables. According to Likert, changes in the key dimensions of the human organisation are considered to be dependable indicators for forecasting changes in the productivity and financial performance of an organisational unit that the human organisation will be able to sustain over substantial periods of time. Moreover, when changes in the human organisational dimensions occur, predictions can be made of the magnitude of changes that will occur subsequently in the output performance of that human organisation.

#### **How changes in value of human organisation are estimated in monetary terms?**

For computing a monetary estimate of the expected change in the value of human organisation, the following steps are suggested:

- 1) Using Likert's 'survey of organisation questionnaire', the key dimensions of human organisation are measured on a Likert scale at specified time periods in non-monetary terms.
- 2) The scaled responses to questionnaire items called 'scores' are then standardized by statistical methods to take into account the degree of variability of the set of responses. This is done in respect of responses for each time period.
- 3) The difference between two standardized scores from one period to the next is then calculated. This difference (called delta) represents the change in an index of specified dimensions of the human organisation.
- 4) From present changes in dimensions of the human organisation, the expected future change in end-result variables is estimated. Specifically, for a given variable the delta is multiplied by coefficient or correlation between that variable and end-result variable. This provides an estimate in standard scores of the anticipated change in the end-result variable attributable to a change in the human organisational dimension believed to cause that change.
- 5) Lastly, convert the standard scores into the measuring units of the end-result variables.

Likert points out further that changes in the productive capability of a firm's human organisation cannot be assessed correctly unless periodic measurements of causal and intervening dimensions of that organisation are taken regularly. Otherwise current profit and loss reports often encourage them to believe that changes are occurring that are the exact opposite of the shifts that actually are taking place. When profits go up, it is often assumed that the human organisation has become more productive, but steps taken to maintain earnings or prevent losses may actually result in a decrease in the productive capability of the human organisation, even though a shortrange increase in reported profits is attained. That has happened in many firms.

There is some controversy about the validity and reliability of this method. According to Flamholtz, this method is worthy of future research because at present its validity and feasibility have not yet been established. Likert, however, maintains that the method is feasible where reliable and valid measurements of the coefficients are available.

#### **Methods for valuation of expense centre groups**

Flamholtz proposes three methods for valuation of expense centre groups using surrogate measures for their valuation :

- 1) Capitalisation of Compensation
- 2) Replacement Cost Valuation, and
- 3) Original Cost Valuation.

#### **Capitalization**

This method refers to capitalizing a person's salary and using it as a surrogate measure of human value that can be applied to the valuation of groups as well as individuals. By this method the value of the group would be estimated as the aggregate of the value of the individuals comprising the group.

Capitalization of compensation method is not considered an ideal method of group valuation because of the possible effects of synergy—a point that has been noted more than once. Still the method at best may provide a valid first approximation of a group's value to the firm.

#### **Replacement cost valuation**

The replacement cost of a group is defined as the sacrifice that would have to be incurred today to recruit, select, hire, train and develop a substitute group capable of providing a set of services equivalent to that of a group presently employed.

Valuation on replacement cost basis would essentially involve considerable subjective estimates which at once brings in the question of validity. Nevertheless, replacement cost can be used as one possible surrogate measure provided the synergism factor must not be ignored.

#### **Original cost valuation**

The method involves estimation of the original cost of recruiting, selecting, hiring, training, and developing a firm's existing human organisation. The need for using original costs to value groups arises out of the necessity of estimating the cost of developing an effectively functioning team. The teamwork is a process associated with effective communication, decision making, coordination and other usual organisational processes. However, the point must be noted that while estimation of costs of certain activities namely, recruiting, selecting . . . etc., is possible, there are no methods of measuring the costs of developing organisational processes.

#### **Valuation of the total human organisation**

The valuation of the total human organisation employs virtually the same methods as appropriate measures for valuation of groups, subject to specific method being used for valuing groups constituting profit centres or expense centres as the case may be.

## 15.8 HUMAN RESOURCE VALUE : NON-MONETARY MEASUREMENTS

Although accounting has conventionally used money as its basic unit of measurement, the American Accounting Association's Committee to Prepare a Statement of Basic Accounting Theory recently suggested that there is no reason why money alone should be the unit of measurement used in accounting. (The committee stated that "there is also no reason why the only measure applied should be 'value' in terms of dollars.") It is entirely conceivable that accounting should deal with various measures and do so in a systematic form, say, a vector or number of measures". The committee concluded that the future scope of accounting was likely to include non-monetary as well as monetary measures.

### Use of non-monetary measurements

In human resource accounting, non-monetary measures of human resource value have significant uses. Firstly, they may be used for **decisions** that do not require monetary measurements -- such as layoff decisions. Secondly, non-monetary measures may also be used as **surrogates** for monetary measures. For example, a ranking of people according to their conditional value may be used as a surrogate for the monetary measurement of conditional value. Thirdly, non-monetary measures may be used to **predict monetary measures**. Hence the importance to develop valid and reliable non-monetary methods of measuring human resource value.

In this context, let us revert to Flamholtz's model to consider the methods of measuring each determinant of an individual's value to human organisations. We referred to the terms expected realizable value and conditional realizable value. **Expected realizable value** and **conditional value** can be measured by ranking methods. The probability of maintaining membership can be measured by actuarial and subjective probabilities. The elements of **conditional value** (productivity, transferability and promotability) can be measured by personnel research and appraisal methods as well as by certain objective measures. **Productivity** corresponds to measures of performance and it can be measured by performance objective indices and by management appraisal. **Promotability** and **transferability** can be measured in terms of the measures of potential such as psychometric tests and subjective assessments. **Satisfaction** can be measured by attitude surveys. **Skills** can be measured by a capability inventory and motivation can be measured by an attitude questionnaire. A person's role can be measured by job analysis, while **rewards** can be measured through attitude surveys.

All of the variables contained in the Likert-Bowers model of the determinants of a group's value can be measured by the "survey of organisations", an attitude questionnaire. Taylor and Bowers have conducted tests of the predictive validity and the internal consistency reliability of this measurement instrument. Their findings led to reconceptualisation of an earlier version of the Likert-Bowers model and provide a foundation for the development of non-monetary measurements of a group's value to an organisation.

## 15.9 DEVELOPING A HUMAN RESOURCE ACCOUNTING SYSTEM : SOME DESIGN CONSIDERATIONS

The design and implementation of human resource accounting system is a matter of individual organisational capability and its perception of accounting and objectives of developing a framework for the accounting of the human resources. While one firm may draw satisfaction with the most rudimentary system, the other organisation may feel the need for much more advanced capability. Similarly, the appropriateness and validity of a certain human resource accounting capability may render itself less appropriate and not valid with the changed conditions both inside and outside the organisation.

Flamholtz suggests five human resource accounting systems by type of capability

represented by systems I, II, III, IV and V. Similarly, five functions of human resource management viz., human resource planning, human resource decision making, conservation, evaluation and management efficiency control are listed. These are arranged in a matrix form (Figure VIII) to indicate the human resource accounting capabilities provided by each system level:

	System I	System II	System III	System IV	System V
<b>Human Resource Management Functions</b>	<b>Prerequisite Personnel system</b>	<b>Basic HRA system</b>	<b>Intermediate HRA system</b>	<b>Advanced HRA system</b>	<b>Total HRA system</b>
<b>I</b>					
<b>Human Resource Planning</b>	Manpower skills inventory Replacement tables	Estimated costs of recruitment training, etc.	Replacement costs	Standard and actual personnel costs Stochastic manpower mobility models Manpower	Stochastic rewards valuation model HR value simulation
			simulations		
<b>II</b>					
<b>Human Resource Decision making:</b>					
<b>A. Budgetary</b>	Personnel costs included in 'Genl & Adm. expenses	Personnel costs budgeted separately	Budgetary system for recruitment, trg. etc. Budget replacement costs	Budget Standard for actual costs Original and replacement costs	Human Capital budgeting Budget ROI on human capital investment.
<b>B. Policy</b>	Traditional selection, training and placement methods	Value-oriented selection decisions	Recruitment vs. training trade off analysis	Manpower assignment optimization models	Value-based compensation
<b>III</b>					
<b>Human Resource conservation:</b>					
<b>A. After-the-fact</b>	Turnover rates	Turnover cost	Replacement cost	Opportunity cost	HR Value depletion
<b>B. Before-the-fact</b>	n.a.	Attitudinal data	Expected Turnover cost	Expected Opportunity costs HR accountability	Expected conditional and realizable value depletion
<b>Human Resource Management Functions</b>	<b>System I</b>	<b>II System</b>	<b>III System</b>	<b>IV System</b>	<b>V System</b>
<b>IV</b>					
<b>Human Resource Evaluation</b>	Performance and potential ratings	Perceived value rankings	Performance predictions of potential value	Measurements of economic value of groups	Measurement of economic value of individuals

		interval scaling of value			
V					
Human Resource Management Efficiency control	n.a.	Comparison of actual costs with historical costs	Comparison of budgeted and actual costs Variance analysis	Comparison of actual costs against standard Variance analysis	Inter-unit comparison of costs.

Figure VII. CAPABILITY PROVIDED BY HRA SYSTEMS I TO V

From the above matrix it would be seen that at the two extremes, there is System I which consists of nominal but very elementary human resource accounting capability. At the other end, there is System V which constitutes the total HRA system, representing the maximal human resource accounting capability.

These five systems can be taken as five levels and five stages of developing human resource accounting capabilities. A firm may presently be in the first stage of human resource accounting capability and desire to reach the fifth stage. Now depending upon its own circumstances, it may be quite rational to move from stage to stage to incrementally increase the firm's capability or alternately, to choose a higher system IV or V.

#### Factors influencing the choice of a system

There are four major factors influencing the choice of a human resource accounting system:

- 1) type of organisation,
- 2) existing human resource accounting capability,
- 3) size and structure of organisation, and
- 4) availability of data for developing human resource accounting.

Let us briefly examine each factor.

#### Type of organisation

There are three main criteria which influence the type of organisation:

- 1) The degree of human capital intensiveness. For example, most service organisations are highly people intensive (the postal department is a case in point) and therefore, likely to lead to account for human resources.
- 2) The number of highly educated or skilled personnel, such as airlines pilots and crew—individually as well as in groups.
- 3) The number of people occupying similar positions i.e. each performing virtually similar functions. For example, field officers in banks and insurance companies. Large numbers provide a basis for comparability and of performance and potential as well as data for purposes of analysis.

#### Size and structure of organisation

A small organisation may not need at all a formalised human resource accounting system because the management's personal knowledge of operations. However, the larger the organisation, the more likely it's need for human resource accounting. Here, the human resource accounting system must be designed as a subsystem to the overall management information system.

#### Existing Human Resource Accounting capability

We have already noted from the matrix (fig. VII) that an organisations PERSONNEL SYSTEMS and human resource capability will also influence the choice of a human resource accounting system. For example an organisation with a computerized human resource information system can be expected to develop system V capability with much ease than an organisation with inadequate personnel system.

#### Potential for Developing HR Accounting

Much of the potential for developing human resource accounting capability will be



judged from the fact of availability of and accessibility to the required data. In some organisations, particularly in service organisations being labour intensive, most of the data is available as a routine aspect of business operations, even though it might lack the advanced capabilities. In other organisations, where some or all the required data is not available, the potential for developing human resource accounting is to intermediate (system III) capability. Exceptionally, an organisation may wish to move directly from minimal to advanced human resource accounting capability.

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## 15.10 PHASES IN THE DESIGN AND IMPLEMENTATION OF A HUMAN RESOURCE ACCOUNTING SYSTEM

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We have noted earlier that different organisations require different degrees of human resource accounting capability. Flamholtz's systems I to V are not all embracing or standards to match a specific organisation's human resource accounting needs. Instead, in each case, an appropriate system will have to be tailor made to a firm's particular needs.

### 5 Phases

The five phases in the design and implementation of human resource accounting system are:

- 1) Identifying human resource accounting objectives,
- 2) Developing human resource accounting measurements,
- 3) Developing a data base for the system,
- 4) Pilot testing the system for validity, and
- 5) Implementing the system.

#### 1) HR Accounting objectives

The objectives of the human resource accounting system should basically stem from the management's requirements from human resource information. These requirements must be defined explicitly. As a part of the detailed study and analysis of the organisation's human resource management process, each organisational unit responsible for human resource management should define its functions, indicate the kinds of decisions made, their relative frequency and information needed to make those decisions. These information needs must be analyzed in relation to the present information flow and the new information to be developed must be made specific. Once this analysis is done, the basis of the human resource accounting system in terms of its scope and objectives can be defined. The objective may be a total HRA system, a problem oriented system, a partial system such as a budgeting system for human resource costs, or setting of standard costs.

#### 2) Developing Human Resource Accounting Measurements

The first step is to select the types of HRA measurements desired. The choice needs to be exercised between : (a) single measurement or a set of measurements, (b) monetary or non-monetary measurements, and (c) measurements of costs or value, or both. In the next step, before these measurements selected can be translated into useable forms, their validity and reliability must be tested.

#### 3) Developing Human Resource Accounting Data base

The inputs required for human resource accounting constitute the data base. These include cost data, time sheets, psychological measurements, etc. In typical cases, it will become necessary to restructure the organisation's accounting classification with a view to ensuring that all personnel related costs are classified separately. Otherwise these cost elements are "buried" covered in one single classification "administration and general expenses". The accounting classification should be organised in relation to responsibility centres such as recruitment, training, management development, etc.

In addition to restructuring the accounting classification, the data base must also include non-financial information such as employee attitude survey feedback as a standard ongoing basis. Similarly, the probabilistic estimates of employee mobility

compiled in the human resource planning process must be taken into account for measuring human resource value.

#### **4) Pilot Testing the System**

After the objectives have been defined, measurements developed, and necessary database is made available, the next step is to pilot test the system. Care should be taken that the test is not influenced by extraneous problems, and that the management's support and cooperation is available throughout the processes of design and development of the system.

In the light of the feedback from pilot testing, the system should be reviewed for its utility, efficiency, cost, etc. aspects and suitably modified, if considered necessary.

#### **5) Implementing the Human Resource Accounting System**

The final phase is the implementation process. It involves essentially, standardizing the input output documents, forms, etc., and familiarizing the personnel with the new system. Staff orientation as to the uses, purposes, uses and methods is a key activity in order to operationalize the human resource accounting system without much hassels.

Any system, over a period of time, may become out of step either because of inherent constraints or changes in the management needs. A continuing review would make the system more responsive to the changing needs, and modifications required would be easy to carry out either by simple adjustments in the existing system or by following the design and implementation process, if need be.

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### **15.11 HUMAN RESOURCE ACCOUNTING : NEED FOR FURTHER VALIDATION AND RESEARCH**

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The theory and practice of human resource accounting has developed so far on the basis of research and case studies of individual organisations taken up by academics and professional managers. But it has not fully developed yet. Flamholtz raises several issues which have remain unresolved :

- 1) the utility of human resource accounting to management,
- 2) the scope of measurement methods,
- 3) the development of operational systems (delivery systems),
- 4) the impact of human resource accounting on organisations, and
- 5) the suitability and methodology of reporting on human assets for external users.

#### **1) Utility to management**

The basic question is : what impact does human resource accounting makes on the human resource planning and decision making? In the absence of human resource accounting information, would the management's actions be the same? Or may be, regardless of the availability of measurement of human resource cost and value, decisions taken on the basis of "intutions" give better results? The questions of this type have not yet been answered. In particular, the effects of output human resource accounting information on decision making, the effects of output from actual human resource accounting decisions systems on management decisions and investor decisions, and the process and product of using human resource accounting in organisations—all need to be researched in depth. Further, the question of utility must be examined from the perspective of the individual, the group, and the organisation as a whole.

#### **2) Method of measurement**

In human resource cost measurement, the reliability of data derived from any existing accounting system for human resource costs remains much in doubt. According to Flamholtz, the researchers do not know the degree to which the data derived from the system of accounting for investment in people (R.G. Barry Corporation), measuring replacement costs are reliable.

As for human resource value measurement, the method proposed by Likert & Bowers to value the human organisation needs to be validated before it can be used in the proposed way. On the validity of the Stochastic Rewards Valuation model proposed by Flamholtz, the author himself in another research study has commented that "the model has divergent convergent and discriminate validity when measures of economic value and a surrogate (compensation) are used for service state values.

### 3) Development of operational systems

Regardless of the fact that some companies have attempted to develop and implement operational systems of human resource accounting, there is need to develop systems that can serve more generally the organisations in different industries of varying sizes and mixes of people. There is also scant information on several basic issues such as:

- How significant are human resource costs?
- What are the most significant components of human resource costs?
- What is the relationship between investment in human resources and other resources of the organisation?
- What is the ratio of investment in human assets and other assets using different benchmarks for different industries, functions, etc? .

Hence the need for basic empirical research to provide answers to these and other pertinent questions.

### 3) Organisational impact of HRA

In the pioneering work at R.G. Barry Corporation, it is claimed that the very fact of attempting to account for firm's human resources focuses the attention of all managers towards people. In the absence of further validation through research, doubts are often raised if this very act (accounting for firm's human resources) going to change the behaviour and attitude of all managers towards people. Questions are asked :

- does the availability of measurements of human resource cost and value increase management's awareness of the importance of human resources?
- how does a person react to knowledge of his/her value as a human resource?
- how does a persons react to this knowledge in relation to his peers?
- what are the complications that can arise through misuse of human resource accounting measurements?
- under what types of managerial style is HRA most appropriate?
- will there be resistance to HRA measures by managers and the working personnel?

These are crucial questions which can be answered only through future research.

### 5) Reporting for external users

Another important issue is the unresolved problem of reporting on human assets. More research is required to develop valid and reliable methods for measuring and reporting investment in human resources in financial statements. Then there is the potential problem of manipulation of earning in the process of capitalizing and amortizing human assets.

And lastly, while economists agree that there does exist a relationship between investments in human resources (human capital) and growth on the macro economic level, there is not much of evidence that the same relation holds for the individual firm. Hence, future research is needed to study the effect of investment in human capital on corporate rate of return.

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## 15.12 SUMMARY

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Human Resource Accounting provides another type of information that holds promise for the evaluation of human resource management and in turn, human resource planning policies and practices which invest in effective utilization of these resources. Human resource accounting places value on the human assets of the firm,

means accounting for an organisation's employees among its other resources, measuring both the cost and the value of the personnel. In other words, it involves accounting for investment in people and their replacement costs, as well as accounting for the economic values of people to an organisation. Several models and methods for developing measures in monetary and non-monetary terms are proposed.

However, there seems to be a diversity in suggested ways of measuring the investments. HRA concept is well theorized, but still there are many questions remaining unanswered, and the practical problems of gathering data and reliable measures of costs and values have been overwhelming. Further, human assets are outside the concept of "ownership" and thus far there being no clear cut method to measuring the "changing characteristic" of human resources, in a wholly convincing way. Nevertheless, much of the value of human resource accounting lies in encouraging managers to consider investments in manpower planning in a more positive way. As management the HRA concept itself, represents a new way of thinking about people as assets. It has a great potential for future research.

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### 15.13 KEY WORDS

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**Investment Approach:** denotes policy of treating certain human resource costs as an investment to be depreciated during an employee's expected employment.

**Humanistic Values:** refers to positive beliefs about the potential and desire for growth among employees.

**Incremental Values:** indicates almost limitless values that are created by a positive organisational climate.

**Organisational climate:** refers to human environment within which an organisation's employees work.

**Organisational climate approach:** necessitates use of periodic surveys to determine ways in which the organisational climate has improved or deteriorated.

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### 15.14 SELF-ASSESSMENT QUESTIONS

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- 1) What is human resource accounting? Discuss with reference to a few definitions of human resource accounting.
- 2) What is cost? Define the following concepts of cost:
  - a) Original cost
  - b) Replacement cost
  - c) Outlay cost
  - d) Opportunity cost
  - e) Standard cost
- 3) What is Human Resource Cost?
- 4) What are the major components of the original cost of human resources?
- 5) What decision situation can you think of in which non-monetary measures of human resource value would be better than monetary values? In what circumstances would the reverse be true?
- 6) A person can have a negative value to the organisation. Do you agree with this statement? Why or why not? How would you measure the negative value of a person to the organisation?

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