

HUMAN RESOURCE ACCOUNTING

UNIT – I

The Non accounting of human resources and the change occurring therein, of an organization may provide a poor picture of the profits and profitability of the organization.

Likert

Objectives of the Study:

This unit aims to provide a basis for the conceptual framework of Human Resource Accounting. An attempt is made to highlight the following aspects.

- ❖ Development of the Concept of HRA
- ❖ An Historical Score Card
- ❖ Meaning and Definition of HRA
- ❖ Importance
- ❖ Objectives of Human Resource Accounting
- ❖ Limitations of Human Resource Accounting
- ❖ HRA for managers & HR Professionals
- ❖ Investment in Human Resources
- ❖ Quality of Work Force and Organizations' Performance
- ❖ Efficient use of Human Resource
- ❖ Enumerating the Assets
- ❖ Calculating the Market Value of Assets
- ❖ Human Capital.

INTRODUCTION

To ensure growth and development of any organisation, the efficiency of people must be augmented in the right perspective. Without human resources,

the other resources cannot be operationally effective. The original health of the organization is indicated by the human behaviour variables, like group loyalty, skill, motivation and capacity for effective interaction, communication and decision making.

Men, materials, machines, money and methods are the resources required for an organization. These resources are broadly classified into two categories, viz., animate and inanimate (human and physical) resources. Men, otherwise known as the human resources, are considered to be animate resources. Others, namely, materials, machines, money and methods are considered to be inanimate or physical resources.

The success or otherwise of an organization depends on how best the scarce physical resources are utilized by the human resource. What is important here is that the physical resources are being activated by the human resources as the physical resources cannot act on their own. Therefore, the efficient and effective utilization of inanimate resources depends largely on the quality, caliber, skills, perception and character of the people, that is, the human resources working in it. The term Human resource at macro level indicates the sum of all the components such as skills, creative abilities, innovative thinking, intuition, imagination, knowledge and experience possessed by all the people. An organization possessed with abundant physical resources may sometimes miserably fail unless it has right people, human resources, to manage its affairs. Thus, the importance of human resources cannot be ignored. Unfortunately, till now generally accepted system of accounting this important asset, viz., the human resources has not been evolved.

For a long period, the importance of human resource was not taken care of seriously by the top management of organizations. Therefore, at this juncture, it becomes imperative to pay due attention on the proper development of such an

important resource of an organization. Let us now concentrate our discussion on the conceptual framework of the Human Resource Accounting.

Development of the concept of Human Resource Accounting:

“Human Resource Accounting” is the offshoot of various research studies conducted in the areas of accounting and finance. Human resource is an asset whose value gets appreciated over the period of time provided placed, applied and developed in the right direction. Till the recent past, organizations took few efforts to assign monetary value to human resource in its accounting practice. Behavioural scientists initiated efforts to develop appropriate methodology for finding out the value of human resource to the organization. They were against the conventional accounting practice for its failure to value the human resource of an organization along with physical resources.

The traditional concept suggested that expenditure on human resource is treated as a **charge against revenue** as it does not create any physical asset. At present there is a change in this concept and the expenses incurred on any asset (as human resources) should be treated as capital expenditure as it yields benefits which can be derived for a long period of time and could be measured in monetary terms.

The following are the reasons why Human Resources Accounting has been receiving so much attention in the recent years.

Firstly, there is genuine need for reliable and complete management of human resources.

Secondly, a traditional framework of Accounting is in the process to include a much broader set of measurement than was possible in the past.

The people are the most important assets of an organization but the value of this asset yet to appear in financial statements. It does not get included in management information systems too. Conventional accounting of human

resources took note of all expenses of Human capital formation which does not seem to be correct or meeting the actual needs.

Human Resource Accounting is the measurement of the cost and value of people to the organization. It involves measuring costs incurred by the organizations to recruit, select, hire, train and develop employees and judge their economic value to the organization.

Historical Score Card of Human Resource Accounting:

The concept of considering the human beings as an asset is an old one. The importance which Emperor Akbar gave to the nine jewels (courtiers) is a strong evidence for the same. The history of our freedom movement will not be complete without mentioning the names of distinguished freedom fighters such as Shri Motilal Nehru, Mahatma Gandhi, Sardar Vallabh Bhai Patel and several others but no effort was made to assign any monetary value to such individuals in the Balance Sheet of the Nation.

Sir William Petty was the pioneer in this direction. The first attempt to value the human beings in monetary terms was made by him in 1691. Petty considered that labour was ‘the father of wealth’ and it must be included in any estimate of national wealth without fail. Further efforts were made by William Far in 1853, Earnest Engle in 1883. The real work started only when behavioural scientists vehemently criticized the conventional accounting practice of not valuing the human resources along with other resources. As a result, accountants and economists realized the fact that an appropriate methodology has to be developed for finding the cost and value of the people to the organization. For a long period of time, a number of experts have worked on it and produced certain models for evaluating human resources. The important among them are Shultz, Flamholtz, Lav and Schwartz, and Kennath Sinclare.

Human Resource Accounting was first started with simple measures of trying to convert output data into contributions. When an HR programme had

effected a change in the output especially for organizations operating on profit basis, its value was determined by calculating the profit contribution.

Rensis Likert in the 1960s was the first to research in HR and emphasized the importance of strong pressures on the HR's qualitative variables and on its benefits in the long-run. According to Likert's model, human variables can be divided into three categories: (i) causal variables; (ii) intervening variables; and (iii) end-result variables. The interaction between the causal and intervening variables affect the end-result variables by way of job satisfaction, costs, productivity and earnings.

Historically the first major systematic effort at evaluation was made by RG Barry Corporation of Columbus in 1967. Their annual report detailed the inauguration of HRA procedures developed by the company to enable them to report accurate estimates of the worth of the organization's human assets. Accumulated costs under the categories namely recruiting and acquisition; formal training and familiarization; informal training and familiarization; experience; and development were accounted. Costs for the expected working lives of individuals (or sometimes shorter periods) were amortized, and unamortized costs (for example, when an individual left the company) were written off. That is, today, known as the Historical Cost Approach to employee valuation. Improvement over the years has helped evolve other bases of valuation, which have been providing supplemental information.

Today they fall under three major categories namely replacement cost, present value of future earnings and present value to the organization, i.e. profit contribution.

The formation of a separate Ministry for human resources development by Government of India with an initial outlay of Rs.1500 crores infused a new vigour into all human development programmes of the nation. Creating such portfolio by every company creates the necessity of accounting for the same.

Human resources is one of the most valuable assets and needless to say that the human beings co-ordinate the best of machines, men and money. Computers, of course, may challenge the human resources but computer is not a brain and it simply carries out human commands. Therefore, Accounting for such human resources is very essential for the organization.

Meaning and Definition of Human Resource Accounting:

The concept of human resource accounting can be better understood if one goes through some of the important definitions given by the competent authors in the accounting field.

1. The American Accounting Society Committee on Human Resource Accounting defines it as follows:

“Human Resource Accounting is the process of identifying and measuring data about human resources and communicating this information to interested parties.” In simple terms, it is an extension of the accounting principles of matching costs and revenues and of organizing data to communicate relevant information in financial terms.

2. Mr. Woodruff Jr. Vice President of R. G. Batty Corporation defines it as follows:

“Human Resource Accounting is an attempt to identify and report investments made in human resources of an organization that are presently not accounted for in conventional accounting practice. Basically it is an information system that tells the management what changes over time are occurring to the human resources of the business.”

3. M.N. Baker defines Human Resource Accounting as follows:

"Human resource accounting is the term applied by the accountancy profession to quantify the cost and value of employees to their employing organization"

4. Another management consultant Stephen Knauf has defined HRA as:

"The measurement of quantification of human organization inputs such as recruitment, training, experience and commitment"

Thus, human resources accounting may be defined as, "a process of accounting which identifies, quantifies and measures human resources for the use of management to cope up with the changes in its quantum and quality so that equilibrium could be achieved in between the required resources and the provided human resources"

In short, human resource accounting is the art of valuing, recording and presenting systematically the worth of human resources in the books of account of an organization. This definition brings out the following important characteristic features of human resource accounting:

1. Valuation of human resources
2. Recording the valuation in the books of account
3. Disclosure of the information in the financial statements of the business.

Importance of Human Resource Accounting:

Human Resource Accounting provides useful information to the management, financial analysts and employees as stated below:

1. Human Resource Accounting helps the management in the Employment, locating and utilization of human resources.
2. It helps in deciding the transfers, promotion, training and retrenchment of human resources.
3. It provides a basis for planning of physical assets vis-à-vis human resources.
4. It assists in evaluating the expenditure incurred for imparting further education and training in employees in terms of the benefits derived by the firm.
5. It helps to identify the causes of high labour turnover at various levels and taking preventive measures to contain it.

6. It helps in locating the real cause for low return on investment, like improper or under-utilization of physical assets or human resource or both.
7. It helps in understanding and assessing the inner strength of an organization and helps the management to steer the company well through most adverse and unfavourable circumstances.
8. It provides valuable information for persons interested in making long term investment in the firm.
9. It helps employees in improving their performance and bargaining power. It makes each of them to understand his contribution towards the betterment of the firm vis-à-vis the expenditure incurred by the firm on him.

Objectives of Human Resources Accounting

The aim of HRA is to depict the potential of HR in monetary terms, while casting the organization's financial statements. The concept can be examined from two dimensions: (i) the investment in HR; and (ii) the value of HR. The expenditure incurred for recruiting, staffing and training and developing the HR quality is the investment in HR. The fruits of such investments are increased productivity and profit to the organization. The yield that the investment generates is considered as the basis for HR value.

Putting in a capsule the main objectives of HRA are to

- Improve management by analyzing investment in HR
- Consider people as its asset
- Attract and retain qualified people
- Profile the organization in financial terms.

The main objective of human resource accounting is to facilitate the management to get information on the cost and value of human resources. Human resources accounting brings to light the quantum of human resources and indicates the right control of conservation, depletion and appreciation of it

in the right perspective. It provides data to the interested persons about the cost of human resources and correspondingly comparing it with the benefit obtained out of its utilization.

The objective of HRA is not merely the recognition of the value of all resources used by the organization, but also includes the management of human resource which will enhance the quantity and quality of goods and services. The basic objective of HRA is to facilitate the efficiency of human resource. It is basically adopted to treat human resources as assets, to generate human data about human resources, to assign value to human resources and to present human assets in the balance sheet.

The main objectives of a HR Accounting system are as follows:

1. To furnish cost value information for making proper and effective management decisions about acquiring, allocating, developing and maintaining human resources in order to achieve cost effective organizational objectives.
2. To monitor effectively the use of human resources by the management.
3. To have an analysis of the human asset i.e. , whether such assets are conserved, depleted or appreciated.
4. To aid in the development of management principles, and proper decision making for the future by classifying financial consequences, of various practices.
5. In all, it facilitates valuation of human resources, recording the valuation in the books of account and disclosure of the information in the financial statement.
6. Further, it is to help the organization in decision making in the following areas:
 - a) Direct Recruitment Vs promotion.
 - b) Transfer Vs. Retention.

- c) Retrenchment Vs. Retention
- d) Impact on budgetary controls of human relations and organizational behaviour.
- e) Decision on reallocation of plants, closing down existing units and developing overseas subsidiaries etc.

Limitations of Human Resource Accounting:

Human Resource Accounting is the term used to describe the accounting methods, system and techniques, which coupled with special knowledge and ability, assist personnel management in the valuation of personnel in financial terms. It presumes that there is great difference among the personnel in their knowledge, ability and motivation in the same organization as well as from organization to organization. It means that some become liability too instead of being human assets. HRA facilitates decision making about the personnel i.e., either to keep or dispense with their services or to provide training. There are many limitations which make the management reluctant to introduce HRA. Some of the attributes are:

- i) There is no proper clear-cut and specific procedure or guidelines for finding cost and value of human resources of an organization. The systems which are being adopted have certain drawbacks.
- ii) The period of existence of human resource is uncertain and hence valuing them under uncertainty in future seems to be unrealistic.
- iii) There is a fear that HRA may dehumanise and manipulate employees.
- iv) For e.g., an employee with a comparatively low value may feel discouraged and develop a complex which itself will affect his competency to work.

- v) The much needed empirical evidence is yet to be found to support the hypothesis that HRA as a tool of the management facilitates better and effective management of human resources.
- vi) In what form and manner, their value to be included in the financial statement is the question yet to be classified on which there is no consensus in the accounting profession.
- vii) As human resources are not capable of being owned, retained and utilized, unlike the physical assets, there is problem for the management to treat them as assets in the strict sense.
- viii) There is constant fear of opposition from the trade unions as placing a value on employees would make them claim rewards and compensations based on such valuation.
- ix) Another question is, on value being placed on human resources how should it be amortized. Is the rate of amortization to be decreasing, constant or increasing? Should it be the same or different for different categories of personnel?
- x) In spite of all its significance and necessity, tax laws do not recognize human beings as assets.
- xi) There is no universally accepted method of human asset valuation.
- xii) As far as our country is concerned human resource accounting is still at the developmental stage. Much additional research is necessary for its effective application.

HRA for managers & HR Professionals:

HR Professionals must perform a wide variety of functional roles. A functional role is a specific set of tasks and expected output for a particular job. We will briefly discuss the roles played by two HR Professionals: the HR Executive/ Manager and the HR Practitioners

The HR Executive/Manager

The HR executive/manager has primary responsibility for all HR activities. This person must integrate the HRD programs with the goals and strategies of the organization, and normally assumes a leadership role in the executive development program, if one exists. The outputs of this role include long-range plans and strategies, policies, and budget allocation schedules.

One of the important tasks of the HR executive is to promote the value of HRD as means of ensuring that organizational members have the competencies to meet current and future job demands. If senior managers do not understand the value of HRD, it will be difficult for the HRD executive to get their commitment to HRD efforts and to justify the expenditure of funds during tough times. Historically during financial difficulties, HRD programs and HRM has been a major target of cost-cutting efforts. Unless the HR executive establishes a clear relationship between HRD expenditures and organizational effectiveness (including profits), HRD programs will not receive the support they need.

The role of the HR executive has become more important and visible as organization make the necessary transition to a global economy. The immediate challenge to HR executives is to redefine a new role for HRD during this period of unprecedented change.

According to Jack Bowsher, former director of education for IBM, when HRD executives "delve deeply into reengineering, quality improvement, and strategic planning, they grasp the link between workforce learning and performance on the one hand, and company performance and profitability on the other." The HRD executive is in an excellent position to establish credibility of HRD programs and processes as tools for managing in today's challenging business environment.

As organization has adjusted to environmental challenges, the roles played by HR professionals have changed. Based on the ASTD (American

Society for Training and Development) study results, Pat Mclagan states that contemporary professionals perform nine distinct roles, which are described below:

1. **The HR strategic adviser** consults strategic decision makers on HRD issues that directly affect the articulation of organization strategies and performance goals. Output includes HR strategic plans and strategic planning education and training programs.
2. **The HR systems designer and developer** assist HR management in the design and development of HR systems that affect organization performance. Outputs include HR program designs, intervention strategies, and implementation of HR Programs.
3. **The organization change agent** advises management in the design and implementation of change strategies used in transforming organizations. The outputs include more efficient work teams, quality management, intervention strategies, implementation, and change reports.
4. **The organization design consultant** advises management on work systems design and the efficient use of human resources. Outputs include intervention strategies, alternative work designs, and implementation.
5. **The learning program specialist (or instructional designer)** identifies needs of the learner, develops and designs appropriate learning programs, and prepares materials and other learning aids. Outputs include program objectives, lesson plans, and intervention strategies.
6. **The instructor/facilitator** presents materials and leads and facilitates structured learning experiences. Outputs include the selection of appropriate instructional methods and techniques and the actual HRD program itself.
7. **The individual development and career counselor** assists individual employees in assessing their competencies and goals in order to develop a

realistic career plan. Outputs include individual assessment sessions, workshop facilitation, and career guidance.

8. The performance consultant (or coach) advises line management on appropriate interventions designed to improve individual and group performance. Outputs include intervention strategies, coaching design, and implementation.

9. The researcher assesses HR practices and programs using appropriate statistical procedures to determine their overall effectiveness and communicates the results to the organization. Outputs include research designs, research findings, and recommendations and reports.

Challenges to organizations and HR Professionals

Many challenges face organizations as a new century unfolds before us. Michael Hitt and his colleagues have identified increasing globalization and the technological revolution, in particular, the internet has a two primary factor that make for a new competitive landscape they suggest a number of actions that organizations can take to address the uncertainty and turbulence in the external environments. These actions include developing employee's skills, effectively using new technology, developing new organizational structures and building cultures that fosters learning and innovation. These obviously have a great deal to do with human resource development. We will add to and build upon that list to present five challenges currently facing the field of HRD. These challenges include:

1. Changing workforce demographics
2. Competing in a global economy
3. Eliminating the skills gap
4. Meeting the need for lifelong individual learning
5. Facilitating organizational learning.

Each of these challenges has potential impact on HRD.

Though HRA has had its inception in the 1960s, it is an evolving concept, which is still at nascent stage. Nonetheless, its relevance to organizations is immensely gaining ground. Armed with various measures and figures, managers and firms can focus on decisions regarding investments in areas of intellectual capital that will have the greatest payoff for the firm.

Internally and externally, HRA would provide information to investors and other staff, of the value of human resources, the returns on investments in training and development and also the link between HR interventions and financial results.

As a way to assess human capital, HRA represents a new way of thinking strategically.

Boudreau has noted that measures of HRA and benefits can serve a variety of purposes. It acts as a catalyst for change. It tends to enhance the credibility of the HR functioning for it was not long back that this function was looked down disdainfully as only a department to organize picnics for its staff. HRA also helps persuade others to support investment in HR and also to improve the quality of HR decisions.

Change is taking place at the tremendous rate. To make it effective and in order to make the team, HR professionals need to develop the business skills of strategic planning and process technology. And the first step towards the sustainable growth is accounting HR in financial terms.

Investment in Human Resources:

There is much debate as to whether the human resources of an organization can be considered as an asset and treated accordingly in the accounting system. There are two schools of thought. One says that human resource is an asset and the other does not agree with this. Now let us see what is

an asset? Asset is anything which is owned by the entity to derive service in future and should have legally enforceable claim.

As such there is no guarantee of deriving benefits from the existing human resources in future and has no sales value like other assets. Therefore, legally, human resource is not an asset claims one school of thought. Besides, company law also does not consider it as an asset.

But the other school is of the opinion that the "human resource is an asset". This school of thought puts forth two contentions in favour of its opinion as follows:

- 1) There is a legal ownership on the "human resource" which could in practice prevent him from joining the other organizations unless properly relieved by complying with some formalities like giving advance notice of resignation, etc.
- 2) Uncertainty of deriving benefits is a common problem to all assets, not only with the human resources. Deriving future benefit may be a big question mark in other assets too due to many factors. 'Obsolescence' may be the one.
- 3) Generally, an asset needs maintenance and development support from the organization so as to derive benefits over a long period of time. Similarly, human resources as an asset also is in need of training and development in order to maintain the service potential for the employer.
- 4) R.L. Woodruff Junior observed that treating people as assets and accounting them is logical and satisfactory to the expectation of the future economic benefits.

The above analysis supports the view that the human resource is an asset as they are valuable resources to an organization and investments in such asset will help organization to improve.

Now, what is an investment?

Any resource pressed into service for producing good and services is called investments. Thus, investment refers to expenditure on new plant and

machinery, capital equipments, physical construction of new buildings together with any change in the stock of goods produced. There are two basic determinants of investment.

- (i) The expected rate of profit which the business hopes to realize from investment, and
- (ii) The rate of interest.

The level of investment is guided by the level of expected profits. Firms will invest, only if it is profitable. Further an important cost associated with investment is the cost of borrowing capital, which is the rate of interest. Of these two, the expected rate of profit is more influential than the rate of interest.

Cost of Human Resources

As human resource is considered as an asset, any expenditure incurred in the acquisition and accumulation of human resource will be treated as an investment. Cost of human resources represents sacrifice that will have to be incurred today to acquire and develop people in future. The cost of human resource otherwise called Historical cost of human resources is the investment in human resources which has both Revenue (expense) and Capital (asset) components. This cost may be classified as follows:

1. Acquisition Cost
2. Training (Development) Cost
3. Welfare Cost and
4. Other Costs

Acquisition cost comprised the following costs:-

- (i) Recruitment Cost
- (ii) Selection Cost
- (iii) Placement Cost
- (iv) Campus Interview Cost

Training (Development) cost includes the following:-

- (i) Formal Training Cost
- (ii) On the Job Training Cost
- (iii) Special Training
- (iv) Development Programmes

Welfare Cost includes the following:-

- (i) Medical Expenditure
- (ii) Canteen Expenditure
- (iii) Specific and General Allowances
- (iv) Children Welfare Expenses
- (v) Other Welfare Expenditure

Other Costs include the following:-

- (i) Safety Expenditure
- (ii) Ex-gratia
- (iii) Multi-trade incentives
- (iv) Rewarding Suggestions

The following paragraphs give a detailed enumeration of the various costs involved in the human resources accounting.

I. Acquisition Cost

It refers to the costs incurred in acquiring the right man for the right job at the right time and in right quantity. It includes the expenses incurred on recruitment, selection; entire cost is taken into consideration including those who are not selected.

a) Recruitment cost: It is the cost incurred to identify sources of human resources both from within and outside the organization. For example, cost of recruiting materials, administrative expenses, advertising costs, agency fees, recruiter's salary and travel and outstation costs.

b) Selection cost: It depends on several factors such as the type of personnel being recruited and the method of recruitment. The cost of selection depends on the position for which a person is being selected. The higher the position, the greater is the selection cost. It includes cost of application blanks, administrative cost of processing applications, conducting tests, interview, medical examination and the Salaries, materials and consulting fees of the selectors.

c) Placement cost: In deciding upon the placement, the individual's ability, attitude, interest, temperament and aspirations are taken into consideration with reference to the job requirements. The cost of placement can be collected for the purpose of human resource accounting.

2. Training and Development Cost:

It refers to the sacrifice that must be made to train a person either to provide the expected level of performance or to enrich the individual's skill. Training improves the productivity potential of both the individual and the organization. The training cost includes the following:

a) Formal training cost: It refers to the cost incurred in conventional training for the orientation of an individual so that he can operate the work. The remuneration to the training staff and the fixed cost of the training schools are essentially Human Resource Investment items.

b) On the job training cost: Once the employee is placed on the job, he must be trained to do the job efficiently and effectively and in this regard the employee learns while he is on his job. In the process, the costs of mishandling the job, the payments to the employee more than what he actually contributes are on the job training cost. Thus it is an Investment in Human Resource.

c) Special training cost: To achieve the performance standards sometimes specific training programmes may be devised. Such training gets a distinct human resource to the organization. The costs of such training are called special training costs fall under the human resource investment of the organization.

d) Development programmes cost: Employees may be allowed to participate in a variety of development programmes to enrich their faculties. These programmes may range from ordinary lectures to international conferences and seminars. The participants have an opportunity to interact with other executives on national and international level. Such association involves cost such as delegate fees, the travel cost, loss of output during the development programme etc. which are to be accounted for as a human resource investment.

3. Welfare Cost:

Management is after all creation and maintenance of an environment. Therefore, it is a vital function of an employer to provide an atmosphere to the employees to perform their work in healthy, congenial climate conducive to good health and high morale. The expenses incurred for this purpose will facilitate the employee to increase the quality of his civic life. These welfare costs can be classified as follows:

i) Welfare and amenities within the organization: Crèches, rest shelters and canteens, latrines and urinals, washing and bathing facilities, drinking water and occupational safety etc. are the welfare facilities provided by the employer within the organization.

ii) Welfare outside the organization: Social insurance measures, maternity benefit, medical facilities, education facilities, housing, recreational facilities, holiday homes and leave travel facilities are some of the welfare measures provided outside the establishment.

4. Other Costs

There are some other costs which include expenditure on employee safety, ex-gratia, multi-trade incentives and others. In India, Factories Act 1948 has made statutory provisions with regard to employees' health, safety and welfare as follows:

I) Health of workers

- Cleanliness, Disposal of waste and effluents
- Ventilation and temperature
- Dust and fumes
- Artificial humidification
- Overcrowding
- Lighting
- Drinking water
- Latrines and urinals, spittoons etc.

II) Safety of the workers

- Fencing of machinery
- Work on machinery in motion
- Employment of young persons
- Casing of new machines
- Hoists and lifts
- Lifting machines
- Pressure plant
- Protection of eyes, precautions against dangerous fumes
- Tests of stability, etc.

III) Welfare of the workers

- Washing facilities
- Facilities for storing and drying clothing
- Facilities for sitting
- First aid appliances
- Canteens
- Crèches
- Welfare Officers

Rate of Return on Human Resources

The calculation of the rate of return on human resources is vital. When large amount of investment is made on human resource building by not capitalizing such expenditure, the profits of the organization are understated. Rate of return can be used as a performance measure. The rate of return can be calculated on the basis of the following premises:

- a) Measurement of return on organization building.
- b) Measurement of return on organizational utilization.

In order to calculate return on investment, the changes in human resources must be calculated and recorded. To find out the changes in human resources, the total investment in human resources must be calculated.

Measurement of Return on Organization building:

When an investment is made in human resources, it is both for the purpose of organization building and organization utilization. In regard to human resources investment for building the organization, the recruiting and training costs of an individual and group of individuals must be calculated. Also the orientation cost of building the personnel must be taken into account while making such calculations.

Measurement of Return on Organization utilization:

Measurement of benefits obtained through utilization of human resources must be done. Besides, the fulfillment of objectives by the utilization of human resources must also be taken into account for the measurement of utilization.

The clubbed result of measurement of organization building and organizational utilization of human resources will provide return on Investment.

Quality of Work Force and Organizations' Performance:

Work force refers to the employees in the organization in a collective form or a group. The quality of work force in the organization must be high, as this force executes the work to achieve the organizational goals. If this work force experience a sense of frustration due to any factor such as low wages, poor

working conditions, unfavourable terms of employment biased promotional policies, poor training and bad treatment by their supervisors, the unfair conditions of employment, inter personal conflicts, role conflict, job pressure etc, it cannot form a quality work force. The quality of work force results in 'high productivity'. For this, the employees in the organization should have high morale, participating tendency, innovative thinking and develop a work culture to work for the common goal of the enterprise. This could be achieved only when there is quality of work life.

Tight work schedule, speed of machine, tight supervision and control by supervisor and less social interaction, the limited scope of the job, short cycle of operations, lack of opportunity to exercise discretion and initiative, prevalence of bureaucratic controls, oppressive supervision, poor working conditions etc. will affect the quality of work life.

Quality of Work Life (QWL)

Rapid technological advances and their applications in business have resulted in a situation in which employees have started developing the feeling of powerlessness, meaninglessness, normlessness, social isolation and self-estrangement. Such a feeling may result into lesser increase in productivity. This forced the academicians and practitioners to see the workplace problems with a different perspective, that is, social perspective which revealed that productivity of employees was not only affected by the type of technology but also by the environment that prevailed at the workplace. This led to the emergence of concept of quality of work life (QWL) during 1970s.

Purposes of QWL:

Integrating the socio-psychological needs of people in the organization, the unique requirements of a particular technology, the structure and processes of the organization and socio-cultural milieu are the purposes of QWL. From the

shop floor, the concept of quality of work life spread to other parts of the organization covering white-collar employees and even managerial personnel.

What is Quality of Work Life (QWL)?

Suttle has defined quality of work life as “the degree to which members of a work organization are able to satisfy important personal needs through their experiences in the organization”.

J. Richard and J. Lloyd define QWL as "the degree to which members of a work organization are able to satisfy important personal needs through their experience in the organization".

It refers to favourableness or unfavourableness of a job environment for people. Quality of work life improvement refers to any activity for greater organizational effectiveness through the enhancement of human dignity and growth process through which the work force of the organization learn how to work together for betterment to determine for themselves what actions, changes and improvements are desirable and workable.

Richard E. Walton refers to quality of work life in terms of eight broad conditions of employment which are also the measuring factors of QWL. They are:

- i) Adequate and fair compensation.
- ii) Safe and healthy working conditions.
- iii) Opportunity to use and develop human capacities.
- iv) Opportunity for career growth.
- v) Social integration in work force.
- vi) Constitutionalism in the work organization.
- vii) Work and quality of life.
- viii) Social relevance of work.

What work force feels about the work place?

The 'Economic Times' in December 1999 collected the views from top level HR executives from Indian companies on the emerging workplace. The views expressed were as follows:

1. There would be more celebrations. Music, poetry, and art at work to provide creative moments in between the lightening speed of work. People with high EQ levels would be valued far more than yesterday as coaches and facilitators orchestrate the output of knowledge workers.
2. People tomorrow would want and deserve a workplace free from anxiety and stress, where each can contribute fully from their jobs and also get a satisfactory growth in return.
3. The new work use habits are going to be far more flexible, and individuals will use technology more effectively so that they can find optimum balance between family and work. What teleworking will encourage is a focus on work output and results rather than the time put as is the traditional model of a 9-5 office.
4. People at work should have the option to exercise several choices operating from home, virtual offices, flexible hours, and possibility of switching from a fast track to a slow track.
5. People not in the services sectors – who therefore have to report to work – can look forward to more aesthetically appealing office spaces with technology enabling environment-friendly intelligent buildings which encourage the body and mind to give their best.
6. At the intellectual level, there would be a quantum jump in creativity and innovation. Technology-enabled rich imagery, cross fertilization of ideas of people from different cultures and magic of cyberspace would make break through ideas common place.

7. The future workplace will buzz with words like openness, speed, teamwork and quality: brilliant tomorrow where capability alone will rule, where demonstrated performance will mean for more than just a paper degree.

The role of HR personnel will be crucial to bring such changes. They will create and sustain high performance cultures which retain talent and provide unique learning and growth.

How to improve the QWL?

Observed from the above, the concept of quality of work life is to create a climate at the workplace so that human – technological - organizational interface leads to a better quality of work life. Climate is a set of attributes specific to a particular organization that may be included from the way the organization deals with its members. There are a number of factors involved in QWL, and these factors can be grouped in three categories: individual factors, job factors, and organizational factors. The characteristics of these factors affect the individual involvement in the job, his sense of competence which lead to job satisfaction and finally to job performance and productivity.

An individual in the organization wants to satisfy his needs while working. Depending on the nature of the individual, he may want equitable financial package, employment benefits, job security, and interesting work, involvement in decision-making process affecting him and his work, and getting proper feedback about his performance. If these factors are favourable, the individual will feel job involvement and sense of competence, consequently job satisfaction and contribute positively. Therefore, in improving QWL, all these factors have to be taken into account though there may not be any universal phenomenon. The Human Resource manager has to take the following steps for maintaining high order of QWL:

1. Flexibility in Work Schedule. Employees want flexibility in work schedule. There may be three aspects of flexibility, viz., flexi time – a system of flexible

working hours, staggered working hours – different time intervals for beginning and end of working hours and compressed work-week – more working hours per day with lesser number of working days per week.

2. Autonomous Work Group. Creation of autonomous work group helps in creating positive feelings among employees. They may be given freedom to choose their own teams; there should be freedom of decision making regarding the choice of methods for work distribution of tasks among group members and designing of work schedules.

3. Job Enrichment. Job enrichment attempts to design a job in such a way that it becomes more interesting and challenging so that the worker makes meaning out of that. The degree of job enrichment determines the degree of QWL.

4. Opportunity for Growth. An employee, particularly the achievement-oriented one, seeks growth through his work. If the work provides him opportunity for personal growth and to develop his personality, he will feel committed to the-job and the organization.

5. Providing stability of employment: Good pay and different alternative ways of providing better wages and stability of employment will help the work force to function better

6. Participation. Participation in decision making, particularly on the matters directly concerned with an individual's working, has an important bearing on his satisfaction and performance. Higher degree of participation increases the QWL and overall organizational climate.

7. Recognition: Awarding and rewarding for their achievement, job enrichment, providing well furnished and decent work places, offering membership in associations and in clubs, offering vacation trips etc., are the ways to recognize the employees.

8. Congenial relationship: Harmonious worker-manager relationship makes the worker feel a sense of association and belongingness.

9. Grievance procedure: when the organization allows the employees to express their grievances and represent their problems, their confidence in the management improves.

10. Occupational stress: Stress is a condition of strain on one's emotion. It adversely affects employee's productivity. The HR manager has to identify and minimize the stress.

11. Organizational health programme: These programmes educate the employees about health problems, means to maintain and improve health. This programme should also suggest physical exercise, diet control etc. Effective implementation of these programmes result in reduction of hospitalization, absenteeism, excessive job turnover, disability etc.

12. Adequacy of resources: The enterprise must see that sufficient resources are allocated towards achieving the objectives of QWL.

13. Seniority and merit promotion Seniority is to be taken for promotion for operating employees and merit is to be considered for advancement of managerial personnel. The promotional policies and activities should be fair and Just for maintaining high order of QWL.

14. Communication. To make QWL effective two-way communication is necessary. Through the downward communication employees would receive information about the various aspects of the organization, instructions about job performance and other specific communication which may be relevant for them. Through upward communication, employees can share their views, grievances and how to overcome these and suggestions for improving the work performance.

At this juncture, it is necessary to make a mention about the Quality Circle and Task Force which are sometimes used interchangeably by mistake in place of QWL. The following few lines highlight the demarcation of these terms.

Quality Circles

A quality circle is defined as a "self-governing group of workers with or without their supervisors who voluntarily meet regularly to identify, analyze and solve problems of their work field". This is not the same as "task force".

Quality circles are formed for specific objectives, which are:

- i) To develop, enhance and utilize human resources effectively.
- ii) To improve quality of product, productivity and reduce cost of production.
- iii) To satisfy the worker's psychological needs for proper motivation.
- iv) To improve supervisory skill.
- v) To make use of one's creative and innovative skill through participation for effective achievement of objectives.

Task force:

A task force is a group of most skilled employees selected and appointed by management, engaged in various functions, with an orientation to problem solving.

Performance

There is a general relationship between quality of work force and performance. Greater the quality of work force, higher is the performance. **What is performance then?** It is the process of functioning in a stipulated predetermined manner and achieving the expected results within its framework. In simple terms, performance refers to the degree of accomplishment of the tasks that makes up an individual's job. It indicates how well an individual is fulfilling the job demands. It is always measured in terms of results. For eg, a student may exert himself a great deal but score poor marks or grade which reflects that his performance is poor.

But to understand really whether the performance is good or bad or whether it is positive or negative, it needs to be measured. The performance is to be appraised to know how the employee has taken up his job or work. One's

performance is measured on the basis of his achievement. It is a qualitative consideration and when we say the employees are performing well, it means they are productive.

It can be generally measured based on the productivity. Productivity implies both effectiveness and efficiency. The effectiveness refers to the goal accomplishment and efficiency evaluates the ratio of inputs consumed to output achieved. The greater the output for a lower input used to get that output, results in greater efficiency. In addition to productivity, as measured in terms of effectiveness and efficiency, performance also includes personal data such as measures of accidents, turnover, absence and tardiness. So, a good employee not only performs well but also minimizes problems for the organization by going to work on time, not absenting himself and minimizing the number of work related accidents. The employee does not cause any disruption apart from doing his job efficiently.

Efficient use of Human Resource:

The Human Resources of an organization represent one of its largest investments. The term human resources at the macro level indicate the sum of all the components (like skill, creative ability) possessed by all the people. Human resources at the organizational level include all the component resources of all employees from rank and file to top level management. So, it includes the resource, of all people who contribute their services to the attainment of organizational goals. Human resources play a crucial role in the development process of the present economy. It is often felt that though the exploitation of natural resources, availability of physical and financial resources and international aid play prominent roles in the growth of modern economies, none of these factors is more significant than efficient and committed manpower.

A country with abundance of physical resources will not benefit itself unless human resources make use of them. Only the human resources are

responsible for making use of national resources and for the transformation of traditional economies into modern and industrial economies. In the real sense, the values, attitudes, general orientation and quality of the people of a country determine its economic development. The shift from manufacturing to service and the increasing pace of technological advancement make human resources the crucial ingredient to the national well-being and growth.

The efficient use of human resources depends upon effective human resource management. HRM is an approach to the management of people based on the following main principles:

First, human resources are the most important assets an organization has and their effective management is the key to success.

Second, this success is likely to be achieved if the personal policies and procedure of the enterprise are also linked with the achievement of corporate objective and strategic plans.

Third, the corporate culture and the values, organizational climate and managerial behaviour that come out from the culture will exert a major influence on the achievement of excellence. The culture must be managed in such a way that organizational value may have to be changed or reinforced and that continuous effort starting from the top, will be required to get them accepted and acted upon.

Finally, HRM is concerned with integration - getting all the members of the organization involved in the organizational practice and working together with a sense of common purpose to achieve the organizational goals.

It develops a specialized field in attempting to develop programmes, policies and activities to promote the satisfaction of both individual and organizational needs, goals and objectives. Through human resource, it tries to shape an appropriate corporate culture and introducing programmes which support the core values of the enterprise. The technique for the application of

HRM will include many functions such as manpower planning, selection, performance appraisal, salary administration, training and management development. These will be overlaid by special programmes designed to improve communication systems, involvement, commitment and productivity. In fact it aims at qualitatively improving the human beings in the organization who are considered as the most valuable assets of an enterprise.

According to Peters and Watennan, to achieve productivity through people, it is essential to "treat them as adults, treat them as partners, treat them with dignity and treat them with respect". Both the managers and workers must be persuaded to realize that they have a common objective and interest in increasing output. The following actions will be more fruitful to improve the use human resources:

- a. Conduct a productivity drive.
- b. Improve manpower budgeting and control techniques.
- c. Introduce work measurement.
- d. Use appropriate payment method by results, bonus and profit-sharing schemes.
- e. Improve motivation.
- f. Involve employees in improvement programmes.
- g. Introduce new technology.
- h. Negotiate appropriate productivity programme.
- i. Introduce training programme based on an analysis of productivity needs.

The efficient use of human resources could be successfully planned only when the employees are made to understand the objectives of the organization, plan to develop their own career in the organization which will make them more confident and involve them together as a quality workforce.

The efficient use of human resources must result in

- High productivity;

- Development of skill and organizational commitment;
- Career development;

Top management has to ensure that it is not sufficient to merely design the "technological sub-system" which includes work flow, information flow, job roles, job relationships, task force policies, procedures and job feedback. They must also consider "human sub-system" which includes organizational climate, level of motivation, high commitment participation, co-operation, satisfaction with work environment, willingness to accept change, work group factors, human resource development and satisfaction with compensation, company policies and procedures.

Enumerating the Assets:

Until recently, Human Resource Management (HRM) activities have commonly been evaluated in behavioral and statistical terms. In this competitive climate the need to evaluate HRM activities in economic terms is becoming increasingly apparent. Developing such measures requires an inter- disciplinary approach wherein information from accounting, finance, economics and behavioral science has to be incorporated and delivered in the language understood by the business world.

The next step is to transform generated data into the only language the business world understands-Money.

The need to convert Human Resource Management (HRM) activities in economic terms has become vital in this competitive scenario. And truly enough HR has also evolved wherein its functions of hiring, paying salaries, administration, benefits, developing and retaining employees, etc., have been translated into quantitative terms in order to monitor results and facilitate changes. And today the data that is collected as such is being converted to monetary values and thus the emergence of Human Resource Accounting (HRA).

According to the theory of accounting for HR propounded by Flamholtz EG (i) people are valuable resource of an enterprise and; (ii) information on the investment and value of human resource is useful for internal and /or external decision-making. According to the suggestions given by Brummer RL , a firm has to capitalize on its expenditure on HRM's functions namely recruitment, selection, orientation, training and development of people and treat them as assets for the purpose of HRA. The amounts so capitalized can be shown in the balance sheet as human assets as distinguished from physical assets.

When we refer to assets, we remember only two assets, viz, fixed assets and current assets. Fixed assets are valued at historical cost basis and current asset at current price. But the growing awareness of the importance of intangibles is also reflected in accounting for assets. There is a widening gap between the perceived value and the accounting value of the business. It necessitated the accounting for intangibles and the accountants have handled several such areas of accounting the intangibles too.

The traditional "bricks and mortar" accounting is of little use in modern business where more than three fourths of value addition is derived from knowledge, an intangible asset. For example, the accounting implications of R and D have been examined and analysis on that has been referred in the financial statements by some of the foreign companies.

Earlier accounting theorists like Paten and Scott recognized human resource as an asset and commented that "in a business, well organized and loyal personnel are more important asset than a stock of merchandise". Likert first used the term "human asset accounting", which has been replaced by human resource accounting which demonstrates the weakness of traditional accounting for not bringing human resource within its fold. The process of assigning numeric value to human resources can either be cost based or value based.

The cost-based approach includes historical cost, replacement cost and opportunity cost. This approach can be further sub-divided into two categories. That is non-monetary and monetary. The non-monetary approach focuses on the organizational and behavioural variables which determine human resource value. The monetary approach focuses on the revenue generation capacity of human resource and attaches a value figure accounting.

The exponents of human resource valuation models in most cases have not dealt with the mode of recording and disclosure of the accounting information relating to human resources in the financial statements of the organization. It is left to the discretion of the accounting bodies that have yet to develop a generally accepted basis for valuation, recording and disclosure of human resource accounting information in the financial statements of an organization. In most cases, the human resource accounting information is given in the form of supplementary information attached to the financial statements.

Prof. N. Dasgupta has suggested in his total cost approach the following mode for disclosure of human resources in the balance sheet of an organization.

According to him, the human resources valued as per his model should be shown both on the 'assets' as well as 'liabilities' sides of the balance sheet. On the assets side, it should be shown after the fixed assets as Human Assets classified into two parts – (i) value of individuals, (ii) value of firm's investment. On the 'Liabilities' side, it should be shown after the capital as Human Assets Capital by that amount at which it has been shown on the asset side against 'value of individuals.' He has given the following example to clarify his point.

Example: A firm has started its business with a capital of Rs.10,00,000. It has purchased fixed assets worth Rs.5,00,000 in cash. It has kept Rs.2,60,000 as working capital and incurred Rs.2,40,000 on recruiting, training and developing

the engineers and few workers. The value of engineers and workers is assessed at Rs.8,00,000.

The above items will be shown in the balance sheet as follows:

BALANCE SHEET
(INCLUDING HUMAN RESOURCES)

LIABILITIES	Rs.	ASSETS	Rs.
Capital	10,00,000	Fixed Assets	5,00,000
Human Assets Capital	8,00,000	Human Assets:	
		(i) Individuals' Value	8,00,000
		(ii) Value of Firm's Investments	2,40,000
		Current Assets	2,60,000
	18,00,000		18,00,000

Valuation of Human Assets

Valuation of human assets are the most important aspect of human resource accounting. A recent trend in today's corporate world is to measure the value of intangible assets of the companies such as goodwill {valuation of goodwill is quite old}, brands, patents, and now human assets. Consultants in

HRM emphasize the need for valuation fo human assets. For example, Brian Friedman Human capital consultant with Arthur Anderson, views that "if you treat human resources as your most valuable assets. "Before we go through the mechanism of valuation go human assets, let us see the types of various human assets.

Types of human assets

Human assets are in intangible form and are within the inside of human resources.

Therefore, there may be different ways in which these can be classified. For example, Sumantra Ghoshal has classified these into three categories: intellectual capital, social capital and emotional capital. Besides, there is recent emphasis on spiritual capital. Let us briefly discuss these to identify how these contribute to individual effectiveness.

Intellectual capital.

The first element of the human capital is intellectual capital which can be defined at individual level as well as at organizational level.

At the individual level, it refers to his knowledge, skills and expertise. It may be in the form of specialized knowledge, tacit knowledge and skills, cognitive complexity and learning capacity.

At the organizational level, intellectual capital consists of both the stock of knowledge, skills and expertise that members of the organization collectively possess, and the knowledge and expertise that may be embedded in or owned by the organization including patents, information technology based knowledge systems, or specialized processes of work.

Ghoshal observes that “in the recent past, much management attention has been paid to this issue of intellectual capital, and rightly so. Knowledge certainly in service industries like consulting, investment banking, IT services, consumer electronics, and electrical machinery.

Social capital

Social capital is derived from the network of relationships, both internally and externally. From organization's point of view, social capital relates to structure, quality, and flexibility of the human networks which can be created through cohorts, joint departments and functions, long-term employment and internal culture.

The other aspect of social capital is external-built on the relationships with external forces like customers, suppliers, government agencies, etc.

however, building external relationships and working on these does not involve taking undue advantages for furthering the interest of the organization. it is used in the context of trustworthiness.

Emotional capital

Emotional capital involves self-confidence, ambition, courage, risk-taking ability and resilience. It is reflected in what is described as a 'can do' spirit. Individuals need self-confidence based on self-esteem, courage, and resilience to convert their knowledge and relationships into effective actions.

Organizations require high internal energy and an environment of pride, trust, and openness to create a bias for speed and action in rapidly changing environment. In today's context, more companies are involved in developing emotional quotient {EQ} as the individuals in an organization depend more on their emotional capital for effectiveness than their intelligence and technical skills. Emotional capital helps in controlling such emotions as anger, hatred, frustration, confusion, sadness, etc. which affect the job performance adversely. Further, it helps in reducing stress, a major problem of the modern organizations.

Spiritual capital

Spiritual capital is the recent development in the practice of human resource management. First, it was intelligent quotient (IQ) followed by emotional quotient (EQ), and now has come spiritual quotient (SQ). Ullhas Pagey, Director {HR and OD}, Aptech limited, views that "whereas with a high IQ you may get hired: with a high EQ, you get promoted. But this is a short – term perspective and long-term growth is linked to SQ. "spiritual capital is assuming increasing values, ego, and approach to work match those of the organization. All these forms of human capital are not isolated rather these are interrelated. Therefore, while measuring human capital, all these must be taken together. Human resource accounting makes attempt to measure this capital.

Methods of valuation of human assets:

There are a number of methods suggested for the valuation of human assets. Many of these methods are based on the valuation of physical and financial assets while others take into account human consideration. Major methods of valuation of human assets are historical cost, replacement cost, standard cost present value of future earnings and expected realizable value.

The major developments in HRA were started only during 1960's by some of the organizations in USA. Of course, the first attempt to value the human being in monetary terms was made by William Potty who opined that labour was the father of wealth and it must be taken into account while making an estimate of wealth. On scanning through literature, the approaches to HRA can be broadly classified as follows:

a) Cost based approaches:

- i) Historical Cost
- ii) Replacement Cost
- iii) Opportunity Cost
- iv) Standard Cost

b) Monetary value based approaches:

- i) The Lev and Schwartz Model
- ii) The Eric Flamholtz Model
- iii) Morse Model

c) Non- monetary value -based approaches:

- i) Likert Model
- ii) The Flamholtz Model
- iii) Ogan Model

A. Cost Based Approaches:**i) Historical cost approach:**

Brummet, Flamholtz and Pyle have developed this method. It is on the basis of actual cost incurred on human resources. Such a cost may be of two types- acquisition cost and learning cost.

Acquisition cost is the expense incurred on recruitment, selection; entire cost is taken into consideration including those who are not selected.

Learning cost involves expenses incurred on training and development. This method is very simple in its application but it does not reflect the true value of human assets. For example, an experienced employee may not require much training and therefore, his value may appear to be low though his real value is much more than what is suggested by historical cost method.

Under this approach actual cost incurred towards recruitment, hiring, training and developing human resources of the organization are capitalized and amortized over the future expected useful life of the human resources. Certain part of costs will be written off in proportion to the income of the future years which those human resources will provide service.

When these human assets are prematurely liquidated, the amount not written off is charged to income of the year in which such liquidation takes place.

When the useful life of the human resource is considered to be longer than originally expected, revisions are to be effected in the amortization schedule. The historical cost of human resource is almost similar to the book value of the other physical assets. The additional costs incurred in training and developing is capitalized and is amortized over the remaining working life of the employee. The unexpired value is investment in human assets.

ADVANTAGES

1. Simple to understand and easily worked out.
2. Cost is related to revenue

3. It enables to provide a basis for evaluating the company's returns on its investment in human resources.

DISADVANTAGES

1. It takes into account only acquisition costs and does not take into account his potentiality.
2. It is not clear when or up to how many years the amount should be amortized
3. Amount to be amortized is not fixed.
4. Capital cost decreases with amortization.

ii) Replacement cost

Rensis Likert & Eric G. Flamholtz propounded it. This is a measure of cost to replace a firm's existing human resources. Human Resources are to be valued on the assumption that a new similar organization has to be created from scratch and the cost to the firm is calculated if the existing resources were required to be replaced with other persons of equivalent talents and experience. It takes into account all costs involved in recruiting, hiring, training and developing the replacement to the present level of efficiency.

As against historical cost methods which take into account the actual cost incurred on employees, replacement cost takes into account the notional cost that may be required to acquire a new employee to replace the present one. Replacement cost is generally much higher than the historical cost. For example, Friedman has estimated that the replacement cost of an executive in middle management level is about 1.5 to 2 times the current salary paid in that position.

Replacement cost is much better indicator of value of human assets though it may present certain operational problems. For example, true replacement of a person may not be found easily with whose cost the valuation is done.

This approach is more realistic as it incorporates the current value of the organization's human assets in its financial statements prepared at the end of the year. Costs incurred by an organization in replacing a terminated employee are defined as replacement cost like the following –

- a) Communication of job ability
- b) Pre-employment administrative functions
- c) Interviews
- d) Testing
- e) Staff Meetings
- f) Travel Cost
- g) Employment Medical Examination

LIMITATIONS

- 1. There may be no similar replacement for certain existing assets.
- 2. The replacement value is affected by subjective considerations and therefore the value is likely to differ from one another.
- 3. It is against conventional accounting practice.

c) Opportunity cost method:

Heckiman and Jones first advocated this approach. This is also known as “Market Value Method”. This method of measuring the value of human resources is based on the economist's concept of ‘opportunity cost’.

Opportunity cost is the value of an asset when there is an alternative opportunity of using it. In this method there is no opportunity cost for those employees who are not scarce. As such only scarce people should form part of the value of human resources. The employee is considered as scarce only when the employment in one division of an individual or group denies this kind of talent to another division. Thus the opportunity cost of an employee in one department is calculated on the basis of offer made by another department for the employees working in this department in the same organization.

LIMITATIONS

1. The total valuation of human resource on the competitive bid price may be misleading and inaccurate. A person may be a valuable person for the department in which he is working and may have a lower price in the bid by other departments.
2. Only scarce employees are included in this method and as a result unscarce employees may lose their morale, as they are not counted.
3. It would be difficult to identify the alternative use of an employee in the organization.

iv) Standard cost Method.

David Watson has suggested this approach. Instead of using historical or replacement cost, many companies use standard cost for the valuation of human assets just as it is used for physical and financial assets. For using standard cost, employees of an organization are categorized into different groups based on their hierarchical positions.

Standard cost is fixed for each category of employees and their value is calculated. This method is simple but does not take into account differences in employees put in the same group. In many cases, these differences may be quite vital.

According to this approach, standard costs of recruiting, hiring, training and developing per grade of employees are determined year after year. The standard cost so arrived at for all human beings employed in the organization are the value of human resources for accounting purposes.

The approach is easy to explain and can work as a suitable basis for control purposes through the technique of variance analysis. However, determination of the standard cost for each grade of employee is a ticklish issue.

b) Monetary value based approaches:

According to this approach, the value of human resources of an organization is determined according to their present value to the organization. For determination of the present value, a number of valuation models have been developed. Some of the important models are as follows –

In this method the future earnings of various groups of employees are estimated up to the age of their retirement and are discounted at a predetermined rate to obtain the present value of future earnings used in the case of financial assets. It is the present value of future earnings. To determine this value, the organization establishes what an employees' future contribution is worth to it today. That contribution can be measured by its cost or by the wages the organization will pay the employee. The organization does not benefit by monitoring the efficiency of its investment in employee development because the investment has little or no impact on the present valuation of future earnings.

The Lev and Schwartz Model (Present value of future earnings method)

This model has been developed by Lav and Schwartz (1971). According to this model, the value of human resources is ascertained as follows –

1. All employees are classified in specific groups according to their age and skill.
2. Average annual earnings are determined for various ranges of age.
3. The total earnings which each group will get upto retirement age are calculated.
4. The total earnings calculated as above are discounted at the rate of cost of capital. The value thus arrived at will be the value of human resources/assets.
5. The following formula has been suggested for calculating the value of an employee according to this model –

Where, V = the value of an individual r years old.

= the individual's annual earnings upto the retirement

t = retirement age

r = present age of the employee

R = discount rate

Disadvantages

1. This model implies that the future work condition of the employee will not change over the span of his working life, but will remain the same as at present.
2. The approach does not take into account the possibility that the employee will withdraw from the organization prior to his death or retirement. It is therefore not realistic.
3. It ignores the variable of the career movement of the employee within the organization. An engineer will be an engineer throughout his career in the organization.
4. It does not take into account the role changes of employees. A Personnel Manager may become Chief Legal Officer.

However, this method does not give correct value of human assets as it does not measure their contributions to achieving organizational effectiveness.

SCARPELLO & THEEKE (1989)

“At the theoretical level, HRA is an interesting concept. If human resource value could be measured, the knowledge of that value could be used for internal management and external investor decision-making. However, until HRA advocates demonstrate a valid and generalizable means for measuring human resource value in monetary terms, we are compelled to recommend that researchers abandon future consideration of possible benefits from HRA.

Flamholtz Model (Reward Valuation method)

This model has been suggested by Flamholtz (1971). This is an improvement on ‘present value of future earnings model’ since it takes into consideration the possibility or probability of an employee’s movement from

one role to another in his career and also of his leaving the firm earlier, that his death or retirement.

According to this model, the ultimate measure of an individual's value to an organization is his expected realizable value. Expected realizable value is based on the assumption that there is no direct relationship between cost incurred on an individual and his value to the organization at a particular point of time. An individual's value to the organization can be defined as the present worth of set of future services that the expected to provide during the period he remains in the organization.

Flamholtz has given the variables affecting an individual's expected value {IERV}: individual conditional values and his likelihood of remaining in the organization. The former is function of the individual's abilities and activation level, while the later is a function of such variables as job satisfaction, commitment, motivation and other factors.

The model suggests a five-step approach for this purpose –

1. Determination of the period for which a person is expected to serve the organization.
2. Identification of 'service states' (i.e. roles or posts) that the employee might occupy during his service career including the possibility of his quitting the organization.
3. Estimation of the value derived by the organization when a person occupies a particular position. Such value can be determined either by multiplying the price of the services with the quantity of the services to be rendered or the income expected to be derived from the services to be rendered.
4. The total value of the services derived by the organization by different employees or group of employees is determined. The value thus arrived

is discounted at a predetermined rate to get the present value of human resources.

Limitations

The model suffers from nearly all the drawbacks from which the present value of future earnings models suffers. Moreover, It is difficult to obtain reliable data for determining the value derived by an organization during the period a person occupies a particular position. The model also ignores the fact that individuals operating in a group may have a higher value for the organization as compared to individuals working independently.

Morse Model (Net Benefit Model)

This approach has been suggested by Morse (1973). According to this approach, the value of human resources is equivalent to the present value of net benefits derived by the organization from the service of its employees. The method involves the following steps –

1. The gross value of services to be rendered in future by the employees in their individual as well as their collective capacity is determined.
2. The value of future payments (both direct and indirect) to the employees is determined.
3. The excess of the value of future human resources (as per 1 above) over the value of future payments (as per 2 above) is ascertained. This, as a matter of fact, represents the net benefit to the organization on account of human resources.
4. The present value of the net benefit is determined by applying a predetermined discount rate (generally the cost of capital). This amount represents the value of human resources to the organization.

c) Non- monetary value -based approaches:

Pekin Ogan (Certainty Equivalent Net Benefit Model)

This approach has been suggested by Pekin Ogan(1976). This, as a matter of fact, is an extension of “net benefit approach” as suggested by Morse. According to this approach, the certainty with which the net benefits in future will accrue should also be taken into account, while determining the value of human resources. The approach requires determination of the following –

1. Net benefit from each employee as explained under ‘net benefit approach’.
2. Certainty factor at which the benefits will be available
3. The net benefits from all employees multiplied by their certainty factor will give certainty equivalent net benefits. This will be the value of human resources of the organization.

S.K. Chakraborty Model (Aggregate payment approach)

Indian author Prof. S.K. Chakraborty in 1976 advocated this model. He has valued the human resources in aggregate and not on an individual basis. He suggested that managerial and non managerial man power can be evaluated separately. The value of human resource on a collective or group basis can be multiplied by the average tenure of employment of the employees in that group and is the investment in human resource.

The average annual salary payments for the next few years could be found out from the salary grade structure and promotion schemes of the enterprise. The recruitment, including selection, development and training costs of each employee could be recorded separately and considered as deferred revenue expenditure to be written off over the expected average tenure of the employee in the organisation. The deferred portion should be shown in the financial statement of the organisation.

In case of permanent exit on account of death, retrenchment etc. then the balance on the deferred revenue account of that year of that person should be written off against the income in the year of exit itself.

For the purpose of finding the present value of estimated payments the expected average after tax return on capital employed over the average tenure period should be taken as the discount rate.

As for disclosure of accounting information on human resources as an asset, he has suggested to include human assets under investments in the 'financial statement' of the organisation. He is not for taking it as 'fixed assets' as it will cause problems of depreciation, capital gains or losses upon exit etc.; neither it could be taken as 'current asset' as it will not be in conformity with the general meaning of the term.

Human Capital

LPG - Liberalization, Privatization and Globalization all over the world, has created the need for quality products and quality service. It in turn necessitated organizations to compete with one another to improve the quality and device cost reduction measures to exist in the industry. That could be done only with the development of human capital which is evidenced by the rapid economic growth of Japan and other East Asian countries. The investment in human capital cannot be easily measured as it differs from one person to another.

Basically, when we talk of human capital it refers to the human knowledge, their inner capabilities and creativity. The development of technology cannot be fully utilized without knowledge and skill. The capabilities of the human capital in relation to the needs of the organization should be improved by creating a climate in which the human knowledge, skill, capabilities and creativity can be developed. How do we develop our human

capital and put it to optimum use is the challenge faced by the present day corporate sector. Technological improvements, business strategies, quality concerns etc., will have no meaning without people (human capital). So it is people who make all the difference.

People and their development only can meet the needs of globalization and liberalization. The human capital available in the organization should be rightly assessed and developed through motivation, training and perceptual needs of the organization. Only then, the organizational goals can be achieved and can continue to be a market contributor in the field of competition. The computer technology offers greater precision but demands different skills. The owners (personnel) of these new skills are both technically educated and trained on the job. It is the human capital which should be rightly invested for the qualitative improvement of human beings who are considered the most valuable asset of an organization.

Thus, the Human capital refers to the basic skill, capabilities, the perception, know-how and expertise. Every individual has certain skills and understanding. The education one has undergone should help him to develop knowledge in general. Till one gets basic employment he is not keen on planning his future and there is uncertainty. This is normal in most of the cases except a few. As one is placed in an organization in some position, he starts to look for elevation. The organization too would tap his basic skill and capabilities and divert them to achieve the goals of the organization and in the process it attempts to develop his basic skill through proper training, motivation and direction. The human capital is rightly put through for effective functioning, right decision making and career development. In all these it creates value to the organization and makes it more stable in the competitive environment.

At last, the cliché 'people are our most important resource' has actually come to mean something. Today more than ever the management realizes that

the most effective asset in an organization is its people. In fact it is obsolete to say people are the most important asset, rather they are the only dynamic asset. Nothing happens without people-money, equipment, technology..... nothing means anything without a human to act. Hence, the management has slowly realized the importance which in turn has edged Human Resource (HR) from the background into mainstream organizational strategies. Having moved to the center stage is not the end. It has to sustain its stand and move even further and for that to happen HR must learn the language of organizations and management, i.e. it has to talk in quantitative and objective terms. Time and again, every manager has always stated 'You can't manage what you can't measure'. Organizations are managed with quantitative data. Today, HR has also got into the game. It has learned the terminology of the organization's financial statement and has begun to contribute in this area. Universally, HR is emerging as a front line strategic player.

Every organization has its eye on the bottom line-profit and all the units work to demonstrate their contribution to service, quality and performance. It is to be remembered that every unit affects business results and every function is a value-adding operation. Hence, it is imperative to be able to measure this contribution objectively.

An organization uses HRA Asset models when it focuses on assessing its investment in the human capital. In contrast organizations that intend to measure the economic effects of employee's behavior tend to utilize the HRA Expense models. This has led HR to finally attempt to account for an organization's intellectual capital.

Intellectual Capital

Tangible assets can be easily valued. How does one evaluate intangible assets such as creativity, service standards etc., Intellectual capital such as knowledge, skill, information, experience etc, which helps create wealth that

can't be easily assigned a price? To date, there is no clear agreement in the accounting profession about how to account for them.

Yet the role of intangible assets such as brand names, intellectual capital, patents etc., in their contribution to increase the amount of wealth in firms can't be ignored. The shift to a knowledge-based economy has created entirely different categories of assets, popularly known as "soft assets that are not recognized in financial statements".

Valuing Intellectual Capital

Human Capital, Structural Capital and Customer Capital comprise of a company's Intellectual Capital. Even though all the three are intangible, they can be measured and targeted for investment.

Human capital represents knowledge, skills and capability to provide solutions to problems that customers think are important. Enabling human capital requires other structures such as software manuals, customer files etc. Customer capital is the value of an organization's relationship with whom it does business including suppliers. HR professionals have always been trying to develop measures to value human capital. Some of the measures utilized are:

Measures of Innovation

Genuine innovation always commands a premium. All companies are always striving to be different from the other and to stand out from the rest. In this endeavor, new products, ideas, and strategies are the order of the day and now companies are learning to assess this aspect of creativity in the language it well understands, that is the language of finance.

Measuring Employees' Attitude

Above all it is only employees' attitude about the job and the company, which gets reflected in their behavior towards the customers. That behavior in turn translates into customers' retention, recommendations and loyalty, which in

turn get reflected in financial performance. Hence, behaviors and attitudes that affect performance are being measured. Some of the attitudes measured are satisfaction, locus of control, organizational involvement and commitment, and motivation: and the behaviors often measured are performance, adjustment, absence or illness and voluntary turnover.

Measures of Tenure, Turnover, Absenteeism, Experience and learning

These indices that comprise of a company's inventory of knowledge workers need to be quantified. Quantifying tenure, turnover, absenteeism and experience is quite simple when compared to learning. Turnover normally represents a substantial cost to business. In measuring turnover, an organization has to consider three major, separate cost categories: Separation costs, replacement costs and training costs. In addition, the difference in currency-valued performance between those leaving and their replacements should also be considered.

Similarly, the rate of absenteeism is first calculated and then the cost of absenteeism can be estimated using set formulae and procedures. This cost would include employee-hours lost, supervisory hours lost, all other costs incidental to absenteeism, compensation, benefits, etc.

Structural Capital Measures

Sharing, transporting and enabling human capital require other structures or organizational capabilities. Structural capital consists of everything that remains when the employees go home namely, databases, customer files, software manuals, trademarks and organizational structures. In order to find out if a company's systems are helping or hindering its employees to perform to their optimal level measures such as production-to market time, suggestions versus implementation, databases at estimated costs, etc., are accounted.

Customer Satisfaction Measures

There are many objective ways to measure customer satisfaction. Some of the common measures are customer retention rate, brand equity and customer satisfaction. Then customer satisfaction is linked to performance management for individual employees it can generate helpful data for the 360 degree feedback of employees.

Earlier for HR programs it was sufficient just to collect data and calculate the cause and effect of those programs. Today, the ultimate aim is to evaluate not the return on investment and business impact but also to be able to convert these data into monetary values and compare them with the HR's fully loaded costs.

Books for Reference:

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2. Advanced Accountancy, S.N. Maheshwari & S.K. Maheshwari.
3. Human Resource Development-Conceptual Analysis and Strategies, R. Jayagopal.
4. Human Resource Management, S.S. Khanka

5. Personnel / Human Resource Management (Text, Cases and Games): P. Subbarao & V.S.P. Rao.
6. Personnel / Human Resource Management: A.R. Sharma.

QUESTIONS

1. Define 'human resource accounting'.
2. Explain the objectives of Human Resource Accounting.
3. Briefly explain the development of the concept of HRA.
4. Give an account of historical score card if human resource of accounting.
5. Explain the importance of human resource accounting.
6. Explain the limitations of human resource accounting.
7. Briefly explain the various concepts of investment in HRA.

8. What is quality of work life? Explain how to improve the quality of work life.
9. Explain the various methods of valuation of human assets.
10. What is spiritual capital?
11. What is emotional capital?
12. What is social capital?
13. What is intellectual capital?
14. Explain the various types of human assets.
15. What is human capital?

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UNIT - II

HUMAN RESOURCE PLANNING & ACCOUNTING

Human Resource Planning – Human Capital investment – Expenditure Vs. Productivity – Training Human Capital & Productivity – Human Resource Accounting – Measurement of Human Value addition into Money value – objective of Human Resources Accounting – Approaches to Human Resource Accounting.

Most people live – Whether physically, intellectually or morally – in a very restricted circle of their potential being. We all have reservoirs of life to draw upon, which we do not dream.

W. James.

2.1 INTRODUCTION

The most valuable input in an organization is the human element. The most valuable of all capital is that invested in human beings. Organizations are composed of people and the people are the most precious of the gamut of assets owned.

Loose one extra – ordinary player of a team and who will replace him/her? How much time will pass before the organization to require the know-how, drive and the strength diffused by his/her presence amongst the team members? A healthy organization not only aims at the designation but also how to step forward and with whom to proceed.

The importance of sustained manpower is evident from the famous saying:

If you wish to plan for a year, Cultivate flowers’ ;,

If you wish to plan for ten years, Plant trees’ ;,

If you wish to plan for eternity, Develop men’.

Hence, in the process of managing an organization, human resources are not to be neglected, with all-out attention towards financial resources (like money and credit), physical resources (like land, building, machinery). The only living resource, the human resource, need to be planned, procured, nourished possessed and productivity – oriented. The growing importance of this vital resource has pooled the attention researches to develop accounting systems.

2.2 HUMAN RESOURCE PLANNING

2.2.1 Meaning and definition

Human resource planning (HRP) is a forward-looking function. It occupies a pivot place in successful human resource management programme. To ensure that people are available to extend their willing hands towards the development endeavours of an organization, organizations engage in human resource planning.

In simple terms, human resource planning means:-

The process by which and organization ensures that it has the right number and kind of people, at the right places, at the right time, capable of affectively and efficiently completing those tasks that will help the organization to achieve its overall objectives.

Objectives are translated into the need of the work force to attain through human resource planning. Without such plan the requirement estimation is not systematic, rather a mere guesswork.

According to Dale S. Beach. *“Human resource planning is a process of determining and assuring that the organization will have an adequate number of qualified persons, available at proper times, performing jobs which meet the*

needs of the enterprise and which provide satisfaction for the individuals involved.”

Manpower planning is a continuous process. It cannot be rigid or static. It is amenable to modifications, review and adjustments, in accordance with the needs of the organization or the changing circumstances. In the words of Coleman, “ *Manpower planning is the process of determining manpower requirements and the means for meeting those requirements in order to carry out the integrated plan of the organization.* ”

2.2.2 OBJECTIVES OF HUMAN RESOURCE PLANNING.

The basic purpose of having a human resource plan is to have an accurate estimate of the number of employees required, with matching skill to meet organizational objectives. It provides information about the manner in which existing personnel are employed, the kind of skills required for different categories of jobs and human resource requirements over a period of time in relation to organizational objectives. It would also give an indication of the lead time that is available to select and train the required number of additional manpower.

More specifically; HR planning is required to meet the following objectives:

- **Forecast personnel requirements:** HR planning is essential to determine the future manpower needs in a organization. In the absence of such a plan, it would be difficult to have the services of right kind of people at the right time.
- **Cope with changes:** HR planning is required to cope with changes in market conditions, technology, products and government regulations in an effective way. These changes may often require the services of people

with the requisite technical knowledge and training. In the absence of an HR plan, we may not be in a position to enlist their services in time.

- **Use existing manpower productively:** By keeping an inventory of existing personnel in an enterprise by skill, level, training, educational qualifications, work experience, it will be possible to utilize the existing resources more usefully in relation to the job requirements. This also helps in decreasing wage and salary costs in the long run.
- **Promote employees in a systematic manner:** HR planning provides useful information on the basis of which management decides on the promotion of eligible personnel in the organization. In the absence of an HR plan, it may be difficult to ensure regular promotions to competent people on a justifiable basis.

2.2.3 HUMAN RESOURCE PLANNING PROCESS

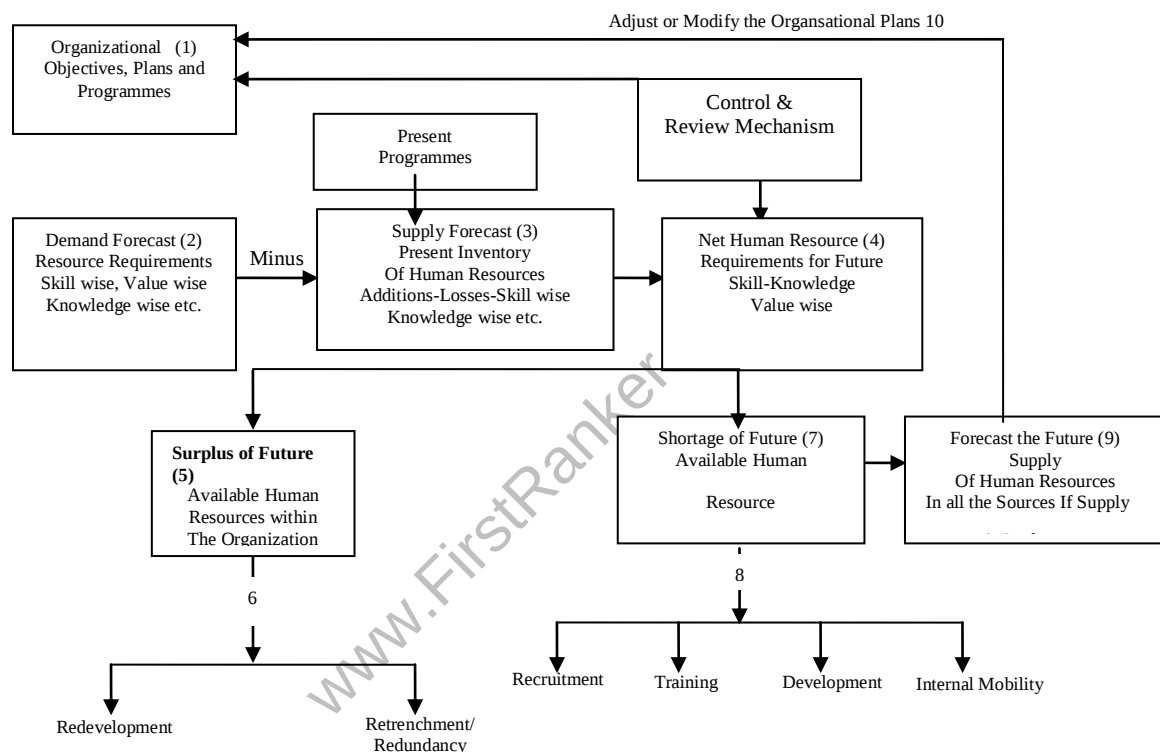
Human Resource Planning consists of the following areas:

1. Analyzing organizational plans.
2. Demand Forecasting – Forecasting the overall human resource requirements in accordance with the organizational plans.
3. Supply Forecasting – Obtaining the data and information about the present inventory of human resources and forecast the future changes in present human resource inventory.
4. Estimating the net human resource requirements.
5. In case of future surplus, plan for redeployment, retrenchment and lay off.
6. In case of future deficit, forecast the future supply of human resources from all sources with reference to plans of other companies.

7. Plan for recruitment, development and internal mobility in future supply is more than of equal to net human resource requirements.
8. Plan to modify or adjust the organizational plan if future supply will be inadequate with reference to future net requirements.

The eight steps of human resource planning are depicted in the figure in the order mentioned above. But the same order need not be followed in the actual planning process, as the steps are independent.

Human Resources Planning Model:



2.2.4. Benefits of HRP

Effective manpower planning provides adequate lead time for the procurement and training of employees. It is all the more crucial because the lead time for procuring personnel is a time consuming process and in certain cases, one may not always get the requisite type of personnel needed for the job. Non-availability of suitable manpower may result in postponement of delays in executing new projects and expansion programmes, which ultimately lead to lower efficiency and productivity. To overcome this an organization must plan out its manpower requirements well in advance, so that it can compete effectively with its competitors in the market.

Manpower planning is an important tool of human Resources Management as it help in the following ways.

1. Manpower planning results in reduced labour costs as it helps management to anticipate shortages and/or surpluses of manpower and correct these imbalances before they become unmanageable and expensive.
2. It is a better basis for planning employee development that is designed to make optimum use of workers' skills within organization.
3. It enables indemnification of the gaps of the existing manpower so that corrective training could be imparted. Thus, the training programme becomes more effective.
4. It leads to improvement in the overall business planning process.
5. It helps in to formulating managerial succession plan as a part of the replacement planning process which is necessitated when job-change plans for managers are formulated. Besides this exercise would provide enough lead-time for identifying and developing managers to move up the corporate ladder.

6. It leads to a greater awareness of the importance of sound manpower management throughout the organization.
7. It serves as a tool to evaluate the effect of alternative manpower actions and policies.

2.2.5 RESPONSIBILITY FOR HRP

Executives at higher level are responsible for HR planning as it is an important factor to steer the organization move in the path of success. Prof. Geisler has outlined the responsibilities of the HR Department in respect of HR planning as under :

- a) Assist and counsel operating managers to plan and set objectives.
- b) Collect and summaries manpower data keeping long-run objectives and broad organizational interests in mind.
- c) Monitor and measure performance against the plan and keep top management informed about it.
- d) Provide proper research base for effective man-power and organizational planning.

2.2.6 Effective HR Planning :

Krishna Swamy in his study “Manpower Planning Practices in Indian Manufacturing organizations” has examined 45 companies of different categories and found that scant attention is plaid towards human resource planning. Most of the Indian organizations. Do not have adequate information on human resources.

There are unpredictable external influences like changes in labour market conditions, technology, market conditions, economic cycles, changes in social and economic values, political changes etc., In such a scenario, forecasting of manpower is a touch task. However to make HR planning effective the following guidelines can be followed :

- (a) HR Plan must fit in with the over all objectives of the organization keeping in view the various aspects of the human side of the enterprise.
- (b) The plan should enjoy consistent support from top management.
- (c) The Organization can develop on up-to-date employee skills inventory. Mark analysis is an approach to forecast the internal supply of manpower, tracking past records & personnel movements; may be adopted for preparing manpower inventory.
- (d) Human resource information system may be developed and data regards individual demographics, career progression, appraisals, skills, interests, training, target positions performance rating, geographic performance, promo ability ratings may be computerized.
- (e) In large organization, a separate HR Planning division may be created to look after the plans for requirement, promotion and retention of human resources.

Systematically executed HRP can be a good means for achieving greater effectiveness.

2.3 HUMAN CAPITAL INVESTMENT

2.3.1 Human Capital Structure

Just like financial capital structure, which consist of various types of capital, the human capital structure consist of various types of employees employed in an organization. The types of employees may be executives, supervisory, artisans, clerical and skilled-staff or semi-skilled staff. The composition and proportion of various types of employees play an important role in the development of an organization.

People are the greatest asset the only real difference between one organization and the other is the performance of the people. The survival, development and performance of an organization depends heavily upon the quality of manpower, Right from Alfred marshal a century ago, down to the management Guru Peter Drucker, focusing attention knowledge workers and knowledge industries come out clear message that “Knowledge” is the key to development. We are in the knowledge era where the new wealth of matrons is tied directly up with the creation, transformation and capitalization of knowledge.

Knowledge based industries especially in the science and technology based units are expanding faster than many other industries and contribute towards the transformation of a country’s economic infrastructure. As there is greater demand for knowledge based products the role of knowledge in achieving competitive advantage has become a very important matter in all sections of management. Knowledge, a primary competitive factor in business, which is non-traditional and intangible, and its accumulation, transformation and valuation lie at the heart of intellectual capital management. A recent study

estimates that 50 to 90 percent of the value created by a firm comes from the management of intellectual capital and not from management of traditional physical assets (Hope and Hope 1998).

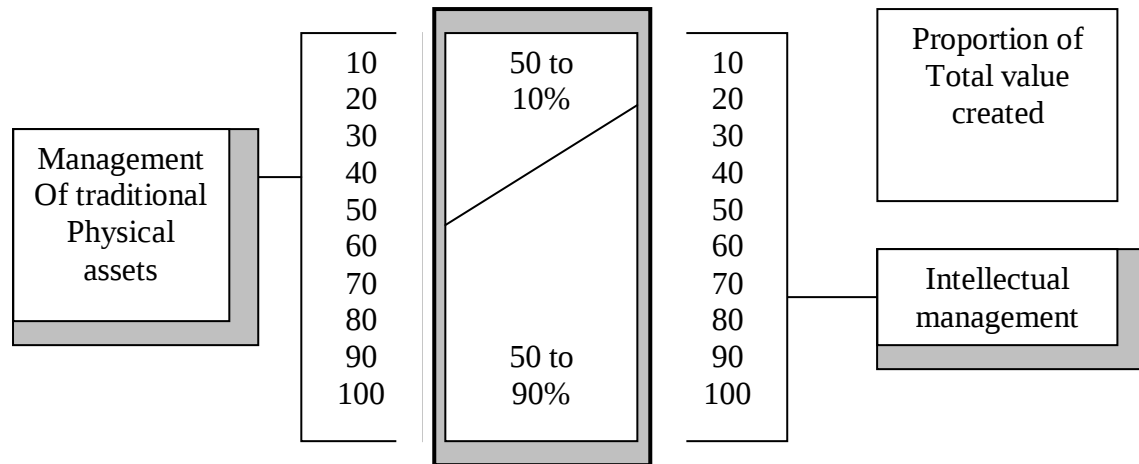


Fig: Value created by Firm

Human capital refers to the know-how, capabilities, skills, and expertise of the human members of the organization. It is that knowledge that each individual has and which can be put to productive use.

2.3.2 HUMAN CAPITAL AND ITS ELEMENTS

The world is shrinking in all major respects, people, goods, capital and information are moving around the to be as never before. Companies are trying to become global players just to survive. Companies like Colgate even proclaim

“We want to build a common corporate culture. We want them all to be collators”, while trying to bridge the cultural gap between domestic employees and those in global operations for serving business interests.

With the concepts of the liberalization, privatization and globalization being applied all over the countries in the world, the need has arisen to go in for quality products and quality service. Each organization has to compete with one another to improve the quality and device cost reduction measures to exist in the industry. That could be done only with the development of human capital. If Japan and other East Asian countries like Korea and Taiwan have recorded rapid economic growth, it is because of their investment in human capital, which cannot be easily measured and which differs from one to another. Basically, when we talk of human capital it refers to the human knowledge, their inner capabilities and creativity qualities. These are to be tapped from the employees. With all the development of technology it cannot be fully utilized to its full potential without knowledge and skill. The capabilities of the human capital in relation to the needs of the organization should be improved with the creation of a climate in which the flower of human knowledge, skill, capabilities and creativity can bloom. How do we develop our human capital and put it to optimum use is the challenge that the present day corporate sector faces. Technological improvements, business strategies, quality concerns etc., will all have to be implemented through people (human capital only). So it is people who make all the difference. People and their development are quite central to meeting the needs of globalization and liberalization. The human capital available in the organization should be rightly assessed and should be further developed through motivation training and perception to the needs of the organization. Only then, the organizational goals can be achieved and more so, it can continue to be market contribution in the field of competition. With the

arrival of micro-electronic technology, work processes have changed. The computer technology offers greater precision but demands different skills. The owners (personnel) of these new skills are both technically educated and trained on the job.

It is the human capital, which should be rightly invested for the qualitative improvement of human beings who are considered the most valuable asset of an organization. Human capital refers to the basic skill, capabilities, the perception know-how and expertise. Every individual has certain skills and understanding. The education one has undergone should help him to develop knowledge in general. Till one gets basic employment he is not keen on planning his future and there is uncertainty. This is normal most of the cases except one, who makes his planning as to what he should be even when he takes his education.

As one is placed in an organization in some position, he starts to look for elevation. The organization too would tap his basic skill and capabilities and divert them to achieve the goals of the organization and in the process it attempts to develop his basic skill through proper training, motivation and direction. The human capital is rightly put through for the personnel in the organization for effective functioning, right decision making and career development. In all these it creates value to the organization and makes it more stable in the competitive environment.

The basic elements of human capital are projected as under:

- Know-how
- Education
- Vocational qualification
- Work related knowledge
- Occupational assessments

- Psychometric assessments
- Work related competencies
- Entrepreneurial innovativeness, proactive and reactive abilities.
- Changeability.

(Source: SMAC, 1998)

1. **Know-how** : This is one of the major elements as it relates to the process of the means to get the end results. It answers the question what is what and how to do it and the functions involved in general.
2. **Education** : This is a basic factor which makes one to understand the various aspects of the job or work allotted. This is also a motivating facts for career advancement.
3. **Vocational qualification** : This element refers to the practical knowledge a person gets through vocational education and training certain sphere of activity.
4. **Work-related knowledge** : It is one's knowledge in the particular field of work which he has gained through such work being allotted to him. His earlier work experience in that particular job or work will be of additional value.
5. **Occupational assessment**: A good analysis of the job will motivate one to study the nature of work or occupation. This will enable one to plan is future career depending upon the value of assessment.
6. **Psychometric approach** : This approach tries to measure the ability, i.e., intelligence in terms of quantity or how much intelligence a person has. In other words, this approach tries to determine and measure qualitatively the factors that make up intelligence.

To day Psychometric testing is used to discover usually able youngsters, who may benefit from enriched or alerted learning.

Each person's score is compared with standardized norms, standards obtained from the scores of a large, representative sample of children of the same age who took the test while it was in the process of preparation. Besides providing standardized norms, test developers must devise techniques to try to ensure that the tests are valid (that they measure the abilities they claim to measure) and reliable that the results are reasonably consistent from one time to another. These are rigorous criteria, but tests can be meaningful and useful only if they are both valid and reliable.

7. **Work related competencies** : This relates to the knowledge one possesses with regard to the work he is allotted or involved in. This includes the nature of the job, his or her practical knowledge and experience in that line of activity, the training one has undergone in that line or work, is aptitude towards the work etc.
8. **Entrepreneurial innovativeness, proactive and reactive abilities** : It is the entrepreneurial skill and force with which one involves himself in his work. The aptitude in the particular sphere of activity should motivate him for innovative approach. That should make one to act so when there is some adverse result. Innovativeness is based on the constant bent of mind on research in the work field.
9. **Changeability** : The competitiveness among the enterprises drive them making various changes in the organization. As the organizations look for changes, the employees would be driven for challenging tasks with many changes being made in the organizational structure. It may even result in positional change. One should be capable of adjusting himself to the changing organizational setup and changing situations.

These are all the elements of human capital. To tap these qualities highly and develop them would be the task of Human resource development.

2.3.3 Measures to Evaluate Human Capital:

In an enterprise the following indicators are being applied as measures evaluate the human capital:

- i) Reputation of company employees with head hunters.
- ii) Years of experience in profession.
- iii) Rookie ratio (percentage of employees with less than 2 years experience)
- iv) Employee satisfaction.
- v) Employee participation.
- vi) Proportion of employees making new innovative plans and suggestions.
- vii) Value added per employee.
- viii) Value added per salary rupee.

The accounting and reporting of intellectual capital will face the following problems.

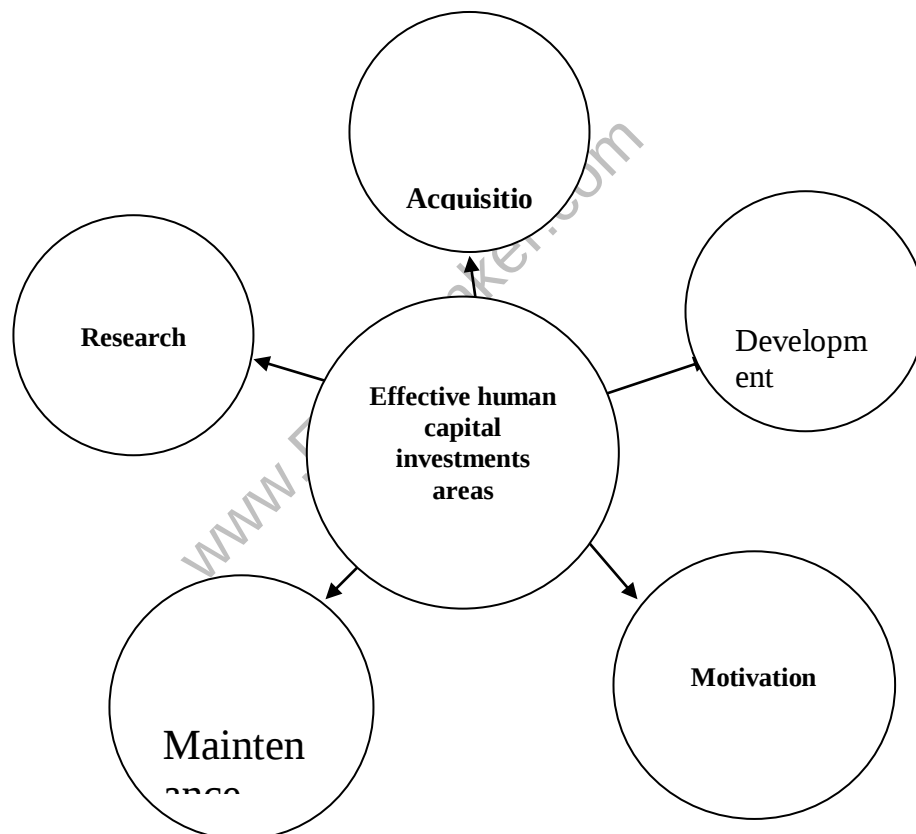
- i) The need for better tools to manage investment in people, skills and technological capabilities.
- ii) The need to be able to measure, over the long run, the returns of investment in people's skills, information bases and the organizational technological capabilities.

2.3.4 HUMAN CAPITAL INVESTMENT

The Human Capital acts as a building block for the organizational (structural) capital of the firm. So, when the enterprise looks for making the Human Capital more effective and beneficial, it has to focus on the effectiveness of investing in training, research and development outcome and returns to technological infrastructure spending.

The investment in human capital should be properly planned keeping in mind the future expansion and development programmes as the organizational goal. Already it is seen that the organization required personnel who have to be rightly used for achieving its long project objectives. So, these personnel need proper motivation and encouragement through job analysis, training and research development. Lines of activities are to be thought about for making the employee to be more innovative. They must conduct themselves so to be a suggestive body to the organization.

To have effective human capital investment, any organization should plan broadly on five major areas as follows:



1. Acquisition

Acquisition involves.

- a) Human Resource Planning
- b) Recruiting: Internal and External
- c) Employees Socialization

In HR planning, the management has to ensure that it has the right number and kind of people at the right places, at the right times, capable of effectively (doing the right thing) and efficiently (doing things rightly) completing the work needed for the enterprise to achieve its overall objectives. This necessitates job analysis. If the HR planning finds the need or specific or additional employees based on job analysis, to hire these additional employees, the enterprise must discover potential applicants. Out of these potential applicants, screening is to be done to identify job applicants who will be successful if selected.

This acquisition function is over when the selected applicants have been appointed in the organization, who have to adapt themselves to the organizational culture and their work environment. The organizational culture conveys the new employees how things are done and what really matters for the workforce and for the organization. When they adopt the organizational culture, they learn the rope, i.e., what is most significant for them and for the enterprise and how one gets adapted to the new environment. This is what is referred to as “employee socialization”. The term socialization refers to all passages undergone by employees. When an employee enters fresh or takes up a new job, or gets a promotion or accepts a lateral transfer, he has to make an adjustment with the new environment. This is due to different work activities, new boss, a different group of co-workers and different set of standards for better

performance. The most profound adjustment will occur when one makes the move into an organization – the move from being an outsider to being an insider.

The first process in the employee socialization will be “orientation” on the job. This is only a small part of the overall socialization of a new employee in the organization Basically “orientation” covers the activities involved in introducing a new employee to the organization and to his work units. The orientation programme should familiarizes the new employee with the organization’s objectives, history, procedures, and rules. Further it communicates relevant personnel policies such as focus of work, pay procedures, active requirement and fringe benefits, reviews the specific duties and responsibilities of the new employee’s job etc.

2. **Development**

This includes,

- a) Employee training
- b) Management development
- c) Career Development

- a) **Employee Training** : As jobs have become more complex, the significance of employee training has increased. The modern complex societies have created increased pressure for the organizations to readapt the produce and services produced as a competitive product. This has necessitated raise the skill level and adaptability of the employees.

Training is a learning experience, which seeks a permanent change in an individual to improve his ability to perform on the job. It can involve the

changing of skills, knowledge attitudes or social behavior. The training techniques can help to improve employees' job performance, gain confidence in their attitude towards their job and their interactions with co-workers and supervisors.

- b) **Management Development:** This is more future oriented and more concerned with education than assisting a person to become a better performer with training. The management development activities should attempt to instill sound reasoning process – to enhance one's ability to understand and interpret knowledge. Development focuses more on the employee's personal growth. A successful manager is one who has analytical, human, conceptual and specialized skill. The management normally adopts four popular on-the-job techniques. They are coaching understanding assignments, job rotation and committee assignment.

Coaching: When one manager takes an active role in guiding another person to similar position, that is referred to as 'coaching'. An effective coach gives guidance through directions, advice, criticism and suggestions in an attempt to aid the growth of an employee.

Understudy Assignments: As a development technique, the understudy assignment is to replace vacationing managers. The potential managers are given opportunity to relieve an experienced manager of his job and act as his substitute during that period. As a staff assistant to a manager, the understudy gets the opportunity to learn the manager's job.

Job Rotation: It refers to placing the employee in different new positions. It could be either vertical or horizontal. Vertical rotation is promoting the worker to new positions. The horizontal job rotation is more significant at the development level. It could be termed as lateral transfer. It is a very good method for broadening the manager's new positions. It reduces boredom and stimulates one to develop new ideas. The horizontal job transfer can be (a) on a planned basis, i.e., by means of a development program where one spends two to three months in the same activity and then moves to the next (b) on a situation basis, e.g., by changing the person from one activity to another when the previous one is no longer challenging or to meet the needs of work scheduling. It permits a greater understanding of other activities within the organization, it becomes increasingly necessary to understand the intricacies and inter relationships of activities and these abilities can be more quickly acquired by moving about within the organization.

Committee Assignment: Assignment in a committee can give a better opportunity to the employee to share in the managerial decision making to learn by watching others and to analyze and investigate specific organizational problems. Committees often take up task force activities designed to go into a particular problem, ascertain alternative solution and make recommendations for implementing a solution. This sort of assignment can both be interesting and rewarding to the employee's growth. It increases the employee's exposure to other members of the organization as well. Off-the-job development techniques are also equally important while one's efficiency in higher level of organization in to be achieved. Among the different techniques which are adopted in the enterprise more commonly used ones are : Sensitivity Training, Transactional

Analysis, Lecture Course and Simulation Exercises (for e.g. case study, decision game, and role plays).

Career Development: A “career” is a sequence of positions occupied by a person during the course of a life time. Effective organizational career development ensures the needed talent being available and improves the organizational ability to attract and retain high talent personnel. It also reduces employee frustrations. Individual career development is a three step self-assessed process:

- a) Identifying and organizing skill, interest, work-related need and values.
- b) Converting these inventories into general career fields and specific job goals.
- c) Testing these possibilities against the realities of the organization.

3. Motivation

“Motivation” is the willingness to do something and is conditional by this action’s ability to satisfy some need for the individual. A need is one which is looking for certain outcomes appearing very attractive. An unsatisfied need creates tension which stimulates drives within the individual. These drives generate a search behaviour to find particular goals that, if attained, satisfy the need and lead to the reduction of tension. A need is the deficit state. It is an internal state that makes certain outcomes appears attractive. An unsatisfied need creates tension that stimulates drives within the individual. These drives generate a search behavior to find particular goals that, if attained, will satisfy that need and lead to the reduction of tension. It can therefore, be said that motivated people are in the state of tension. To relieve this tension, they exert

effort. The greater the tension, the higher is the effort level. If this effort successfully leads to the satisfaction of the need, tension is reduced.

The Organization has to develop right type of motivational techniques to help the workers achieve their need satisfaction and reduction of tension. If a person is to perform effectively, extrinsic factors such as job design, working conditions, job security and supervision must be seen as satisfactory. But more intrinsic factors such as achievement, recognition and responsibility from their work are also the motivating factors. People expect their work to be objectively evaluated. So, the performance appraisal and its results will affect employees' motivation. If they think that their efforts will be unfairly judged, motivation will decrease. The rewards or punishments that follow the performance appraisal will influence motivation.

4. Maintenance

The objective of this is to retain people who are performing at high levels. This requires that the organization provides safe and healthy working conditions and satisfactory labor relations. This involves compensation administration.

Employees exchange work for rewards and the main reward is certainly money, but how much? This is to be rightly decided. The goals of compensation administration are to design the lowest-cost pay structure that will attract, motivate and retain competent employees who will perceive the reward as fair. As the organization wants to pay fair wages the employees want fair compensation for the job being done. So, the organization is concerned with

determining a fair compensation plan. It also recognizes that while paying the employees, compensation systems are predominantly designed around the jobs. The responsibilities and the demands of the job determine the pay range. The actual performance of incumbents determines the pay range and where they are to be placed. The essence of compensation administration is job evaluation and establishment of a good pay structure.

Job Evaluation : Job evaluation seeks to use the information in job analysis to orderly determine the value of each job in relation to all jobs within the organization. It means to rank all the jobs in the organization and place them in the order or position that will reflect the worth of each job. It is mainly ranking of the jobs and not people. The ranking through the job evaluation is a means to make a good pay structure. It can also provide an objective standard from which modifications can be made for any compromise. The four basic approaches to job evaluation are :

- i) The ranking method.
- ii) The classification method.
- iii) The factor comparison method.
- iv) The point method.

In addition to a basic wage structure, organizations offer incentive compensation. These incentives can be designed around the individual, the group or the organization. Executive compensation is also considered which is higher than that of rank-and-file personnel and also includes other financial and non-financial benefits not otherwise available to operative employees.

The organizations have to offer other benefits as 'sweetening the pot' Employees are accustomed to such benefits but the cost of benefit for the enterprise sometimes cause more problems. These costs include social security insurance, worker compensation, pay for rest period, sick leave pension programmes, life insurance, health insurance, expenses as social and recreational events, housing, educational and medical facilities, etc.

Safety and Health : Organizations have to make provisions for the safety and health of the workers. Based on the Organizational safety and health rules, preventive measures and to be provided. Basically, employees are to be given safety education, skill training, engineering, protection and regular enforcement. Work surroundings should be well maintained. Health programmes are to be adopted. Provision for stress management is to be made. Causes for stress to be identified and steps to reduce the stress must be implemented. The burnout i.e., emotional and physical exhaustion caused due to various factors should be brought under control by job enrichment, smooth environment and other progressive activities.

5. Research

Since effective management of human resources depends on refining HRM practices to changing conditions, there is need for conducting research to keep abreast of the latest findings in HRM and provide a suitable framework by which the solutions to the problems of HRM can be found. Research helps to introduce changes with new and relevant HRM practices. Research leads to systematic goal oriented investigation of facts that seek to establish certain results and findings. The HRM research could be in any of these are as:

- Wage surveys.

- Effectiveness of various recruitment sources.
- Job analysis
- Performance appraisal validation
- Effectiveness of training methods.
- Attitude survey towards reward system
- Job satisfaction survey
- Effectiveness of an assessment center etc.

2.4 Expenditure Vs Productivity

2.4.1. Expenditure

Expenditure refers to a planned and purposeful outflow of funds for growth and development in business over a period of time. Business spends to earn; to grow and be excellent in the line of operation.

Any organization in the competitive world of “Survival of the fittest”, incurs expenditures towards personnel. Better wages, better working conditions, better facilities better tools and equipments, better training and development etc., are the areas where expenditures are made with the intention of business gain. It has to channel these outflows of funds under appropriate heads in appropriate

situations-towards wage and salary administration, fringe benefits, enhancing the quality of work life, management development, change, organizational development. These are some of the areas of outflow of funds with the expectation of better and more profitable return, otherwise called attainment of higher productivity.

2.4.2 Productivity :

Historically, the term is believed to be used for the first time by economist Quinsy in 1776. Towards the end of the 19th century it was understood as “the faculty to produce”. In the modern sense, it indicates the relationship between the results and the means employed. It seeks to measure the economic soundness of the means. It is the amount of work that is being produced in the organization in terms of how much. Peter Drucker has referred productivity as, *“That balance between all factors of production that will give greatest output for the smallest effort”*.

To reduce the description of productivity to precise terms, it is the relationship between output and input. Symbolically, $P=O/I$ where P = Productivity, O = Output and I = Input. Productivity can be considered to be higher if the same product can be obtained by limited means and lower if larger quantity of means is required for the same product level. Productivity increases as an organization finds new ways to use fewer resources to produce its output.

Though the overall productivity is being defined as a ratio of output over input, the measurement of productivity is a difficult proposition as account of non-homogeneous nature of relationship between input and output, difficulty in quantifying factors like entrepreneurship acuity and lack of identical behavior of input and output in differing circumstances.

2.5 TRAINING

2.5.1. Meaning

Training is a learning experience in that it seeks a relatively permanent change in an individual that will improve his or her ability to perform on the job. Training can involve the changing of skills, knowledge, attitudes or social behaviour. It may mean changing what employees know, how they work, their attitudes towards their work or their interactions with their co-workers or their supervisors.

2.5.2 Determining Training Needs and Priorities

For determining the training needs the following four questions, should be answered:

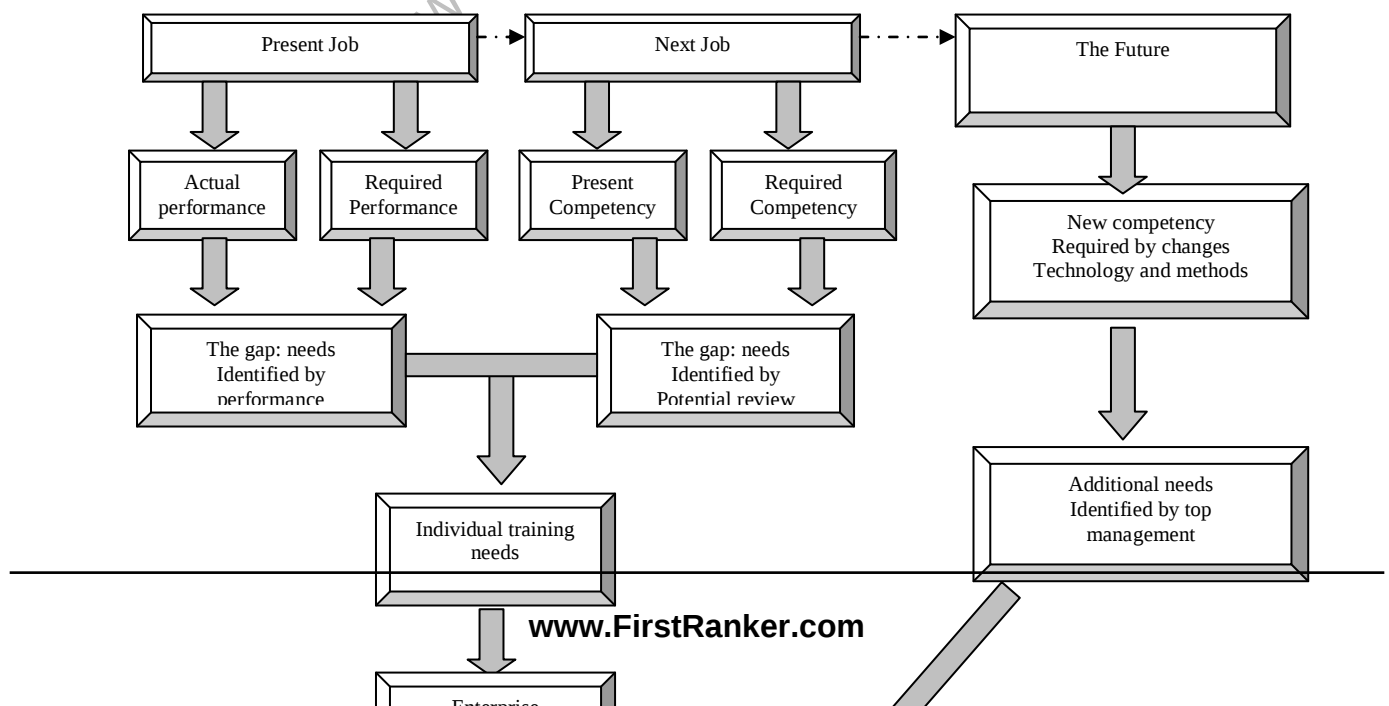
- What are the organisation's goals ?**
- What tasks must be completed ?**
- What behaviours are necessary for each job incumbent to complete his or her assigned task?**
- What deficiencies do incumbents have in the skills, knowledge, or attitudes required to perform the necessary behaviours ?**

These questions demonstrate the close link between human resource planning and determination of training needs. When a manager sees evidence of inadequate job performance, assuming the individual is making a satisfactory effort, attention should be given towards raising the skill level of the worker. When a manager is confronted with a drop in productivity, it suggests that skills need to be fine-tuned. If deficiencies in performance are uncovered it need not necessarily follow that the manager should take corrective action. It is important to put training into perspective. Training

is judged by its contribution to performance where performance is a function of skills, abilities, motivation and the opportunity to perform. Managers must compare the value received from the increase in performance that can be attributed to training with the costs incurred in that training. The desire for improved worker productivity cannot be approached in a vacuum. The benefits that accrue from training must exceed the costs incurred.

Once it has been determined that training is necessary training goals are established. Management should explicitly state what changes or results are sought for each employee. It is not adequate to say that there is a need to improve the behaviour, knowledge and skills of the employee but also by how much. The goals should be tangible, verifiable and measurable and clear to both management and employee.

Data about individual training needs can be gathered from performance appraisals. Interviews with the jobholder, tests, surveys, and career plans for individuals. Let us look more loosely at the steps in the manager development process, focusing first on the present job, then on the next job in the career ladder, and finally on the long-term future needs of the organization.



Manager Development Process and Training

Adapted from John W. Humble, Improving Business Results (Maidenhead, England: MC Graw-Hill Book Company (UK) Ltd., 1968

2.5.3 TRAINING METHODS

The most popular training methods used by organizations can be classified as either on-the-job training or off-the-job training.

On-the-job training: On-the-job training places the employees in an actual work situation and makes them appear to be immediately productive. It is learning by doing. For jobs that are either difficult to simulate or can be learned quickly by watching and doing, on-the-job training makes sense.

One of the drawbacks to the on-the-job training can be low productivity while the employees develop their skills, Another drawback can be the errors made by the trainees while they learn. However, when the damage the trainees can do is minimal, where training facilities and personnel are limited or costly, and where it is desirable for the workers to learn the job under normal working conditions, the benefits of on-the-job training frequently offset its drawbacks. Some of the on-the-job training programs are

Apprenticeship Programs : People seeking to enter skilled trades to become, for example, plumbers, electricians or iron-workers are often required to undergo apprenticeship training before they are accepted to journeyman status. Typically, this apprenticeship period is from two to five years. During the apprenticeship period, the trainee is paid less than a fully qualified worker. Apprenticeship programs put the trainee under the guidance of a master worker. The argument of apprenticeship program is that the required job knowledge and skills are so complex as to rule out anything less than a long time period where the trainee studies under a skilled master journeyman.

Job Instruction Training : During World War II, a systematic approach to on-the-job training was developed to prepare supervisors to train operatives. This approach called job instruction training (JIT) was part of the training within Industry program. JIT proved highly effective and became extremely popular. JIT consists of four basic steps:

- Preparing the trainees by telling them about the job and overcoming their uncertainties:

- Presenting the instruction, giving essential information in a clear manner.
- Having the trainees try out the job to demonstrate their understanding;
- Placing the workers into the job, on their own, with a designated resource person to call upon should they need assistance.

Basics of Instruction
Learning

Essentials of

Prepare

Motivation

- Break down the job
- Prepare an instruction plan
- Put the learner at ease

Present

Understanding

g

- Tell
- Show
- Demonstrate
- Explain

Try Out

Participation

- Have the learner talk through the job
- Have the learner instruct the supervisor on how the job is done
- Let the learner do the job

Follow-up

Application

- Check progress frequently at first
- Tell the learner whom to go to for help

- Gradually taper off progress checks

Table 3.1: JIT Instruction / Learning Sequence

Off-the-job training : Off-the-job training covers a number of techniques classroom lectures, films, demonstrations, case studies and other simulation exercises and programmed instructions. The facilities needed for each of these techniques vary from a small makeshift classroom to an elaborate development center with large lecture halls, supplemented by small conference rooms with sophisticated audio-visual equipment, two-way mirrors and all the frills. Some frequently used methods are:

Classroom lectures or conference : The lecture or conference approach is well adapted to conveying specific information rules, procedures, or methods. The use of audiovisuals or demonstrations can often make a formal classroom presentation more interesting while increasing retention and offering a vehicle for clarifying more difficult points. The lecture's liabilities include possible lack of feedback and the lack of active involvement by the trainees. However, this can be partially offset by reducing the structured lecture format and allowing trainees to provide feedback to the lecturer or creating discussion groups under the direction of a conference leader.

Films : Motion pictures can be useful training technique. Whether purchased from standard film distributors or produced internally by the organization, they can provide information and explicitly demonstrate skills that are not easily presented by other techniques. Motion pictures are often

used in conjunction with conference discussions to clarify and amplify those points that the films emphasized.

Simulation exercises : Any training activity that explicitly places the trainee in an artificial environment that closely mirrors actual working conditions can be considered a simulation. Simulation activities include case exercises, experiential exercises, complex computer modeling and vestibule training. Cases present an in-depth description of a particular problem an employee might encounter on the job. The employee attempts to find and analyze the problem, evaluate alternative courses of action, and decide what course of action should be most satisfactory.

Experiential exercises : Experiential exercises are usually short, structured learning experiences where individuals learn by doing. For instance, rather than talk about interpersonal conflicts and how to deal with them, an experiential exercise could be used to create a conflict situation where employees have to experience a conflict personally and work out its solution. After completing the exercise, the facilitator or trainer typically discusses what happened and introduces theoretical concepts to help explain the members' behaviour during the exercise.

Computer modeling: Complex computer modeling simulates the work environment by programming a computer to imitate some of the realities of the work situation. Computer modeling is widely used by airlines in the training of pilots. The computer simulates the number of critical job dimensions and allows learning to take place without the risk or high costs that would be incurred if a mistake were made in a real life-flying situation. An error during a simulation offers an opportunity to learn through one's

mistakes. A similar error under real-life conditions might cost a number of lives and the loss of multimillion dollar aircraft—quite a high price for a learning exercise. Obviously, complex computer modeling is expensive and can be justified only where programs are formal, a number of trainees will be developed, and the costs of allowing the individual to learn on the job are prohibitive.

Vestibule training: In vestibule training, employees learn their jobs on the equipment they will be using, but the learning is conducted away from the actual work floor. In the 1990s many large retail chains train cashiers on their new computer cash registers, which are much more complex because they control inventory and perform other functions in addition to ringing up orders—in specially created vestibule labs that simulated the actual check-out counter environment. While expensive, vestibule training allows employees to get a full feel for doing tasks without “real world” pressures. Additionally, vestibule training uses the same equipment the trainee will use on the job.

Programmed instruction : The programmed instruction technique can be in the form of programmed texts or manuals, while in some organizations teaching machines are utilized. All programmed instruction approaches have a common characteristic. They condense the material to be learned into highly organized, logical sequence, which require the trainee to respond. The ideal format provides for nearly instantaneous feedback that informs the trainee if his or her response is correct.

Training evaluation : Training does not always work and when it does it is rarely 100 percent effective. Sometimes the skills required to do the job is

impossible for the target population. Sometimes the organization will not permit performance of the job as specified, and at other times there are design deficiencies inherent in the equipment, that are so severe that no reasonable amount of training and learning can make the equipment useable or maintainable. These are all the factors that are to be considered while evaluating a training programme. We need to evaluate the training effectiveness in meeting its objective and the validity of those objectives. While the number of possible evaluation criteria could be very large, it is necessary to narrow the list to those that are most needed and meaningful. The measures considered most meaningful and essential are those relating to training acceptance, appropriateness to trainee population, objectives assessment and job relevance.

Evaluation design : As in any other experiment the design is completed before the evaluation is done. A common approach is to establish what skill or knowledge level is held by the trainee prior to training. For this a pre-training test could be conducted. If the trainees have been selected after proper identification of training needs none of them should be able to pass this test. A test administered after the training will provide the data necessary to determine if the objectives were met. If the data reveals that none of the trainees could pass the pre-training test and all the them could pass after training test, then we can state unequivocally that the training was effective in upgrading the knowledge and skills of the trainees. Evaluation should be done at different points of time, at the end of a lesson or module, at the end of the course, shortly after beginning to use the skills and knowledge on the job, three to six months after completing training and one to three years after training.

Training the trainers : When an instructor is required for a training program, the person should have a comprehensive understanding of the training material, the subject matter and the techniques necessary for the effective presentation of the material. The roles of instructors can vary widely depending upon the training developer's design for the instructor. Typical roles for the instructor are traditional lecturer, administrator, facilitator, expert and feedback provider. An instructor may assume all the roles in a single program or session or may rely solely on one for a training program. Trainer training, therefore, must include the entire array of activities from classroom demeanor to discipline. Formal trainer training generally takes a three fold course: training principles and practices; techniques of classroom behaviour and observations and practice in the classroom. Trainer must also know the methods to be used for taking the feedback. In a simple stimulus-response situation, such as in the target example where shooter must know where he hit in previous round to improve, the feedback is simple, in a more complex situation, where the correct answers vary or may not be so apparent, feedback deals more with the process than with the substance of the decision. Trainers need to learn how to draw out the learner so that the process becomes clear to the trainers. The trainer must suppress value judgment in giving feedback. Feedback must be objective, unless the task is to please another person.

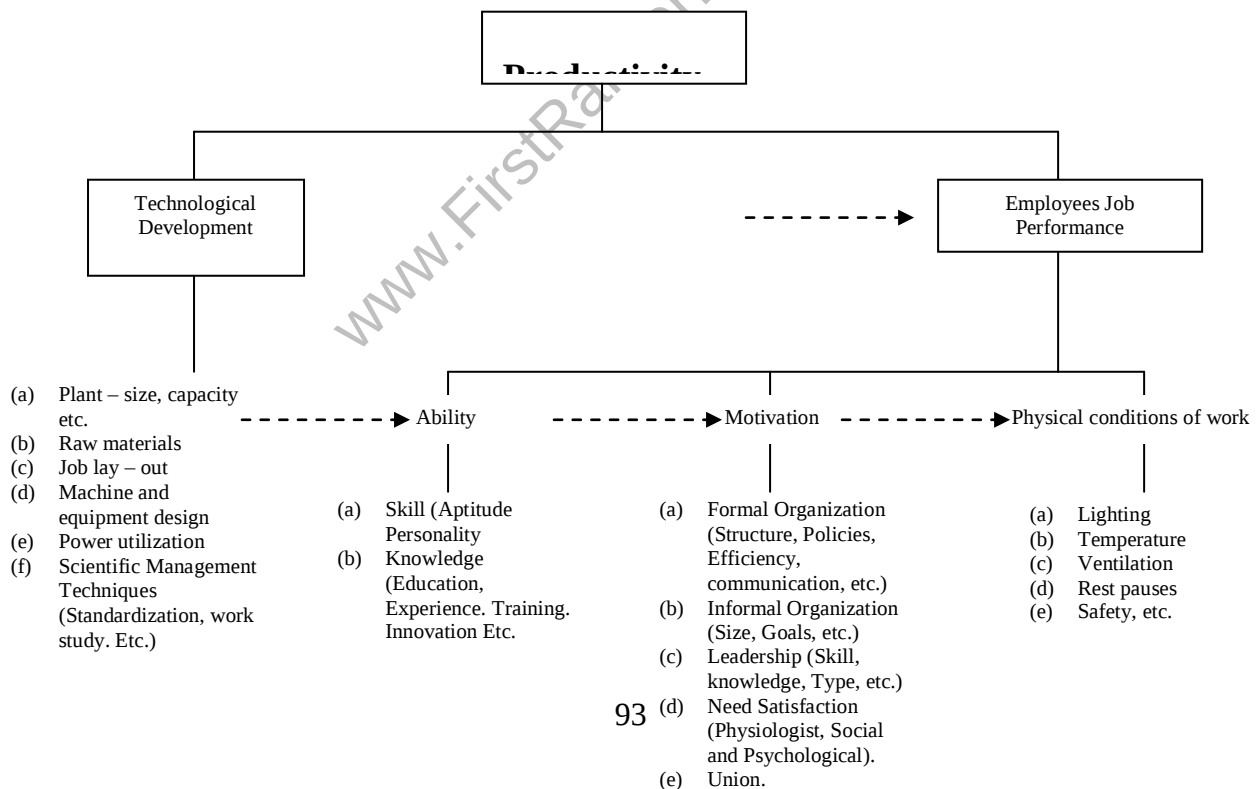
2.5.4 Estimating costs in training:

Costs associated with the development and delivery of training programmes are labour, materials and overheads. Media and materials costs may vary substantially from one program to another. Some programs require most extensive data collection and analysis than others, while still others accrue large publishing costs. Cost questions always arise while considering

training program development. The sponsor needs to be able to meet budget resources to ensure successful completion of the program. Therefore, the training developer needs to provide a reasonably accurate estimate of the costs associated with each phase of the development process and for the total costs to the point where the program has been tested and is ready for learners.

2.6 HUMAN CAPITAL AND PRODUCTIVITY:

Productivity measured in terms of output per man (or per man-hour) is broadly determined by two principal factors: (i) technological development, and (ii) employees' job performance. Of these employees' job performance depends primarily on (a) the ability of the individual employees (may be called the ability to work), (b) the motivation of employees (may be called the willingness of the worker to work) and (c) physical conditions of work. The following chart * spelling out these factors will help us in understanding the whole set of forces that have a bearing on productivity.



*Adapted from Report A. Sutermeister : People and Productivity.

1. **Technological Development** : Technical factors including the degree of mechanization, technical know-how, raw materials, layout and the methods and techniques of work determine the level of technological development in any industry. Research shows that in industrial plants technological development is by far the most important factor influencing productivity. Improvements in methods of work and equipment are reported to have shown increases in productivity ranging from 20 to 200 per cent. In marketing firms, on the other hand, the degree of technology with a more important part to play.
2. **Employee' Job Performance** : It has been emphasized earlier also that the human factor is a critical factor in the success of an enterprise or an industry. The human side of an enterprise is its dynamic part; good machines, improved methods of work, new processes, in short, all improvement in technology, calls for willingness and action on the part of men in industry to serve as agents of higher productivity. Employees include men at levels of organization right from the rank-and-file workers up to the top-level executives. Sometimes an improvement in technology is more than offset by changes for the worse on the human side of productivity which should go up actually goes down.

- a) **Motivation** : The willingness of the employee to work for an organization is related to his productivity in an important way. The urge to work is a complex phenomenon governed by several factors the motivation of an employee will depend upon the organization structure (formal as well as informal), leadership, need satisfaction and the influence of trade unions. Delegation and decentralization of authority, participative management, organizational efficiency, proper personnel policies relating to selection, placement, promotion, wage-salary levels, incentives, merit-rating, job evaluation, training and provision for two-way communication are some of the features of the formal organization which influence motivation. Likewise, the existence of groups with higher productivity as their goal is likely to contribute to the organizational objectives.

Research shows that job performance results from “ability times motivation”. A person may be very capable but if he is not motivated, he cannot perform well on his job. Likewise, a person may be highly motivated, but if he lacks the basic ability required for the job, he cannot do well. This is a point that is generally overlooked in stressing the importance of motivation in particular.

- b) **Physical Conditions of work (Work Environment)** : The importance of a proper work environment and physical conditions on the job has been emphasized at length by industrial psychologists and human engineers. It is important that the work environment ensures the greatest

ease at work through better ventilation, better lighting, improved safety devices, reduction in noise, etc. equally important is the need for making the workday reasonable in length, and for introducing suitable rest pauses to enable the men to recoup their energy lost in continuous work. The Hawthorne experiments showed that physical conditions of work were not directly and necessarily related to output. What really matters is the attitude of the employees toward these conditions. At the same time, certain studies made in England show that when the temperature gets beyond reasonable limits, this did tend to affect output even when the workers had high ability and high motivation. In any case, the management cannot run away from its obligation for providing the most congenial possible working conditions to the employees. Improvement in productivity brings the following advantages to the firm and the community at large :

- a) **Reduction in the cost of raw materials (through increase in the productivity of raw materials)**
- b) **Reduction in labour cost per unit of output.**
- c) **Reduction in overheads and power costs per unit of output.**
- d) **Reduction in the price of goods.**
- e) **Increase in wages and salaries (through schemes for sharing the gains of productivity).**
- f) **Increase in the reserve fund that can be utilized for expansion and modernization.**
- g) **Better standards of living for people through increase in their incomes and improvement in the quality of goods that can be made available at cheaper prices.**

- h) Increase in the competitive strength of the country in export market through reduction in cost of production and improvement in quality of output.**

2.7 HUMAN RESOURCE ACCOUNTING:

Human element is the most valuable input in an organization. A team of competent, devoted and motivated persons can convert a sick concern into a successful one. On the other hand, incompetent and disinclined personnel may squander away the existing physical and financial resources, leading the concern to collapse. The accounting profession until approximately 1965 largely ignored the obvious importance of people in organizations and as productive resources. Now, there appears to be wide spread awakening and growing interest for human resource accounting.

2.7.1 The Concept of Human Resource Accounting:

The productivity of a company's investment is known from the rate of return it gives. So far, these rates of productiveness considered in respect of Physical assets only. To find out the productivity of investment on human beings in any organization human resource accounting emerged as a supporting tool. The Human Resource Accounting is a scating tool that generates and reports quantitative control information about the contribution of human resource for promontory industrial productivity.

There are two major reasons why Human Resources Accounting has been receiving so much attention in the recent years. First, there is genuine need for reliable and complete management of human resources.

Secondly, a traditional framework of Accounting is in the process to include a much broader set of measurement than was possible in the past. The people are

the most important assets of an organization and yet the value of this asset does not appear in financial statements. This information does not get included in management information systems. Conventional accounting of human resources outlay consists of taking note of all expenses of Human capital formation which does not seem either to be correct or meeting the actual needs.

In simple terms, *Human Resource Accounting means accounting for people as the organizational resource.* The **American Accounting Association (AAA)** Committee on HRA defined human resource accounting as following: *HRA is the process of identifying and measuring data about human resources and communicating this information to interested parties.*

Stephen Knauf defined HRA as : The measurement and quantification of human organizational inputs, such as recruiting, training, experience, and commitment.

Eric Flameouts explained human resource accounting as *accounting for people as organizational resources. It is the measurement of the cost and value of people for the organization.* To quote Deirdre, *"Human Resource Accounting in the measurement of cost and value, is a term used to describe a variety of proposals that seek to report and emphasis the importance of Human resources knowledgeable, trained and loyal employees in a company's earning proceeds and total assets."*

In the words of R.L. Woodruff Jr. vice President, R.G. Barry corporation the company which undertake pioneering work (1960s) in developing human resources accounting *"HR Accounting is an attempt to identify and report investment made in resources of the organization that are not presently accounted for under conventional accounting practice."* Basically it is an information system that informs the management about the changes that are occurring to the human resources of the business.

One may not find unanimity on what human resource accounting is from the aforesaid definitions . But the importance of information is evident. Human resource accounting system requires and produces a pool of information for effective decision-making concerning the human assets. It is an information system that tells management what changes over time are occurring to the human resources of the business.

Following are the Limitations of human resource accounting:

1. Absence of clear cut procedures or guidelines.
2. Period of existence is uncertain and valuing uncertainly seems to be unrealistic.
3. It may dehumanise & manipulate employees.
4. Empirical evidence is yet to be found that HRA is a management tool.
5. There is no consensus in accounting profession.
6. Problem of management to treat them as assets as they are not capable of being owned, retained and utilised like physical assets.
7. Fear of question from trade unions.
8. Problem in amortisation
9. Tax laws do not recognize human beings assets.
10. No universally accepted method of HR valuation.

2.8 Measurement of Human Value addition into Money Value:

HRA aims at converting human data into money value. Human data as such has not been accounted for since it is not like a physical asset which has a direct money value whether it is being represented by historical cost or replacement cost or conversion process of human data into money value: Human data has to

be identified as the value of the production capacity etc., of the people at work should result in the growth of the organization and in turn the profit and the value of the firm. There are of course different approaches to human resources which work out the human capital into money value. It does not merely into account the present human asset as such but it takes into account the growth of the human asset with reference to the future needs of the organization with the various policy elements and action plan introduced and implemented by the organization. As it has been rightly referred to earlier, it aims to measure the cost and value of people in the (human resources) organization.

One of the management scientists, Likert cautioned that “the non accounting of human resources and the change occurring therein, of an organization may provide a poor picture of the profits and profitability of the organization.”

Johnson & Kapila that “accounting systems treat many cash outlays as expenses of the period in which they are made even though these outlays will benefit future periods. Discretionary cash outlays for employee training and morale can produce substantial cash inflow for the future. Managers under pressure to meet short term profit goals can on occasions, achieve these goals by reducing their expenditure on such discretionary investments.”

This led to the development of a new field of enquiry in accounting namely ‘Human Resource Accounting’.

2.9 Objectives of HRA.

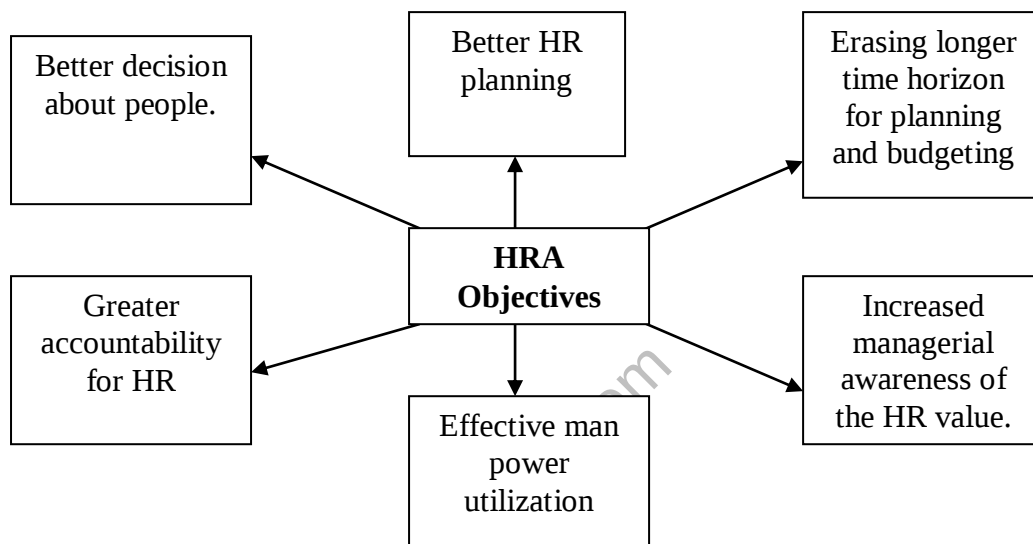
Considering the Definition of HRA as the process of identifying and measuring data about human resources and communicating this information to interested parties, the following three objectives are implied :

- a) Identification of Human resource value
- b) Measurement of cost and value of the people to organization.

- c) Investigation of the cognitive and behavioral impact of such information.

It is basically adopted to treat human resources as assets to generate human data about human resources, to assign value to human resources and to present human assets in the balance sheet.

The following model contemplates the aims and objective of HRA :



The system aims at furnishing cost value information for making proper and effective management decisions about acquiring, allocating, developing and maintain human resources in order to achieve cost effective organizational objectives further, it is to help the organization in decision making in the following areas :

- Direct Recruitment Vs Promotion.
- Transform Vs. Retention
- Retrenchment Vs. Retention.
- Usefulness of cost reduction programme in view of their possible impact on human resources.

- e) Impact of budgetary control on human resources and organizational behaviors.
- f) Decision on relocating plants, closing down existing units, developing overseas subsidiaries etc.

According to S.A. muscove “A well developed HRA system can theoretically aid managers in becoming more effective and efficient in managing the resources that are available to them”.

2.10 Approaches to Human Resource Accounting:

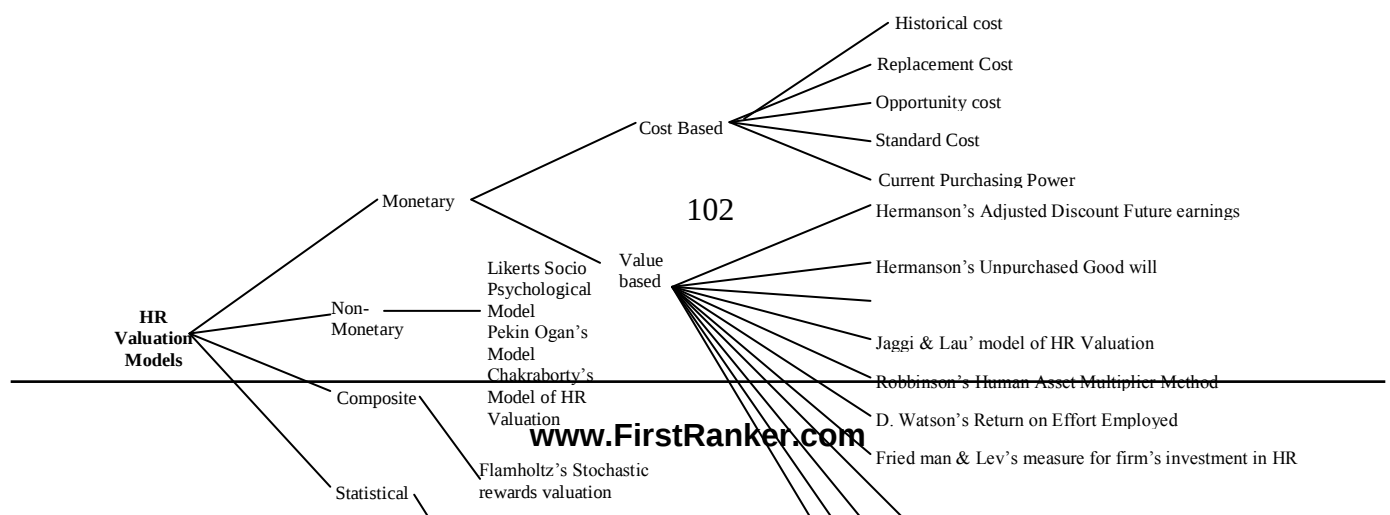
There are several approaches for the valuation of human resources.

There are two basis issues.

1. How human resources assets should be valued, i.e, should historical cost or replacement value of present value methods be used?
2. The implications of capitalized human resources, once they are recorded, i.e., how should human resources be amortized? What are the tax implication of human resource amortization? What are the implication of human resource accounting on internal and external auditing?

Once it is accepted that human resources are an asset, the question of measuring the cost of this asset arises. The monetary approaches to measurement of human assets are broadly based either upon cost or economic value. The cost approaches involve computation of the cost of human resources to the organization. The cost are capitalized and amortized over the useful life of the asset.

On scanning through literature, the approaches to HRA can be broadly classified as follows:



Some of the approaches are described below.

2.10.1 Monetary Approaches:

A. Cost Based Approaches

(a) Historical cost approaches: **In this method, the basic contributing factors for developing the human resource of the organization has been equated to the actual cost incurred. This approach was originally developed by William (Pyle & R. G Barry Corporation. A leisure footwear manufacturer in Columbia (U.S.A) and was assisted by Brummet & Eric G. Flamholtz.**

In this approach, the actual costs of recruiting, selecting hiring, training, placing and developing the employees of an organization are capitalized and amortized over the expected useful life of the asset concerned. If the asset is liquidated prematurely, losses are recorded, and if an asset has a longer life than estimates, revisions are made in the amortization schedule.

This approach relies primarily on accounting techniques which have been in common use for many years. It is easy to develop and operate these systems. Management also has little difficulty in interpreting the

meaning and the information supplied by cost based systems since the underlying concepts are consistent with those of the conventional accounting data. It simply involves an extension of the concept of proper matching of costs with revenue. Historical cost of human resources is treated very much like the cost of fixed assets. The same principles of capitalization and amortization are applied.

The main advantage of this method is that

- a. It is quite simple to understand and can be easily worked out.
- b. It satisfies the traditional accounting concept of relating cost revenue.
- c. It provides a basis for evaluating the company's returns on investment in human resources.

This approach has the following limitations:

- a. It takes into account only a part of the employees acquisition cost and ignores the aggregate value of their potential services.
- b. It is not easy or it may not be possible to estimate the number of year over which the capitalized expenditure is to be amortised.
- c. Because of the above problem, it will be difficult to determine a precise rate of amortization. A question may arise as to whether it should constant, increasing or decreasing.
- d. One fact to be considered is that gaining experience economic value of human resources increase. But under this method the capital cost decreases, with amortization. The question arises as to how the difference could be reconciled.

(b) Replacement cost approach: The approach was propounded first by Rensis Likert and was further developed by Eric G. Flamholtz. This is mainly based on the concept of Replacement cost. This is a measure the cost to replace a firm's human resource. Rensis Likert had suggested determination of the value of total human organization on the basis of the assumption that a new similar organization has to be created from scratch. He says 'Suppose that tomorrow, your firm had all of its present facilities but no personnel except the Chairman and he had to rebuild the human organization back to its present effectiveness. How much would it cost? All costs would be included which are involved in the recruiting, hiring, training the developing the replacement to the present level of proficiency and familiarity with the organization. This should serve as the basis of valuation of human resources of the organization from time to time.

This approach incorporates the current value of the company's human resources. It takes into account the fluctuations of the job market and the general rise in price level. Replacement costs have the advantage of being present oriented." This method is regarded as a good surrogate for the economic value of the asset in the sense that market considerations are essential in reaching a final figure. Such a final figure is also generally intended to be conceptually equivalent to a notion of a person's economic value.

A disadvantage of replacement cost is that it may not always be possible to obtain such a measure for a particular employee. It is difficult to fit identical replacement of the existing human resources in actual practice. Replacement cost does not necessarily reflect the knowledge, competence and loyalties concerning an organization that an individual can build over time. Further, the "managers asked to estimate the cost of completely

replacing their human organization may have difficulty doing so, and different managers may arrive at quite different estimates.

(c) Opportunity cost Model: To meet the deficiencies of the Replacement cost, Hekimain and Jones have suggested the use of Opportunity Cost Concept. For capital equipment and assets Joel Dean has defined Opportunity Cost as “The most profitable alternative use ... that is foregone by putting it to present use.” Under this method the value of an employee in his alternative use is determined; that value is taken as the basis for estimating. If employees can be hired externally there is no opportunity cost for them. Hekimian and Jones have suggested a competitive bidding process for the scarce employee in an organization.

Under this method, “the investment center managers will bid for the scarce employee they wish to recruit. These ‘scarce’ employees come from within the firm and include only those who are the subjects of recruitment requests made by an investment center manager. In other words, employees not considered ‘scarce’ are not included in the human asset base of the organization.

In this approach, the divisional investment center manager may bid for the services of the various personnel he requires. This bid price is then included in the investment base. The maximum bid price may go to the extent of the capitalized value of the extra profits likely to be generated by the ability and competence of the executive.

For example, assume that a company has a capital base of Rs. 20,00,000 and it earned profits of the amount of Rs. 2,00,000. The return on investment (ROI) of the particular industry of which the company belongs is 12%. If the services of a particular executive are required, it is expected that the profits will increase by Rs. 60,000 over and above the target profit

If we capitalize Rs. 60,000 at 12% rate of return, it works to Rs. 5,00,000. The company may bid upto Rs. 5,00,000 for the executive. However the maximum bid can go upto the capitalized value of Rs. 1,00,000, the actual excess profit expected to be generated by the executive, i.e Rs. 8,33,333.

Hekimian and Jones believe that this approach provides for more optimal allocation of personnel and sets the quantitative base for planning, evaluating and developing the human assets of the firm.

However, this approach has narrowed down the concept of opportunity cost by restricting in to the next best use of the employees within the same organization. The main drawbacks of this method is:

The method does not show the true cost of human resources in an organization because it excludes from its purview the employees who are not being bid by other departments of investment centers.

The method provides only a partial solutions as the employees of the type that can easily be hired from outside are not assets under this approach.

To determine the bid price for an employee, a Manager must make a judgmental estimate of that employee's value. Hence a low degree of objectivity can be expected form the opportunity cost.

(d) Standard Cost Method: To avoid complication of calculation under the replacement cost, standard cost or recruiting, hiring, training and developing per grade of employees are developed and established and made up-to-date every year. The standard cost so arrived at for all human beings are treated as value of human resources for accounting purposes. In case of new entrants the total standard costs would be increased by standard cost relating to that entrant.

(e) Current Purchasing Power Method: Under this method, instead of taking the replacement cost to capitalize, the capitalized historic cost of investment in human resources is converted is converted into current purchasing

power of money with the help of index numbers. If there is an increase in the index number, it will result in a corresponding increase in the value of human resources.

The standard cost method and the current purchasing power method also suffers from all drawbacks of the replacement cost except they are simpler calculation.

B. Value-based Models: Under this approach, value of human resources of an organization can be found out by discounting the future salaries and other capital costs by a certain rate of discount or by discounting the future earning of the organization at a certain date by suitable rate and allocating a part of the present value of earnings to human resources.

The valuation models developed under this approach are as under.

a. Hermanson's Adjusted Discounted Future Earnings Model:

Hermanson (1964) proposed this method in his pioneering work at Michigan State University (USA). Hermanson suggested the discounting of wage payments to people as a measure of a person's value to an organization. However he suggests the adjustment of his discounted future wage stream by an efficiency factor. To calculate Efficiency Ratio, he makes use of weighted average of firm's net income during the past five years. The weights are assigned in a reverse order – highest to the current year, i.e., 5 and 1 to the preceding 4th year. The formula given ahead is used for calculating Efficiency Ratio.

$$\text{Efficiency Ratio} = \frac{\text{Hermanson's Adjusted Future Earnings}}{\text{Hermanson's Future Earnings}}$$

- RF_0 = The rate of accounting income on owned assets of the firm for the current year,
- RE_0 = The average rate of accounting income on owned assets for all firms in the economy for the current year,
- RF_0 = Rate of accounting income on owned assets for the firm for the fourth preceding year,
- RE_4 = The average rate of accounting income on owned assets for all firms in the economy for the fourth preceding year.

Hermanson has suggested the following the Journal Entry to reflect the human asset value.

Human Resources	Dr
To Future wages payable	
To excess worth crated by	
Relatively efficient human resources.	

This method has been criticized on the following grounds:

- (1) The Efficiency Ration is subjective,
- (2) The weighting scheme used in computing the ratio has no theoretical or empirical justification but it is purely arbitrary,
- (3) Valuation period of 5 years is also without justification.

b. Lev and Schwartz Present Value of Future Earnings Model

This Model is also as the Compensation Model. Given the uncertainty and the difficulty associated with determination of the value of human capital, Baruch Lev ad Aba Schwartz suggested the use of an individual employee's future compensation as a surrogate of his value. According

to them, “the value of human compensational as a surrogate of his value. According to them, “the value of human capital embodied in a person of age x is the present value of his remaining earning from employment.”²⁵ This value for a discrete income stream is:

$$V_x = \sum_{t=x}^T \frac{I(t)}{(1+r)^{t-x}}$$

Where V_x = the human capital value of a person x years old
 $I_{(t)}$ – the person’s annual earnings up to retirement
 R = a discount rate specific to the person and
 T = retirement age.

Because V_x is an ex-post value, given that $I_{(t)}$ is obtained only after retirement, and V_x ignores the possibility of death occurring prior to retirement age, the authors have refined the valuation model after incorporating $P_x(t)$ the probability of a person dying at age t in the following manner:

$$S(V'_x) = \sum_{t=x}^T P_x(t+1) \sum_{i=t}^T \frac{I_i}{(1+r)^{t-i}}$$

Where I_i = future annual earnings
 $P_x(t)$ = the probability of a person dying at age t and
 $\sum(V'_x) =$ the expected value of a person’s
human capital

The firm’s labour force will be divided into homogeneous group of employees, such as unskilled, semi-skilled, and skilled employed. Engineers of different kinds,

Lev, B. and Schwartz, A., On the Use of the Economic Concept of Human Capital in Financial Statements, Accounting Review, January

1971. PP. –103-112, salesman, managerial staff, etc. Average earning profits, based on census data, will be constructed for each group and the present value of human capital calculated. The sum of present values over the various employee groups will provide the total human capital value associated with the firm²⁶

For example, assume that the total number of unskilled employees in the age group 15-34 in a manufacturing concern is 500, and that the future average earnings per year per employee is expected to be as follows:

Age (Years)	Average Annual Earnings
	Per Employee
	Rs.
25-34	4,000
35-44	5,000
45-54	6,000
55-64	5,000

Further, assume that the discount rate is 10%. The value of human capital of the unskilled employees under study will be calculated in the following manner:

Assume, for the sake of simplicity that all 500 employees are 25 years old. Each person will earn per year on an average in the following way:

Rs. 4,000 a year for the next 10 years

Rs. 5,000 a year for the years 11-20 years

Rs. 6,000 a year for the years 21-30 years

Rs. 5,000 a year for the years 31-40 years

The present value of this series of 40 numbers multiplied by 500 (number of unskilled employees) is equal to Rs. 2,18,31,500 being the value of human capital of this group.

The working is shown below:

Calculation of present value—

Rs.		P. V. Factor			Rs.
4,000	X	6.145*	(1-10 Years)	=	124,580
5,000	X	2.369 +	(11-20 Years)	=	11,845
6,000	X	0.913 +	(21-30 Years)	=	5,478
5,000	X	0.532 (+)	(31-40 Years)	=	43,663

Total P.V for an employee

(See P.V. of annuity of Re 1 table)

* From the table at 10 years and 10% rate = 6.145

+ 8.514 – 6.145 = 2.369

+ 9.427 – 8.514 = 0.913

(+) 9.779 – 9.427 = 0.352

Rs. 43,663 x 500 – Rs 2,18,31,500

The model suffers from the following limitations:

- Earnings do not represent true limitations.
- A person's value to an organization is not determined entirely by the person's inherent qualities, skill and traits but also by the organizational role in which the individual is placed. His expertise may be in one field and many not be required in another. Further, the individual's skill and knowledge are not valuable to an organization in an abstract form. They become valuable only when they are applied to achieve the end results of the organization.
- The model also does take into account the possibility and probability of an individual leaving the organization for reasons other than death or retirement.

- (d) The assumption in this model that people will not make role changes during their career with the organization is not realistic. Their role changes when they are transferred on promotion.
 - (e) Earnings (salary) is an expense. How can the capitalized value of expenses to be incurred in future be an asset? It should be the value of the benefit expected to accrue that should be capitalized and not the amount to be spent for the use of the asset.
 - (f) It fails to evaluate correctly the team work involved. Team works definitely more than the sum of the values of the individuals. The valuation is not reflecting the contribution of the team as a whole.
 - (g) This approach ignores security, bargaining capacity, skill, experience of the persons which will affect the payment of higher scale of pay.
- (c) Rewards valuation model: According to this model, the ultimate measure of an individual's value to an organization is the expected realizable value. The model has been suggested by Flamholtz. Here, it tries to identify the major variables that determine an individual's value to an organization. The expected realizable value of an individual is the present worth of the future services expected to be provided during the period he is expected to continue to serve in the organization. This is based on the assumption that human beings, like all other assets, are capable of providing future services that have economic value. It is presumed that a person's value to an organization depends upon the positions to be occupied by him in his organization. As people move from one organizational role to another, or occupy different organizational roles, they render service (i.e., reward) to the organization. The roles they will occupy in future will have to be determined probabilistically for each individual.

$$\Sigma(R) = \sum_{i=1}^n \left| \frac{\sum_{j=1}^n R_j P(R_j)}{(1+r)^j} \right|$$

where $\Sigma(R)$ = Expected realizable value,

R_i = the value R , to be derived by the organization in each possible service state, i ,

Where,

$E(Rv)$ = A person's expected realizable value.

R_i = Value 'R' to be derived by the organization for each position i .

$P(R_i)$ = Probability that an individual would occupy position i .

T = Time of retirement.

M = state of exit

R = Discount rate.

The model suggests a five step approach for assessing the value of the organization:

- (i) First of all, forecast as to how long (period) a person will remain and continue in the organization, i.e., his expected service life in the organization.
- (ii) Identifying the service states i.e., roles that he might occupy till he is likely to leave the organization.
- (iii) Thirdly, estimate the value derived by the organization when a person occupies a particular position for a specified period.
- (iv) Fourth, estimate the probability of occupying each possible mutually exclusive state at specified future times.
- (v) Finally, discount (at a specified pre – determined rate to get the present value of human resources.

The approach is considered to be an improvement over Lev & Schwartz model in two aspects:

- a. it takes into account factors relating to the possibility and probability of employees career (different role) movement.
- b. Of their quitting the organization for reasons than retirement or death.

Limitations:

- i. On examining the operational capacity, the approach falls short of practical value in as much as that probabilities will be have to be determined for each individual occupying various services states and these probabilities have to be determined for all employees for 'n' period on individual basis.
- ii. It will also be very expensive and time consuming to predict career movements or exit probabilities on an individual basis.
- iii. The data developed on the basis may involve large variance which reduce usefulness of the model.

(d) Jaggi and Lau Model for Human Resource Valuation

The valuation of human resources on a group basis was suggested by the authors of this model s remedy to the problem of predicting the expected tenure of promotion chance of employees on an individual basis." By 'group' is meant a homogeneous group of "Employees who may not necessarily be working in the same department. It might be

difficult to predict and individual's expected service tenure in the organization or at a particular level or position, but on a group basis, it is easier to ascertain the percentage of people in a particular group like either to leave the firm during each of the forthcoming periods, or the promoted to higher levels. Since this concept assumes that the pattern of movement is likely to remain constant overtime, the probabilities determined for one period are extended to future periods.

Besides the abovementioned monetary measures many non-monetary measures have also been used from time to time. The frequently used non-monetary measure of human value is derived from the Likert-Bowers model of the variables that determine the effectiveness of a firm's organization. 32 Other measures of attitudes, inventory of skills and capabilities of individuals have also been used.

(e) Net benefit model:

This approach was suggested by Morse (1973). Under this model, the value of human resources is equivalent to the present value of the net benefits derived by the organization from the services of its employees.

The following steps are involved in this approach:

- a. To ascertain the gross value of the services to be rendered in future by the employees in their individual and collective capacity.
- b. The value direct and indirect future payment to the employees is to be determined.
- c. The difference or the excess of the value of future human resources (as per) (a) above over the value of future payments as per (b) is ascertained. This will

represent the net benefit to the enterprises because of human resources.

- d. On applying a predetermined discount rate (e.g., the cost of capital to the net benefit the present value is determined. This amount represents the value of human resources to the enterprise.

2.10.2 NON-MONETARY VALUE-BASED APPROACHES:

(a) Certainty equivalent net benefit model : **Pekin Ogan** suggested this approach which is a further extension of net benefit model as developed by **Morse**. In this approach, the value of human resource is determined in future for the enterprise. Under this method, the following steps are involved :

- (a) Ascertainment of Net benefit from each employee (as determined previous approach).
- (b) Certainty factors at which the benefit will be available in future.
- (c) The certainty equivalent benefit will be calculated by multiplying the certainty factor with the net benefits from all the employees. This equated as the value of human resources to the enterprise.

(b) Aggregate payment approach :

This is the model envisaged by the Indian author **Prof. S. K. Chakraborty** in 1976, on the human resources. He has valued the human resources in aggregate and not on an individual basis. However he suggested that managerial and non managerial manpower can be evaluated separately. The value of human resource on a collective or group basis can be found

and by multiplying the average tenure of employment of the employees in that group and shown as investment in the position statement. The average annual salary grade structure and promotion schemes of the enterprise.

He has further stated that recruitment, including selection development and training costs of each employee could be records separately and these could be attributed as deferred revenue expenditure to be written off over the expected average tenure of the employee in the organization. The deferred portion should be shown in the position statement of the organization. If there is permanent exit on account of that year attributable to that person should be written off against the income in the year of exit itself.

The discount rate for the purpose of finding the present value of estimated payments in the future should be taken as the expected average after tax return on capital employed over the average tenure period. He opines that the adoption of such a long term rate to avoid fluctuation in human asset valuation from year to year is simply due to changing rates of returns.

As for disclosure of accounting information on human resources as an asset, he has suggested that it would be most appropriate to include human assets under investments in the “position statement” of the organisation prepared at the year end. He does not favour this to be taken under the head “fixed assets” as it will cause problems of depreciation, capital gains or losses upon exit etc., neither it could be taken as “current asset” as it will not be in conformity with the general meaning of the term.

2.10.3 EMERGING ISSUES :

Human resources accounting clearly encompasses such elements as :

1. The composition of employees in different grades for five years.
2. Productivity of human resources for five years.
3. Programmes for employee development.
4. Personnel payments to the employees and expenses on social welfare per employee.
5. Human assets valuation.
6. Human assets vis-à-vis total assets.
7. Value of human assets in an organization.

In India, human resources accounting unit now has not been introduced as a system. So far as the statutory requirement is concerned, the Companies Act., 1956 does not require furnishing of any significant information about human resources in the financial statements of companies. The Institute of Chartered Accountants of India, too, have not issued an value of human resources of an organization, However, the existing accounting standards, in the absence of any negative directive, may be seen to support the adoption of human resources accounting by an organization for the purpose of meeting its own requirements. As a result. HRA has become a sparingly implemented practice in the corporate sector in India. The result of non-disclosure of human resources cost and value information in financial statements of business enterprises has been that financial statements for no reveal any quantitative information on huaman resources and the state of affairs is improperly reported to different authorities.

The dichotomy in accounting between human and non-human capital is rather fundamental, while the latter is recognized as an asset and recorded as such in the financial statement, the former is totally ignored. With the accelerated growth in science and technology, the value of human capital is

gradually increasing and hence it is essential for a company to reflect the investment in human resources. In the absence of HRA, the management may not realize the negative effects of certain programmes aimed at improving profits in the short run. Such programmes may result in decreased value of human assets due to fall in productivity levels, high labour turnover and low morale.

2.10.4 HUMAN RESOURCE ACCOUNTING IN INDIA :

An increasing trend towards the measurement and reporting of human assets, particularly in the public sector, is noticeable during the past 20 years. The companies, who are presently reporting human-asset valuations, include:

1. **Bharat Heavy Electricals Ltd. (BHEL).**
2. **Cement Corporation of India Ltd. (CCI).**
3. **Projects and Equipment Corporation of India Ltd. (PEC).**
4. **Engineers India Ltd. (EIL).**
5. **The Minerals and Metals Trading Corporation of India Ltd. (MMTC).**
6. **Electronics India Ltd.**
7. **Infosys Technologies Ltd.**

2.10.5 Prospects

Human asset accounting still remains a voluntary disclosure on the part of business entities and as yet no expose draft has been issued for such a specialized report. Unless this minimum initiative is taken by the accounting bodies such as Indian Accounting Standards Board and also the International Accounting Standards Committee outlining the format. Provisions and guidelines. A real push to this additional information can

scarcely be expected. One has to reckon that, accounting for people as organizational resources, through it has a high relevance evaluation, has a low objectivity evaluation.

Reference Books

1. **Human Resource Accounting: Advance in Concepts, Methods and Applications (Hardcover)**, “Eric G. Flamholtz”, Springer; 3 edition, ISBN: 0792382676
 2. **How to Measure Human Resource Management (Hardcover)**, Jac Fitz-enz, et al, Mc-Graw Hill),
 3. **Accounting for Human Resources: Rakesh Chandra Katiyar**, UK Publishing House.
 4. **Human Resource Accounting: M. Saeed, D. K. Kulshetha**, Anmol Publication.
 5. **Human Resource Accounting: D. Prabakara Roa**. Inter India Publication.
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QUESTIONS

1. What is Human Resource Planning? Briefly discuss the steps involved in HR planning or an industrial enterprise?
2. What is Human resource accounting what are its objectives? How is it relevant in today's context.
3. Describe the Lev-Schwartz model human resource accounting. What are its limitation.

4. Write a brief note on the various approaches to human resource accounting.
5. Define training. Explain the advantage of training to the employees and the organization.
6. How will you determine the training needs of an organization? Discuss.
7. What is productivity? Write about the factors affecting productivity with a special reference to the human capital.
8. Briefly state the areas to be focused for effective human capital investment.
9. Write a note on Measurement of Human Value addition into Money Value.
10. Write notes on:
 - (a) Cost based approaches of HR valuation.
 - (b) Limitations to HR accounting.
 - (c) Effective HR planning.
 - (d) Measures to evaluate Human Capital
 - (e) Human Capital

UNIT – III

Objectives of the Study

- * Human Resource as an asset
- * Investment in human resources
- * Rate of return on human resources
- * Parameters for calculating return on investment in human resources
- * Human Resource Cost Analysis
- * Organizational behaviour vs. Turnover
- * Wastage of human resources labour turnover, idle time, and absenteeism
- * Organizational Climate Approach.
- * Cost Reduction
- * Future Performance

Introduction

Human resources comprise one of the most valuable assets and it is a better source of capital and can give continuity to any organization. The human beings co-ordinate the machines, men and money to the optimum advantage of the organization. Computers with sophisticated technology may challenge the human resources with massive substitution of human resources in doing the work, but even such computers ought to be installed and operated in the right perspective to get the desired benefits only by the human resources. It may even substitute the labour of thousands of employees. But when the operator of that computer is not equipped with the proper calibre and knowledge to operate it in the right way, then the work of thousands of workers get spoiled and thus, human resource ultimately outweighs computer. Accounting for such human resources is very vital for the organization to find out the inventory at the current level and to increase or decrease it as needed according to the prevailing atmosphere of the organization.

Controversy among the accountants continues as to whether the human resources of an organization can be considered as an asset and treated accordingly in the accounting system in vogue. To consider something as an asset, it should have legally enforceable claim and to be owned by the entity with an objective to derive service from it in future. There is a very strong case for assetisation of human resources; the major-premise being that they are valuable resources to an organization. Investments in such asset will help corporate decision makers.

Investment Approach to Human Resources

Since human resources are considered as asset, any expenditure in the acquisition and accumulation of human resources will be treated as an investment. Historical cost of human resources represents sacrifice that will have to be incurred today to acquire and develop people.

Historical Cost of Human Resources

The elements comprising historical human costs at three levels of classification:

- A) Natural cost classification which refers to the primary objects of expenditures such as salaries, advertising, agency fees etc.
- B) Costs of specific personnel management functions such as recruitment, selection and training.
- C) Costs of the basic human resource management functions involved in historical cost of human resources - acquisition and development cost.

CATEGORIES OF HISTORICAL COST

Historical cost of human resources is the investment in human resources which has expense and asset components. Various cost items representing human resource investment subsystem can be categorized under four groups of input variables as under:

- (I) Acquisition Cost

- (2) Development cost
- (3) Welfare Cost
- (4) Other Costs

RATE OF RETURN ON HUMAN RESOURCES

Human beings constitute an important asset for organizational success. Without human resources, the physical and financial resources can't be operationally effective. The investment in such human resource variables and the calculation of the rate of return on human resources is vital. When large amount of investment is made on human resource building, by not capitalizing such expenditure, the profits of the organization are understated during such build up periods and profit. Rate of return can be used as a very good performance measure, the index of which can be calculated as follows.

Conventional profit + Changes in human resources

Conventional assets + Human assets

Parameters for Calculating Return on Investment in Human Resources

The rate of return can be calculated on the basis of the following premises:

- a) Measurement of return on organization building.
- b) Measurement of return on organizational utilization.

Measurement of return on organization building: In order to calculate return on investment, the changes in human resources must be calculated and recorded. To find out the changes in human resources, the total investment in human resources must be calculated.

Measurement of Human resources Investment
 |
 Individual and group of individuals
 |
 Measurement of Human resources Investment
 |
 Recruitment, Training, Experience building

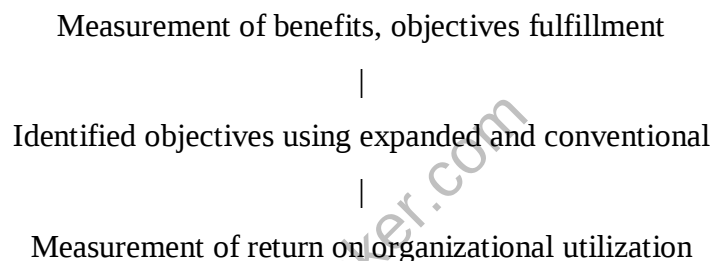
Measurement of Return on Organization building.

When such investment is made it is both for the purpose of organization building and organization utilization. In regard to human resources investment for building the organization, the recruiting and training costs of an individual and group of individuals must be calculated.

Also the orientation cost of building the personnel must be taken into account while making such calculations.

Measurement of Return on Organization utilization:

For this purpose, the measurement of benefits obtained through utilization of human resources must be done. Along with it, nonetheless, the fulfillment of objectives by the utilization of human resources must also be taken into account for the measurement of utilization.



The clubbed result of measurement of organization building and of human resources will provide return on Investment

$$\begin{array}{c}
 \text{Measurement of return on organization building} \\
 + \\
 \text{Measurement of return on organizational utilization} \\
 = \\
 \text{Return on Investment}
 \end{array}$$

HR Cost Analysis

HR cost analysis is the study of behaviour of cost in relation to one or more HR criteria. Controlling manpower costs has now become important for

organisations, particularly when we are required to look within for cost savings to sustain organizational growth and profitability. To enforce control on HR costs, it is essential to develop a check.list at the outset. This requires grouping of activities under different cost heads and then Identifying the individual cost elements under each head. By developing an HR costs spreadsheet, we can understand the magnitude of HR costs in an organisation. Element-wise cost trend over the years facilitates regular monitoring and operational control. At the macro-level, net value added per employee is an indicator of cost efficiency. We have given an example of such computation for a public sector undertaking over a six-year period, from the published data of Comptroller and Auditor General (CAG), 1999.

Developing an HR Costs Checklist

Bramham (1998) developed an indicative checklist for HR costs. However, this checklist varies from organization to organization due to obvious differences in their practices. Here we have mentioned about those cost elements which are common in practice. .

Remuneration

Remuneration costs include basic pay, dearness allowance, city compensatory allowance, house rent allowance, conveyance allowance, etc. However, these are paid remuneration costs. Organizations are also required to cater for deferred benefits to employees, which we have referred as NWLC earlier. Certain statutory payments to employees are also accounted under this head, like, contribution to provident fund, pension fund, medical benefits, payment for holiday, sickness, bonus, etc. To retain and attract talent, organizations may also give various fringe benefits to their employees. Even the latest practice to provide stock options to employees involves certain opportunity cost to the organization. The best practice is to delineate such cost elements and arrange the same in the form of a spread sheet. Element-wise cost

trends then can be studied over the years and also can be benchmarked with other comparable organizations to understand the nature of variance and to enforce control, wherever necessary. Some organizations prefer to increase the paid wage cost by reducing the NWLC burden. Such strategy is very effective in cases, where employees are mostly in their exploratory age group (less than 35). This in one way helps the organization to reduce their cost burden and at the same time to retain young and talented employees. Cost savings certain statutory payments is also possible by participating in Group Gratuity Scheme, Group Medical Insurance Scheme, Group Pension Scheme, etc., of public finance institutions, like, Life Insurance Corporation, etc.

Recruitment

Recruitment cost is also another major cost head for HR. Right from developing job specifications to describing job requirements, it includes costs of recruitment, promotion (through advertising), head hunting, evaluation, interviewing, induction and orientation. A well defined job specification minimizes the search for the right fit and consequent costs. If recruitment plans are to meet short-term requirements, it may be better to outsource than go in for direct recruitment:

There are many specialized manpower agencies, which make people with required skill sets available on contractual terms. Similarly, internal hiring also needs to be explored vis-d-vis external hiring. Internal hiring involves restructuring and relocation costs, a clear policy on 'promotion from within' (wherever recruitment is made for the higher posts), etc. A detailed study on cost of hiring is necessary to explore an alternative recruitment process.

Training Costs

Cordon's (2000) 9-step analysis of ROI on Human Capital has already be discussed in earlier chapter on 'Skills and multi-skilling'. In fact this 9-step model considers all aspects of training cost and its benefits. To be more specific,

training costs include, cost for induction period, cost of remuneration for the trainee and trainer, cost of travel for the trainee and the trainer, if any, cost of training materials, imputed cost of machines and equipments, used during the training, cost for development of training modules, cost of training evaluation, cost of material wastage during training, if any, cost of production loss for the trainee and the trainer (if he is within the organization, for in-house training), etc. To accurately ascertain cost of training, it is necessary to develop a checklist or a worksheet, delineating all direct and indirect costs of training. There are various methods of training delivery, which we have discussed in chapter on 'Training and Development'. Relative benefits and costs of each such method also need to be weighed to understand the most cost-efficient system. Any training on skill renewal needs to be weighed in terms of expanded skill cycle of the trainees. If the trainees are in the higher age bracket or due to retire within a short span, then offering them voluntary retirement (VR) may be more cost-effective than putting them on training for skill renewal and skill change.

Relocation Costs

Many organizations have their policies on periodic relocation of employees as part of their restructuring exercise. This is more appropriate for those who have their units in multiple locations. Such decisions from organizational point of view, involve cost related to disturbance allowance, cost of possible litigation, cost of housing, cost of travel, etc. Many departmental undertakings and public sector units thoughtlessly relocate their employees adding costs to the exchequer. For example, in one of the published reports, it was evident that Indian Ordnance Factories spent in one year Rs. 40 crore for relocation of their employees. Hence relocation decisions must be cost effective or else this will defeat the purpose, straining organizational viability.

Separation Costs

Relocation also induces separation. There may be other reasons for separation, which may be either for organizational initiative or for individual employees' reasons. Since separation requires replacement, immediate cost-effect is on loss of production. Other costs of separation are redundancy benefits (if separation is organization induced), ex-gratia payments (if any), etc. Since separation follows immediate liquidation of fringe benefits, savings of the organization on this course also need to be considered to compute the actual costs. Indian organizations have now replicated global practices, to go for large-scale redundancy. Offering VRS in PSU banks to 99,425 employed at a cost of Rs. 10,073 crore is an example. While this may prove to be effective for obvious reasons of savings on manpower (redundant) cost, it may also have the ill effect of skill mismatch (particularly business skills) with new recruits, which will further add to the cost of separation.

Support Costs

Some of the employee support services are statutory, while others are offered voluntarily by the organizations. For computing support costs, therefore, it is necessary to distribute these under two different heads and then study their impact. Medical welfare, canteens, safety, security, insurance (medi-claim, etc.), death benefits, parking space costs, etc. are some of the statutory costs for employee support services. While house journal, club membership, music at workplace, long service awards, suggestion schemes, library services, holiday homes, etc., are examples of voluntary support services for employees. Since, employee support services have direct effect on employee motivation, cost curtailment decisions must have reference to this aspect.

Personal Overhead Costs

Personnel overhead costs spread over personnel record keeping, costs for maintaining Human Resources Information Systems (HRIS), cost of personnel

decisions and overall costs for maintaining personnel department (salary of the people working in this department). Outsourcing personnel services to a great extent can reduce such cost burden. However, its relative merits and demerits need to be studied.

To enforce control over human resource costs, it is necessary to develop worksheets on each cost element, duly grouping these under different cost heads. Decisions on cost control need to be weighed in terms of lost opportunity for employee motivation and consequent loss of productivity. To understand the trend of HR costs, ratio analysis can be done from the data collected from the spreadsheet.

Organizational Behaviour

Organizational behaviour is the study and application of knowledge about human behaviour related to other elements of the organization such as structure, technology and social system. Basically, organizational behaviour is concerned with that aspect of human behaviour which is relevant for organizational performance. It studies human behaviour at individual level, group level and organizational level. A study of organizational behaviour involves the integration of the behavioural sciences into the study of people's behaviour within the organizations. Thus, organizational behaviour is an academic discipline concerned with understanding and describing human behaviour in an organizational environment.

Features of Organizational Behaviour

1) Organizational behaviour is not a discipline but it is a field of study in which endeavour is made to synthesise principles, concepts, and processes. But a discipline is an accepted science with a theoretical foundation.

- 2) Since the study of organizational behaviour integrates the relevant knowledge drawn from different disciplines for some specific purpose, it is an interdisciplinary approach. It draws heavily from psychology, sociology and anthropology.
- 3) Organizational behaviour study makes application of various researches to solve the organizational problems particularly related to human behaviour aspect. It concentrates on applied research.
4. The organizational behaviour is a normative science. A normative science prescribes how the various findings of the researches can be applied to get organizational results which are acceptable to the society.
5. The attention of organizational behaviour is focused on people from humanistic point of view.
6. Organizational behaviour is oriented towards organizational objectives. Further organizational behaviour focuses on both organizational and individual objectives.
7. Organizational behaviour study is total systems approach which integrates all the variables affecting organizational functioning.

ORGANIZATIONAL BEHAVIOUR VS. TURNOVER

Individual Behaviour

Turnover in an organization may also be based on the organizational behaviour of the employees. Turnover may be a factor caused by individual decisions or group decisions. As far as an individual worker or personnel is concerned, the following may be the reasons for leaving the job:

- a) The individual may feel that the pay that he receives is unfair, inequitable and not commensurate for his standard of living.
- b) Individual may sustain work dissatisfaction due to the disturbances caused by people in the supervisory cadre.

- c) Individual may feel that his ego is hurt both by the top management and the people in the supervisory cadre.
- d) He may leave the job, feeling that there is no recognition for his work.
- e) For want of promotion, a person may leave his work. In flatter organizations there may be little chance for promotion. Some people may find wide discrepancies between pre-employment expectations and actual job experiences.
- f) Employee's morale and motivation may not be tuned by the on-going job conditions.
- h) Resignations and turnover may increase if people are not trained properly or feel that demands are being made upon them which they can't reasonably be expected to fulfill without proper training.

The above said are the normal reasons for which employees may leave the organisation. But there are people who continue even after sustaining dissatisfaction for which, reasons could be found out only by analyzing the psychological views of them.

There are certain reasons which are very apparent for which the employees quit their jobs and sometimes the incumbent's behaviour of leaving the organization is mysterious and beyond analysis.

Group Behaviour

Sometimes the employees may leave the organization in a group. This massive turnover, sometimes, paralyze the organization and even it may lead to its temporary closure. Especially this type of turnover is more among the category of unskilled, and semi-skilled workers who are mostly illiterate.

They are guided by their informal leader who directs them and sometimes dominate the formal union leader. Organizational behaviour of the informal leader may be both positive and negative to his group workers.

When he institutes a move in which he rationalizes the quit purely for the welfare of the employees, it is well and good: but when he makes the move to

quit for threatening the top level management to achieve his personal ends, it is not good both for the employer and the group. Even though some of the workers in the group have dissatisfaction over the behaviour of the informal leader, they go on with him just to keep the team spirit.

Turnover like this could be done only when the group is sure of getting alternative employment immediately without disturbing their earnings. In some cases, turnover of employees as a group is done mainly on the gimmicks played by another employer in the same industry to attract labourers for his unit. He may bribe the informal leader and make him to direct his group for leaving the current employer. Since there is no problem in getting employment, the group members may give consent based on their vicious leader's command. The main reason for the success of the informal leader is that it is very easy to strike a harmony among the illiterate and little educated 'workers

Group Behaviour and Educated Personnel

In case of educated personnel, quitting the job as a group is not feasible since each incumbent has his own idea and behaviour towards his job. It is a herculean task to strike a harmony among such personnel since they are educated. Personality clash is very common among educated personnel and informal leadership may not be a viable concept among them. Power politics among them to attain the favour of the employer will erode their union and decision on collective strength to quit the job may not be a possible one. Even though they form a group, they will see that there is no damage to their ego because of any action of others in the group.

WASTAGE OF HUMAN RESOURCES

The term wastage is the loss of employees other than by redundancy. Redundancy points out the position of the employee as no longer needed for any available job and therefore liable to dismissal. In an organisation, the wastage is caused by-

- (a) Labour turnover
- (b) Idle Time
- (c) Absenteeism

a) Labour Turnover

The change in workforce is known as labour turnover. It is the rate of change in the composition of the labour force in the organization. Whenever an employee leaves the organisation, the management, has to sustain loss and wastage arising from the replacement of the leaving incumbent, by inexperienced new labour force. This replacement cost also includes cost of recruitment, selection and training of new employees. Loss of output due to the gap in obtaining new workers, loss due to inefficiency of new workers, cost of accidents due to lack of experience of new workers and cost of scrap and defective work of new workers are the replacement cost involved in labour turnover. In order to keep the workforce satisfied and to prevent or discourage them from leaving the organization the management incurs the following costs:

- (a) Cost of welfare activities
- (b) Cost of medical services
- (c) Pension Schemes
- (d) Extra bonus

In spite of the preventive measures, if there is higher labour turnover then it will deplete the stock of human resources and also lead to its wastage. For example in a company an executive officer is appointed and sent abroad to get special training on the work method. The cost of giving him the training is Rs.6 lakhs. Unfortunately he leaves the job (no contractual liability or bond) and the company has to replace another incumbent with the same training and additionally it has to spend another 6 lakhs for making the new incumbent fit for the job. Human resources at a cost of Rs.6 lakh is wasted due to the turnover. In order to avoid wastage, by turnover the management should take the following steps:

1) Suitable and satisfactory wage policy:

When the management is suitably rewarding the labour by devising a satisfactory wage policy, the turnover may be low.

2) Proper work conditions:

The management should see that the workers are provided proper working conditions to ensure their health and safety.

3) Sympathetic attitude of personnel department:

To prevent turnover, the personnel department should have positive and sympathetic attitude towards the workers and motivate them in the right perspective.

4) Financial and non financial incentive plans:

To recognize both efficient and normal work, the management must frame both financial and non financial incentive plans.

5) Promotion opportunities:

Majority of the workers will be on the look-out for an opportunity to quit the organization when there is no scope or little scope for promotion in spite of satisfactory remuneration. When the opportunities for promotion are more, the turnover may be low.

6) Labour participation in management:

This is one of the recognized ways of recognizing labour, since it gives the worker a sense of involvement in management and his participation in managerial affairs will give him the sense of responsibility and he will not think of leaving the organisation.

7) Effective grievance procedures:

The workers must be given explicit and vivid procedures to represent their grievances so that the grievances could be redressed immediately and

reduce the depression of workers. Consequently, his idea to quit on this reason may be dropped by him.

8) Welfare measures:

Strengthening the welfare measures in general will improve the morale and motivation of the workers and will reduce turnover.

B) Idle Time

When the work is measured on the basis of the time spent by the labourer, the concept of idle time has to be given significance, since it is a factor that affects the cost of production to a greater extent. Idle time represents time lost by 'time workers'. When workers are paid on time basis, there may arise a difference between the time for which they are paid and that which they actually spend on production. The difference between the time they spend on the work and the time for which they are paid represents idle time.

Example:

- (1) Time lost between the mill' or factory gate to the production department.
- (2) Tea breaks
- (3) Machine maintenance.

Production causes of idle time: The human resources are wasted to a greater level at the production point, due to many reasons. When there is a breakdown of machine, then there is idle time of workers for which they are paid. Power failure is also another reason for idle time in which the wastage is caused by frequent power failure. This problem could be managed by installing electric power generators. Sometimes the workers have to be idle for want of instructions from the foreman or factory engineer. They may also wait for tools or for the arrival of raw materials. Idle time can be reduced by the strict supervision and proper maintenance of plant and machinery.

Administrative causes: Idle time may also be caused by administrative decisions. When there is a surplus capacity of plant and machinery which the

management decides not to utilize there may be idle time due to administrative reason. This will happen during depression period in which some machines are used below capacity and the regular workers are paid full amount of wages. This type of idle time arises out of abnormal situations and is generally not controllable by the management.

Economic causes: Idle time may also be caused when there is a fall in demand for the product, seasonal nature of certain industries etc., in which production can't be engaged, and the surplus labour (permanent) ought to be utilised for doing some other jobs. If the management is not utilizing the manpower in alternative employment, then there will be idle time.

Types of Idle Time

Normal idle time: Here the wastage of human resources cannot be avoided and has to be borne by the employer. For example, when the engineering department takes time for setting the machine when it goes out of order, the labourers have to wait for which time they have to be paid. As a first method of treating idle time, it may be charged to factory overhead. Wage rate may be inflated so as to make allowance for normal loss of labour time.

Abnormal idle time: Here the idle time arises due to reasons which are beyond the control of management. Time lost due to breakdown of machineries, time lost in waiting for raw materials and tools and accidents are some of the examples of abnormal idle time and it is adjusted through costing profit and loss account. The following table is the specimen of an idle time card useful in accounting for idle time.

Control of idle time:

1. Controllable causes for idle time should be properly analyzed and responsibility should be fixed on appropriate individuals.
2. Production ought to be planned in proper manner so that imbalances in production are avoided or reduced.

3. Repairs and maintenance of plant and machinery should be regularly undertaken to avoid their breakdown.
4. There should not be any interruption in the supply of raw materials.
5. Right tools along with work instruction at the right time will avoid idle time.
6. There must be rigid control and strict supervisory measures to make the work to move without idle time.

C) Absenteeism

Absenteeism is another way in which human resources are wasted. It is a major concern in most organisations. Employees may be absent from work for several reasons illness, death in the family, or personal reasons which are unavoidable and understandable. Number of employers have sick policies that allow employees to take paid absences, a certain number of days per year. The formula suggested by U.S Department of Labour for computing absenteeism rate is as follows:

$$\frac{\text{Number of person days lost through job absence during period}}{\text{Average number of employees} \times \text{Number of work days}} \times 100$$

Reasonable absenteeism: When a labourer or personnel absents him with proper reasons, (illness, death of relatives, urgent personal work, etc.) then the employer could bear with such absenteeism.

Unreasonable absenteeism: When a labourer or personnel absents himself from work without genuine reasons, then it is called unreasonable absenteeism' For example, medical leave may be applied for, by a worker for completing his personal works. Perhaps it may be called as 'medical leave on non-medical ground'. Similarly employees may avail casual leave to stretch the week-end on Friday and Monday.

Steps to achieve effective absence control:

- 1) There must be commitment on the part of management to reduce the cost of absenteeism.
- 2) Another controlling measure of absenteeism is to trust the employees and provide sickness benefits on the strength of this trust. Yet they should not accept claims of sickness benefit when the level of sickness absence is unacceptable.
- 3) Computerized information system is necessary for the successful functioning of the 'trust' system.
- 4) Absenteeism must be accepted on the basis of a documented attendance policy.
- 5) In order to increase the responsibility of the managers and team leaders to deal with the problem of absenteeism, regular and proper training must be given.
- 6) Counselling facilities must be given to employees on attendance problems.

ORGANIZATIONAL CLIMATE APPROACH

Organizations are social systems. Organizations combine science and people, technology and humanity. It is not possible for every organization to have the same type of technology and people and so the organizations differ in their characteristics and internal environment. The internal environment of an organization may be called the organizational climate. Organizational climate, a guide for dealing with people serves as a major influence on motivation and productivity of individuals and total work force. Organizational climate may be noted as the 'personality' of an organization as conceived by its employees. The organizational climate usually has a major influence on motivation, productivity and job satisfaction. The organizational climate is the major motivating factor responsible for satisfaction and dissatisfaction of employees in an organization and affects the quantum of employees' turnover and satisfaction. It refers to the entire social system of a working group.

Definitions

French (1985) defined organizational climate as "the relatively persistent set of perceptions held by organization members concerning the characteristics and quality of organizational culture."

Keith Davis defines organizational climate as the "the human environment within which an organization's employees do their work".

Campbell defines organizational climate as a "set of attributes specific to a particular organization that may be deduced from the way that the organization deals with its members and its environment".

Robert L. Mathis defines it as "composite view of characteristics of an organization as seen by employees".

The gist of the above definitions states that organizational climate is the perceptual environment prevailing in an organization based on which employees do their work. It will have a major impact on the smooth flow in the management of an organisation.

Factors Affecting Organizational Climate

Stalwarts in organizational climate concept have used data relating to individual perception of organization properties in identifying organizational climate.

Litwin and Stringer state six factors which affect organizational climate:

1. Organization Structure: Ideas on the extent of organizational constraints, rules and regulations.
2. Individual responsibility: Having a sense of autonomy of being one's own boss.
3. Rewards commensurate rewards to recognize performance.
4. Risk and risk taking: The degree of challenge and risk to be sustained by the incumbent.
5. Warmth and support Feelings of general good fellowship and helpfulness prevailing in work settings.

6. Tolerance and conflict. Degree of confidence that the climate can tolerate differing opinions.

Schneider and Bastlett caption six items that should be included in determining organizational climate as follows:

1. Managerial support,
2. Managerial structure,
3. Concern for new employees,
4. Inter-agency conflict,
5. Agent's dependence and
6. General dissatisfaction.

It is very tough to generalize the basic contents of organization climate based on these studies.

SIGNIFICANCE OF ORGANIZATIONAL CLIMATE

Influence on human performance: When the organizational climate is viable, the incumbent gets motivated and his performance is upto the expectation of the management. Consequently, he gets job satisfaction that reduces turnover. Organizational climate provides a type of work environment in which an individual feels satisfied or dissatisfied. Since satisfaction of individual determines his efficiency, organizational climate can be said to be directly related to his performance in the organisation. Organisatibnal climate affects performance, satisfaction and attitudes of people in the organisation. A sound climate is a long run proposition. Managers need to take an assets approach to climate, meaning that they take the long run view of climate as an organizational asset.

Performance was more predictable for subjects who worked in a consistent climate than those who had to work in an inconsistent environmental climate. Inconsistent climate was having negative impact on productivity. The organizational climate may be one of trust and confidence or one of fear and

reprimand. Various organizational climates have different impacts on individual motivation, satisfaction and attitudes.

The climate of an organization derives originally from the philosophy and goals of those who join together to create it. The philosophy and goals of people are implemented by leadership working through formal and informal organisation. Formal and informal organization provide the structure to bind the institution together into a working team.

All organizations influence their members by means of a control system that reflects a combination by communication and group processes. The systems of control in an organization interacts with employee's attitudes and with situational factors to produce a specific motivation for each employee at a certain time.

The effect of an effective organizational behaviour system is to produce motivation. Such motivation builds two way relationships. It means that management and employees are jointly benefited without manipulation of one party by the other. Each type of employee is in need of a particular climate. In order to build up a sound climate, executives must understand their people in the organisation. The significant factor is that what motivates job performance in general and in building an overall climate conducive to motivation. The individual differences suggest that there can't be any all purpose organizational climate. The following are the three models of organizational behaviour based on which the organizational climate ought to be fixed. Keith Davis identifies the following three models of organizational behaviour.

Models of Organizational Behaviour

1. Autocratic,
2. Custodial,
3. Supportive and
4. Collegial

1. Autocratic Model

Deep rooted in history, this model claims 'power' as its managerial orientation. The people who are in command must have the power to demand. Authority is the only tool by which the manager gets things done. The employees have to follow the order and have to depend highly on boss attitude for work climate. McGregor's theory states that human beings are inherently distasteful to work and try to avoid responsibility. The autocratic model is based on McGregor's theory. Better performance is ensured through fear, threats, punishment and occasional rewards. Communication is mostly one way i.e., downward (communication flowing from the superior to the subordinate) and there is little interaction between managers and employees. This model is useful for accomplishing work where the employees can be motivated through physiological needs.

Custodial Model

This approach depends on economic resources. If an organization does not have the wealth to provide pensions and pay other benefits, it can't follow a custodial approach. The resulting managerial orientation is towards money to pay the cost of benefits. Since the employee's physical needs are already satisfied, he looks to second level security needs as a motivating force. The employee's dependence on the organization is prominent in custodial approach. since the employees are safe for their bread, they now look for welfare measures from their employer. Their organizational dependence is augmented and personal dependence on boss gets reduced to a considerable extent. Especially in case of senior employees, they can't quit even if the grass looks greener somewhere else. In a custodial environment, the employees are maintained, happy and contented but they are not strongly motivated. The result is that they extend only passive co-operation. The employer can't erase the reservations of the employees over his boss attitude by the perks he gives then and there.

Though satisfied and feel secure, most employees are not producing anywhere near their capacities and they are not motivated to work to greater capacity of which they are capable. The employees are happy but they do not feel fulfilled or self actualized. Thus, custodial approach though looks for economic resources of keeping the employees happy with perks; it also met with fiasco in bringing about a self-actualized work force with motivation to achieve the desired result.

Supportive Model

The supportive model of organizational behaviour depends on managerial leadership than its dependence on power or money. The focal point of this model is on participation making process. This model is based on the assumption that workers move to the maturity level and they expect supportive measures like communication, leadership, decision-making interaction, control and influence to fulfill their higher order needs such as, esteem and self actualization. Supportive model which gives more importance to human aspects rather than economic resources of the organization crystallizes the role of managers to help employees to achieve their work rather than supervising them very closely. Institutions with sophisticated technology and employing professional people can also apply this model for getting the best out of their human resources. This model best suits for managerial levels rather than operative levels.

The Collegial Model

It is an extension of the supportive model. This concept is based on team work that relates to a body of persons having a common purpose. This model tends to be more useful with unprogrammed work and intellectual environment and considerable job freedom. The management, under this model should develop a feeling of partnership with the employees. Managers contribute rather than extending an autocratic boss attitude. Since team work is the main motto of this model it brings both the management and workers under a single roof with

mutual trust. The employees produce with quality, not because of their fear of the inspector or the management's word to do so but out of their in-built obligation to produce goods with quality. With high responsibility, employees discipline themselves for performance and feel some degree of fulfillment and self actualization which will lead to moderate enthusiasm in performance. As far as supportive model is concerned, the maintenance cost of human resource will gradually come down. Since the worker gets the optimistic feeling to work for his organization with pleasure, there is no need for any additional expenditure on keeping the morale of the workers.

IMPROVEMENT AND DETERIORATION OF ORGANIZATIONAL CLIMATE

Autocratic Model

The first model of organizational behaviour creates a climate in which the feelings of the workers are suppressed and they have to just be obedient and tolerant with the autocratic behaviour of the employer. The personal relationship between the employer and the employee is not upto the mark. The labour turnover will be considerable when there is high dissatisfaction of the employees with their boss since they have no other alternative except to leave the job. In case of bottleneck in production or marketing, the employees simply keep mum and they never come out with suggestions for solving the problem.

When the worker leaves his Job, he will burst out with his boss with thick words coming from his soul and he will never have an idea to re-enter the service. As far as autocratic model is concerned the workers sustain a tight organizational climate and they continue in the firm only for satiating their physical needs and they have no peaceful organizational climate. In toto under autocratic model, there is little chance for the improvement of the climate and there are more chances for the deterioration of the existing climate.

Custodial Model

In custodial model of organizational behaviour, as the employee already satisfies his physiological needs, he looks up to his boss for some second line benefits. In this climate ample chances are there to increase the climate by offering second line benefits like pension benefit. Since these benefits are guaranteeing welfare measures both for himself and his family, it creates viable and improved climate under which the worker comes forward with voluntary endeavour to work for the organization with involvement.

But once the benefits awarded to the workers is withdrawn by the employer as their custodian, he has to eat the crow because the workers will lose their confidence and morale and look at the employer with suspicion and now the climate will deteriorate and ultimately workers will be pushed to the tight corner of seeking the trade union mode to get back the benefits they have enjoyed earlier. But the labour turnover will not be more because they enjoy good climate with their work and their main aim is to look for welfare measures for their family. They will work and raise routine voices for the benefits they have lost earlier. In this custodial behaviour system, the climate will be improved a lot and little chances are there for deterioration. Since the workers will adopt "stay and fight" strategy for regaining their facilities enjoyed earlier, the labour turnover will be less.

Supportive Model

In supportive model, since democratic attitudes are more in the behaviour of the employer, there will be a lot of improvement in the organizational climate instead of creating a climate through authority as in the case of autocratic model or through economic resources in case of custodial model. The employer creates a super organizational climate by his supportive role as a leader. Under this behaviour system, the workers have the inclination to improve their performance since they have enough Job satisfaction and further

scope of improving themselves in the organisation. There will be mutual trust between the employer and the employee. The employee will start thinking of the welfare of the organisation. He will come out from the tight shell of distrust and grudge with his employer and ready even to participate in the management.

Chances for deterioration of the good organizational climate are less. Since the employees' needs are met in a higher order, they voluntarily opt themselves for higher performance and contingencies sustained by the management will be shouldered by the employees also. As a result, the employer and employees will have a fine convergence and the improved organizational climate will be at its maximum and deterioration would be a rare factor.

HUMAN RESOURCES ACCOUNTING AND ORGANIZATIONAL CLIMATE

In the case of autocratic model, due to unviable organizational climate, there will be increase in the cost of recruitment for filling the vacancies caused by the labour turnover. Since the workers will be up to the expectation of employer only out of their fear of losing employment they will follow "work to rule" attitude. The autocratic model will tempt the workers to increase the cost of production. This could be possible even by efficient workers as illustrated below. In a textile mill, for a worker at the spinning point, 2 percent of the input is allowed as wastage. For example for 100 kg of raw cotton, he should give an output of 98 kg of yarn. An efficient worker who is capable of giving 100 percent output without wastage may voluntarily go in for utilizing the gap of wasting 2 percent of the output since it may be one of the outlets for expressing his discontent over the autocratic behaviour of the employer and the bad organizational climate he sustains with him.

As far as the custodial system of organizational behaviour is concerned, the employer has to spend additionally on maintaining the human resources.

Since the employer is spending more on welfare measures, the cost will be more but it may be compensated by the increased productivity and reduced wastages.

DETERMINATION OF CHANGES IN HUMAN RESOURCES VARIABLES:

The human resources planning is the systematic and continuing process of analyzing an organization's human resource needs under changing conditions and developing personnel policies appropriate to the longer-term effectiveness of the organisation. It is an inner part of corporate planning and budgeting procedures. One of the main objectives of human resource planning is to anticipate the changes in human resources variables i.e., potential surplus or deficit of people. The human resources variables can be classified into two categories:

a) Casual Variables

These variables incorporate occasional changes, but any change done so will lead to a major change in the organizational culture and future trend (eg., organizational structure, management policies, plans, business strategies, leadership, skills, behaviour etc.

b) Intervening Variables

These variables reflect the internal health of the enterprise. They include loyalties, attitudes, motivations, morale, interpersonal interaction, communication, decision making etc., These are controllable variables which could be kept under the control of the employer by taking consistent effort to maintain the morale, motivation, loyalties and attitude of the employees by various measures. Right decision with proper communication will keep these intervening variables at the equilibrium point. Changes in these variables are very common and it leads to changes in the number of people and hours of work available, the capacity of employees to do the work and their productivity.

The changes in human resource variable arise mainly due to the following reasons:

- a) Potential changes to existing resources through internal promotions.
- b) Potential losses to existing resources through employee wastage.
- c) Effect of changing conditions of work and absenteeism.
- d) Age distribution of employees which may lead to a sudden rise in retirement.

Causes of Employee Turnover

Employee wastage is a main factor that causes changes in the human resources variable. The various reasons causing labour wastage or turnover are listed below:

Pay: Problems in regard to pay arises because of uncompetitive, inequitable or unfair pay systems. The following actions may revive the bottleneck caused by pay:

- 1) Reviewing pay levels on the basis of market surveys.
- 2) Introducing job evaluation or improving an existing scheme to provide for equitable grading decisions.
- 3) Ensuring that employees understand the link between performance and reward.
- 4) Reviewing performance related pay schemes to ensure that they operate fairly.
- 5) Adopting payment by results systems to ensure that employees are not penalized when they are engaged only on short runs.
- 6) Tailoring benefits to individual requirements and preferences.
- 7) Involving employees in developing and operating job evaluation and performance related pay systems.

Jobs: Dissatisfaction results when jobs are unrewarding in themselves. Jobs should be designed to maximize skill variety, task significance, autonomy and feedback and they should provide opportunities for learning and growth.

Performance. Employees can be de-motivated if they are unclear about their responsibilities or performance standards or uninformed about how well they are doing or feel that their performance assessments are unfair.

The following solutions are recommended:

- 1) To express performance requirements in terms of hard but attainable goals.
- 2) To get employees and managers to agree on those goals and the steps required to achieve them.
- 3) To encourage managers to praise employees for good performance but also get them to provide regular information and easily interpreted feedback.
- 4) To train managers in performance review techniques such as counselling.
- 5) To brief the employees on how the management system works and obtain feedback from them on how it has been applied.

Training: More resignations and turnover will be there if people are not properly trained or feel that demands are being made upon them which they can't reasonably be expected to fulfill without proper training. Training programmes and training schemes should be developed so that employees get competence and confidence to achieve expected performance standards. The training programme should be designed to acquire new skills and competence.

Career development: Dissatisfaction with career prospects is a major cause of turnover. The idea of providing 'cradle to grave' careers is no longer relevant in the more changeable job markets of today. Individuals as incumbents possess 'portfolio' of skills and may consciously change direction several times during their careers. For maintaining a stable workforce employers should plan to provide career opportunities by providing more promotion opportunities and equitable promotion procedures.

Commitment. The following are the ways to increase the commitment of the employees towards the achievement of the goals of the organization:

- 1) To explain the organization's mission, values and strategies and encouraging employees to discuss and comment on them.
- 2) To seek and take into account the views of people at work.
- 3) To introduce job changes only after consultation and discussion.
- 4) To provide opportunities for employees to contribute their ideas on improving work systems.

Lack of group cohesion: The employees of an organization can feel isolated and unhappy if they are not part of a cohesive team or if they are bedevilled by disruptive power politics. To solve this problem, autonomous work groups must be established and rewarding people for working effectively as members of teams and developing team work skills.

Dissatisfaction and conflict with managers and supervisors: The management in general or the individual manager may unfairly treat the employees which may cause turnover and this problem should be remedied by selecting managers and team leaders with well developed leadership qualities. Another way is to introduce better procedures for handling grievances and disciplinary problems.

Recruitment, selection and promotion: Rapid turnover can result simply from poor selection or promotion decisions. It is essential to ensure that selection and promotion procedures match the capacities of individuals to the demands of the work they have to do.

COST REDUCTION

Cost reduction is defined as the achievement of real and permanent reduction in the unit cost of goods manufactured or services rendered without impairing their suitability for use intended. Cost reduction must be real and

increase productivity. It must be permanent and should not impair the suitability of products or services for the intended use.

Scope and Areas of Cost Reduction

The scope of cost reduction is wide and it could be applied to wherever cost is incurred. In many organizations the cost of human resources is very high. The top management should find ways by which the cost of human resources is reasonably reduced. Any abnormal reduction of cost in this regard may lead to unfavourable climate. In autocratic type of climate the human resources cost will be reduced since the employer is not so particular about keeping the morale of the employees high and to motivate them for higher productivity. Since better performance is ensured through fear, threat, punishment and occasional rewards, there is no need for spending on welfare cost.

In custodial model, over and above their normal salary and wages the workers look out for welfare measures for which the management has to spend additional amount. So cost reduction is not fully possible here. In supportive model of organizational behaviour, the management extends leadership and support to the employees for job performance. Here the employees' needs are met in High Order. So it may lead to increased cost. But their future performance may be high which may lead to increased productivity and ultimately lead to cost reductions.

Future Performance

The human resources cost will increase when custodial and supportive model of organizational systems are in vogue. The consequent result will be increased work performance and productivity.. When productivity increases it will reduce ultimate cost of production. In toto, the concepts of increased cost and cost reduction are changing frequently in regard to the cost incurred on human resources. The future performance of the human resources depends upon the organizational climate. In autocratic model, of course, the employer can

reduce cost by suppressing the human resources. But such cost reduction is a temporary one. The workers, who are dissatisfied with work, wait for the apt time to quit the job which may lead to labour turnover and subsequent increase in cost due to new recruitment and less productivity. Even workers, who continue, may not perform up to expectations. In concluding remarks, the human resources, could be stated as a variable factor which causes both increase in cost and cost reduction which are the factors dominantly affecting the future performance of the human resource structure of the organization.

Books for further study:

1. Theodore W. Schultz, "Investment in Human Capital", The American Review, Vol. I.
2. Caplan E. H. and Landekich, S., "Human Resource Accounting: Past, Present and Future"

Questions:

1. How to determine rate of return on investment in human resource?
2. Explain the factors affecting the organizational climate.
3. Explain the organizational behaviour with a suitable diagram.
4. Explain the various models of organizational behaviour.
5. How the organizational climate improves and deteriorates under various models of organizational behaviour?
6. What are the various reasons that cause the wastage of human resources?
7. Explain the salient features which treat human resources as an asset.
8. Explain the ingredients of historical cost of human resources.
9. Explain the various categories of investment in human resources.
10. Explain the impact of organizational behaviour in labour turnover.
11. Explain the cause of labour turnover.

12. Explain the various ways how human resources are lost and what are the measures you suggest to prevent labour turnover.
13. What is Cost reduction in human resources?
14. State the areas of Cost reduction in human resource
15. What is relationship between cost reduction and future performance
16. What is Training Cost?
17. What is Relocation Cost?
18. What is Separation Cost?
19. What is Support Cost?
20. What is Personal Overhead Cost?

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Responsibility Accounting

Introduction:

The systems of costing like standard costing and budgetary control are useful to management for controlling the costs. In those systems the emphasis is on the devices of control and not on those who use such devices. Responsibility accounting is a system of control where responsibility is assigned for the control of costs. The persons are made responsible for the control of costs. Responsibility accounting implies a system of accounting whereby the performance of various people is judged by assessing how far they have achieved the predetermined targets set for the divisions, departments or sections for which they are responsible. Each person is responsible for his area of operation. Responsibility accounting is similar to any other system of cost such as standard costing or budgetary control but with greater emphasis towards fixing of the responsibility of the persons entrusted with the execution of specific job. For example, if Mr. X has prepared the cost budget of his department, he will be made responsible for keeping the costs under control. Mr. X will be supplied with detailed information of actual costs incurred by his department. In case the costs are more than budgeted costs, then A will try to find out the reasons and take corrective measures. X will be personally responsible for the performance of his department.

Definition

Responsibility accounting is a system under which managers are given decision-making authority and responsibility for each activity occurring within a specific area of the company. Under this system managers are made responsible

for the activities of segments. These segments may be called departments or divisions.

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Eric Kohier defines responsibility accounting as “a method of accounting in which costs are identified with persons assumed to be capable of controlling them, rather than with products or functions. It differs from activity accounting, in that it does not in itself require an organizational grouping by activities and sub-activities or provide a systematic criterion of system design.”

Charles T. Horngreen defines “Responsibility accounting is a system of accounting that recognizes various responsibility centers throughout the organization and reflects the plans and actions of each of these centers by assigning particular revenues and costs to the one having the pertinent responsibility. It is also called profitability accounting and activity accounting”.

The following inferences can be made from the above definitions:

- (1) Responsibility accounting stresses on communication of information in general and accounting information in particular to various decisional centers.
- (2) Responsibility accounting lays greater emphasis on persons (human factor management)
- (3) Responsibility accounting is tailored to the organizational structure so that the

process of communication of information follows principles of organization.

(4) It is an accounting system which collects and report both planned and actual accounting data in terms of sub-units which are recognized as responsibility centers.

Steps Involved in Responsibility Accounting

Responsibility accounting is used as a control device. Following steps are necessary to effect control through the responsibility accounting:

(1) The organization is divided into various responsibility centers. Each responsibility centre is put under the charge of a responsibility manager.

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(2) The targets or budgets of each responsibility centre are set in consultation with the manager of responsibility centre so that he may be able to give full information about his department. The manager of responsibility centre should know as what is expected of him – each centre should have a clear set of goals. The responsibility and authority of each centre should be well defined.

(3) Managers are charged with the items and responsibility over which they can exercise a significant degree of direct control.

(4) Goals defined for each area of responsibility should be attainable with efficient and effective performance.

(5) The actual performance is communicated to the managers concerned. If it falls short of the standards, the variances are conveyed to the top

management. The names of persons responsible for the variances are also conveyed so that responsibility may be fixed.

- (6) The performance reports for each centre should be prepared highlighting the variances and items requiring management's attention. the corrective measures are suggested or taken and communicated to the concerned managers of the centers.

Responsibility centers

Responsibility accounting focuses attention on responsibility centers. A responsibility centre is a sub-unit of an organization under the supervision of a manager who has the responsibility for the activities of that responsibility centre. Each sub-unit has certain activities to perform and its manager is assigned the responsibility and / or authority to carry out those activities. responsibility centre is the segment of business with reference to which information will be communicated to pin point responsibilities. In the words of Anthony and Races, "A responsibility centre is like an engine in that it has inputs, which are physical quantities of material, hours of various types of labor, and a variety of services; it works with these resources usually; working capital and fixed

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assets are also required. As a result of this work, it produces output, which are classified either as goods, if they are tangible or as services, if they are intangible. These goods or services go either to other responsibility centers within the company or to customers in the outside world." Responsibility centres, for planning and control purposes, is classified into the following cases:

- (A) Expense Centre:** An expense centre is a responsibility centre in which inputs, but not outputs, are measured in monetary terms.

Expense or cost centre is a segment of an organization in which the managers are held responsible for the costs incurred in that segment. Responsibility accounting is based on financial information relating to input (costs) and outputs (Revenues). In an expense centre of responsibility, the accounting system records only the cost incurred in/by the centre or unit but revenues earned (output) are excluded. In case of certain responsibility centres, it is neither possible nor necessary to measure the output in terms of monetary units. Most of the service departments come in this category.

(B) Revenue Centre: A revenue centre is a segment of the organization which is primarily responsible for generating sales revenue. A revenue centre manager does not possess control over cost, investment in assets, but usually has control over some of the expenses of the marketing department. The performance of a revenue centre is evaluated by comparing the actual revenue with budgeted revenue. The marketing manager of a product line, or an individual sales representative are example of revenue centers.

(C) Profit Centre: A responsibility centre is called a profit centre when the manager is held responsible for both costs (inputs) and revenues (outputs) and thus for profit. A profit centre is a big segment of activity for which both revenues and costs are accumulated. A centre whose performance is measured in terms of both – the expense it incurs and revenue it earns, is termed as a profit centre. The output of a responsibility centre may either be meant for internal consumption or for outside customers. In the latter case the revenue is realized when the sales are made. That is, when the output is meant for outside⁴, then the revenue will be measured from the price charged from customers. If the output is

meant for other responsibility centre, then management takes a decision whether to treat the centre as profit centre or not. In fact, any responsibility centre can be turned into a profit centre by determining a selling price for its outputs. For instance, in case of a process industry, the output of one process may be transferred to another process at a profit by taking into account the market price. Such transfers will give some profit to that responsibility centre. although such transfers do not increase the Company's assets, they help in management control process.

(D) Investment Centre: It is defined as a responsibility centre in which inputs are measured in terms of cost/expenses and outputs are measured in terms of revenues and in which assets employed are also measured. A responsibility centre is called an investment centre, when its manager is responsible for costs and revenues as well as for the investment in assets used by his centre. He is responsible for maintaining a satisfactory return on investment i.e. revenues, expenses and the amounts invested in the center's assets. The manager of an investment centre is required to earn a satisfactory return. Thus, return on investment (ROI) is used as the performance evaluation criterion in an investment centre.

Advantages of Responsibility Accounting

The following are some of the advantages of responsibility accounting:

1. It introduces sound system of control – a system of closer control.

2. Each and every individual in the organization is assigned some responsibility and they are accountable for their work.
3. Everybody knows what is expected of him. Nobody can shift responsibility to anybody else if something goes wrong.

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4. It is effective tool of cost control and cost reduction applied with budgetary control and standard costing.
5. It facilitates the management to set realistic plans and budgets.
6. It is not only a control device but also facilitates decentralization of decision-making.
7. It measures the performance of individuals in an objective manner.
8. It fosters a sense of cost-consciousness among managers and their subordinates.
9. It helps the management to make an effective delegation of authority and required responsibility as well.
10. Under the system of responsibility accounting, detailed information is collected about costs and revenues, on a continuous basis and the data is helpful in planning for future costs and revenues.
11. Timely corrective action can be taken and better control over costs can be achieved.

Cost centers vs. Responsibility centers

A cost center is “a location, person or item of equipment (or group of these) for which costs may be ascertained and used for purposes of cost control”. Thus, cost center is used as a means of assembling items of cost, so that they can be assigned to goods and services. In the case of cost centre, emphasis is not on the persons who may be managing a level or product or process.

Responsibility centers, on the other hand, are established on the basis of responsibility delegated to responsible personnel of the organization with a view to identify costs which can be controlled by each one of them. However, cost centres sometimes may be used as responsibility centers too. In that case cost reports are prepared both cost centre-wise and responsibility-centre-wise.

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Transfer Prices

The measurement of profit in a profit centre type of responsibility accounting is also complicated by the problem of transfer prices. A transfer price is a price used to measure the value of goods/services furnished by a profit centre to other responsibility center within a company. That is, when internal exchange of goods and services take place between the different divisions of a firm, they have to be expressed in monetary terms. The monetary amount for these inter-divisional exchanges/transfers is called the transfer price. While determining transfer prices a number of criteria should be carefully considered:

1. Transfer prices should help in the accurate measurement of divisional performance (profitability) measurement.

2. Transfer prices should motivate the divisional managers into maximizing the profitability of their divisions and making decisions that are in the best interest of the organization as a whole.
3. Transfer prices should ensure that divisional autonomy and authority is preserved.
4. Transfer prices should allow goal congruence to take place, which in effect means that the objectives of divisional managers are compatible with the objectives of overall company.

Transfer price policies refer to the selection of policies/methods that would govern the calculations of such prices under various circumstances. The concern of transfer price policies is with developing a transfer pricing system that (i) allows a measure of performance to reflect the use of resources by a division, and (ii) allows the optimal allocation of the firms' resources. In other words, suitable transfer prices should be related to (a) management performance assessment, and (b) decision-optimization.

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Chiefly there are two methods of transfer pricing – cost based and market based. Based on these, there are many types of transfer pricing – cost price, marginal cost price, standard cost price, cost plus fixed margin, market price, negotiated price, opportunity cost price etc. Each type of transfer pricing has advantages and disadvantages too.

COST CONTROL THROUGH RESPONSIBILITY ACCOUNTING

The essence of responsibility accounting, as discussed above, is the collection of costs according to responsibility centers in order that variances from standard costs and budgets can be identified with persons, and based on the causes of variances, corrective actions may be initiated. Reports are prepared to inform a responsibility centre manager how well he has performed in terms of costs. The purpose is not to indicate failure or to find fault. To be effective, control must be conceived as a means of locating those activities and people in the organization in need of help so that assistance can be rendered and the scarce resources of the firm more effectively utilised.⁸

Controllable and Non-controllable Costs

For each responsibility centre costs should be classified as controllable and non-controllable.⁹ Responsibility accounting is based on the notion that a responsibility centre manager should be held accountable for controllable costs. Since we have already discussed the concepts of controllable and non-controllable costs earlier. We focus on important points here. A cost is said to be controllable when it may be regulated by a person at a given level of responsibility during a specified time period. Non-controllable costs are those costs over which a person, at a given level of authority and during a specified time period, has no control. Level of responsibility and time are the two factors which demarcate between controllable and non-controllable costs. Costs which are not controllable at one level of responsibility would always be controllable at another level.

For example, factory rent may be non-controllable by the plant superintendent but would be controllable by the plant manager or by some higher authority. Time also has an effect on controllability. A cost non-controllable in the short run would be controllable in the long run. For example, if management has committed to a contract for a period, then it is not controllable for that period. However, it can be controlled by management at the time when contract comes up for renewal.

Responsibility Reporting

Responsibility reporting is the crucial phase of responsibility accounting. Responsibility reporting requires grouping and defining responsibility within an organization structure, determining and assigning costs to appropriate levels and activities and placing a strong emphasis on cost controllability. Reports prepared under responsibility accounting may be known as performance reports.¹⁰ These reports are prepared with the purpose of:

1. informing each manager of his achievement in controlling costs of his centre;
2. pointing out each manager's accountability for costs incurred; and
3. presenting cost information in such a way that motivates each manager to take remedial action for improved future performance.

In preparing performance reports, management should focus attention on three aspects: (a) frequency of reporting; (b) details to be presented in reports; (c) format of reports. The amount of details and frequency of reports depend on the management level

For which reports are being made. First line supervisors, for instance, would need reports more frequently with considerable details, expressed in physical as well as financial terms. Management at higher level, on the other hand, would need condensed reports, containing only that information that needs their attention and action. Reporting to higher levels of management would not be too frequent. What is important is that reporting should be timely; that is, information should be made available to management

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when it needs. As regards the format, reports should be comprehensive. They should clearly indicate activities controllable by the manager. Both actual and budgeted performance with variances should be given. It is also desirable that explanations, whenever possible, for the occurrence of variances and the remedial action taken or to be taken may also be given. The criterion to decide about contents of reports should be the usefulness of information for indicating accountability and controlling cost. Reports should not be presented in highly technical and complicated manner. They should be easily understood even by non-accounting managers.

HUMAN RESOURCE ACCOUNTING

INTRODUCTION AND DEVELOPMENT

Merits. According to the authors of this approach, a bidding process, such as this, is a promising approach towards (a) more optimal allocation of personnel and (b) a quantitative base for planning, evaluating and developing human assets of the firm.

Limitations. This approach has several limitations:

- (i) It has narrowed down the concept of opportunity cost by restricting it to the next best use of the employee within the same organization.
- (ii) It has specifically excluded from its purview those employees who are not scarce or are not being bid by other department. This is likely to result in lowering morale and productivity of the employees, who are not covered by the competitive bidding process.
- (iii) The total valuation of human resources base on this method may be misleading and inaccurate. This is because a person may be an expert in a particular area and therefore may be useful for one department but useless for another department. Thus, he may be a valuable person for the department he is working and command a high value. However, he may have a lower price in the bid by the other department where his services are not at all required.

Standard Cost Approach

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This approach has been suggested by David Watson. According to the approach, standard costs of recruiting, hiring, training and developing per grade of employees are determined year after year. The standard cost so arrived at for all human beings employed in the organization is the value of human resources for accounting purposes.

The approach is easy to explain and can work as a suitable basis for control purposes through the technique of variance analysis. However, determination of the standard cost for each grade of employee is a ticklish process.

Present Value of Approach

According to this approach, the value of human resources of an organization is determined according to their present value to the organization. For determination of the present value, a number of valuation models have been developed. Some of the important models are as follows:

Present Value of future Earnings Model

This model had been developed by Lav and Schwartz (1971). According to this model, the value of human resources is ascertained as follows:

- (i) All employees are classified in specific groups according to their age and skill.
- (ii) Average annual earnings is determined for various ranges of age.
- (iii) The total earnings which each group will get upto retirement age are calculated.
- (iv) The total earnings calculated as above are discounted at the rate of cost of capita. The value thus arrived at will be the value of human resources/assets.
- (v) The following formula has been suggested for calculating the value of an employee according to this model.

$$V_r = \sum_{t=r}^T \frac{I(t)}{(1+R)^{t-r}}$$

Where V_r = the value of an individual r years old.

$I(t)$ = the individual's annual earnings upto the retirement.

t = retirement age

r = present age of the employee

R = discount rate

Limitations. The method suffers from several limitations:

(1) A person's value to an organization is not entirely determined by the salary paid to him. A person may like to work at a salary which is less than what he actually deserves. Moreover, salary does not remain constant over a period of time. They tend to change in response to social, political and economic conditions. Hence, they cannot be predicted with precision and accuracy.

(2) The model ignores the possibility that an individual may leave the organisation for reasons other than death or retirement. Thus, it overstates an employee's expected service life and his future earnings.

(3) The model does not take into account the changes which people make during their career, from one role to another, at one or more times within the organization itself. This may result in the changes in their expected future earnings and ultimately the value of human resources.

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(4) The model also ignores other considerations such as seniority, bargaining capacity, skill experience, etc., which may result in payment of higher or lower salaries to employees. Thus, the salaries paid to employees may not really represent the employees real worth to the organization.

Reward valuation model

This model has been suggested by Flamholtz (1971). This is an improvement on 'present value of future earnings model' since it takes into consideration the possibility or probability of an employee's movement from one role to another in his career and also of his leaving the firm earlier, than his death or retirement. According to this model, the ultimate measure of an individual's value to an organization is his expected realisable value. The realizable value is estimated on the basis of the present worth of the set of future services he is expected to provide during the period he is likely to remain with the organization. The model suggests a five step approach for this purpose.

1. Determination of the period for which a person is expected to serve the organization.
2. Identification of 'service states' (*i.e.* roles or posts) that the employee might occupy during his service career including the possibility of his quitting the organization.
3. Estimation of the probable period for which a person will occupy each possible 'service state' (posts or roles) in future in the organization.
4. Estimation of the value derived by the organization when a person occupies a particular position, *i.e.* a service state for the specific time period. Such value can be determined either by multiplying the price of the services (articles) with the quantity of the services (articles) to be rendered (produced) or the income expected to be derived from the services to be rendered.

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5. The total value of the services derived by the organization by different employees or group of employees is determined. The value

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thus arrived is discounted at a pre-determined rate to get the present value of human resources.

Limitations. The model suffers from nearly all the drawbacks from which the present value of future earnings model suffers. Moreover, it is difficult to obtain reliable data for determining the value derived by an organization during the period a person occupies a particular position. The model also ignores the fact that individuals operating in a group may have a higher value for the organization as compared to individuals working independently.

Net Benefit Model

This approach has been suggested by Morse (1973). According to this approach, the value of human resources is equivalent to the present value of net benefits derived by the organization from the service of its employees. The method involves the following steps.

1. The gross value of services to be rendered in future by the employees in their individual as well as their collective capacity is determined.
2. The value of future payments(both direct and indirect) to the employees is determined.
3. The excess of the value of future human resources (as per 1 above) over the value of future payments (as per 2 above) is ascertained. This, as a matter of fact, represents the net benefit to the organization on account of human resources.
4. The present value of the net benefit is determined by applying a pre-determined discount rate (generally the cost of capital).

This amount represents the value of human resources to the organization.

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Certainty Equivalent Net Benefit Model

This approach has been suggested by Pekin Ogan (1976). This, as a matter of fact, is an extension of “net benefit approach” as suggested by Morse. According to this approach, the certainty with which the net benefits in future will accrue should also be taken into account, while determining the value of human resources. The approach requires determination of the following:

1. Net benefit from each employee as explained under ‘net benefit approach’ above.
2. Certainty factor at which the benefits will be available.
3. The net benefits from all employees multiplied by their certainty factor will give certainty-equivalent net benefits. This will be the value of human resources of the organization.

Aggregate payment Approach

This approach has been suggested by Prof. S.K. Chakraborty (1976). As a matter of fact, he is the first Indian to suggest a model for valuation of human resources of an organization. According to his model, the human resources are to be valued as a group and not on individual basis.

Professor Chakraborty’s model for valuation of human resources involves the following steps:

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1. All the employees of an organization are divided in two groups, managerial and non-managerial.
2. The average tenure of the employment of the employees in the group is estimated on the basis of past experience.
3. The average salary of the group is determined on the basis of the salary/wage structure prevalent in the organization.

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4. The value of human resources is now determined by multiplying the average salary of the group with the average tenure of the employees in that group.
5. The value determined under '4' above, is discounted at the expected average after tax return on capital employed over the average tenure period, to ascertain the present value of the estimated future payment. Dr. Chakraborty suggests that the adoption of such a long-term rate will avoid fluctuations in the value of "human asset" from year to year simply due to changing annual rates of return.

Professor Chakraborty has also suggested that the recruitment, hiring, selection, development and training cost of each employee should be recorded separately. This should be treated as deferred revenue expenditure and may be written off over the expected average stay of the employee in the organization. The deferred portion, not written off, should be shown in the Balance Sheet of the organization. If there is pre-mature exit of an employee on account of death, retirement, etc., the balance of the deferred revenue expenditure attributable to that person should be written off against the income of the year of exit itself.

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As regards disclosure of accounting information relating to human resource, Professor Chakraborty has suggested that 'human assets' should be shown under the heading "Investments in the Balance Sheet of an organization. He has not favored its inclusion under the heading fixed assets since it would cause problem of depreciation, capital gains and losses, in the event of their exit. Similarly, he has not favored their inclusion in current assets on the ground that this will not be in conformity with the general meaning of the term.

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Total Cost Concept

This approach has been suggested by Prof. N. Dasgupta (1978). According to him the various approaches suggested in the previous pages take into account only those persons, who are employed and ignore those who are unemployed. In case the value of human resources of the nation is to be determined, it should be done in a manner that it brings in its purview both employed and unemployed persons. The system should be such that it fits in preparation of a balance sheet, showing the human resources not only of a firm but also of the whole nation.

According to Prof. Dasgupta; the total cost incurred by the individual, the state and the organization in bringing the individual up to that position in the organization (in case of a nation making him fit for

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appropriate employment) should be taken as the value of a person on the day, he starts serving the organization or becomes fit for appropriate employment. It will include his education, training expenses which he and the state have incurred. The value should be further adjusted by the amount of intelligence (higher or lower which he has). the amount spent by the organization on recruitment , training, familiarizing and developing human beings employed in the organization should be considered separately. However, it should also be treated as a cost increasing the value of human beings. In case the number is large, the valuation can be done group-wise.

the value determined on the aforesaid manner should be adjusted at the end of each year by the organization on the basis of his age, seniority, status, performance, experience, leadership managerial capabilities, etc. The measurement can be done with the help of psychologists and other concerned experts. the revised value would be the value of the employee at the end of the year.

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Prof. Dasgupta's model seems to be sound theoretically. However, its practical application may be difficult since it will involve a number of abstract factors, which may not be capable of being expressed in monetary terms precisely and objectively.

RECORDING AND DISCLOSURE IN FINANCIAL STATEMENTS

In the preceding pages, we have explained the various models dealing with the mode of valuation of human resources as an asset. The

“present value of future earnings” model, as suggested by Law and Schwartz, has been found to be most popular model on account of convenience and objectivity. The exponents of human resource valuation models in most cases have not dealt, with the mode of recording and disclosure of the accounting information relating to human resources in the books of account or financial statements of the organization. This has been left to the discretion of the accounting bodies who have yet to develop a generally accepted basis for valuation, recording and disclosure of human resource accounting information in the financial statements of an organization. In most cases, the human resource accounting information is given in the form of supplementary information attached to the financial statements.

Prof. N. Dasgupta has suggested in his total cost approach (explained earlier) the following mode for disclosure of human resources in the balance sheet of an organization.

According to him, the human resources valued as per his model should be shown both on the “assets” as well as “liabilities” sides of the balance sheet. On the assets side, it should be shown after the fixed assets as Human Assets classified into two parts – (i) value of individuals, (ii) value of firm’s investment. On the “liabilities” side, it should be shown after the capital as Human Assets Capital by that amount at which it has been shown on the asset side against ‘value of individuals.’ He has given the following example to clarify his point.

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Example. A firm has started its business with a capital of Rs.1,00,000. It has purchased fixed assets worth Rs.50,000 in cash. It has kept Rs.26,000 as working capital and incurred Rs.24,000 on recruitment

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training and developing the engineers and a few workers. The value of engineers and a few workers. The value of engineers and workers is assessed at Rs.80,000.

The items will be shown in the balance sheet as follows:

BALANCE SHEET

(INVLUDING HUMAN RESOURCES)

<i>Liabilities</i>	<i>Rs.</i>	<i>Assets</i>
<i>Rs.</i>		
Capital	1,00,000	Fixed Assets
50,000		
Human Assets Capital	80,000	Human Assets:
		(i) Individuals' Value
80,000		
		(ii) Value of Firm's Investment
24,000		
		Cuttent Assets
26,000		
	<u>1,80,000</u>	<u>1,80,000</u>

IMPORTANCE OF HUMAN RESOURCE ASSOUNTING

Human Resource Accounting Provides useful information to the management, financial analysts and employees, as shown below:

1. Human Resource Accounting helps the management in the decision-making process relating to the following matters.
 - (a) Employment, locating and utilization of human resources.
 - (b) Transfers, promotion, training and retrenchment of human resources.
 - (c) Planning of physical assets *vis-à-vis* human resources.

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- (d) Evaluating the expenditure incurred for imparting further education and training to employees in terms of the benefits derived by the firm.
 - (e) Identifying the causes of high labor turnover at various levels and taking preventive measures to contain it.
 - (f) Locating the real cause of low return on investment, that is whether it is due to improper or under-utilization of physical assets or human resource or both.
2. A financial analyst is interested in understanding and assessing the inner strength of firm. Such inner strength does not merely depend on the physical assets owned and possessed by the firm. IT also depends upon the type of human resources available to the firm. The vigilant, dynamic and responsible management can steer the company well through most adverse and unfavorable circumstances. In case the human resources, specially the managerial resources at the disposal of the firm are impartially and systematically valued and disclosed in the financial statements, it will be a valuable information for persons interested in making long-term investment in the firm.
3. The Human Resource Accounting helps individual employees in improving their performance and bargaining power. It makes each of

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them conscious of the contribution that he is making towards the betterment of the firm *vis-à-vis* the expenditure incurred by the firm on him.

OBJECTIONS AGAINST HUMAN RESOURCE ACCOUNTING

The following are some of the common objection against Human Resource Accounting.

1. Human being cannot be owned like other physical assets. They, therefore, cannot command any value.
2. Tax laws do not recognize human beings as assets. Hence, human resource accounting remains merely as a theoretical concept.

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3. There is no generally accepted model for valuation of human resources. The mode of presentation has also yet to be codified.
4. The valuation of human resources depends on a large number of abstract factors not measurable imprecise monetary terms. Hence, the valuation lacks objectivity and preciseness.

The above objections are basically because of human resource accounting being a new concept. The opinion are still to be crystallized. It is yet not less satisfying that the accountants these days have realized that disclosure of human resources in the financial statements “is a must” if they have to show a true and fair view of the state of affairs of the business. In course of time, proper techniques are bound to be developed for valuation of human resources and generally acceptable formats will be evolved by the

accountants for disclosure of this vital information in the financial statements of the firm.

HUMAN RESOURCE ACCOUNTING IN INDIA

In India, the financial statements of companies have to be prepared as per the provisions of the Companies Act, 1956. The Act does not provide for disclosure of any significant information about human resources employed in a company except that the companies have to give by way of a note to the Profit and Loss Account, particulars of employees getting remuneration of Rs.6,00,000 per annum or more.' However, there is nothing in the Act which prevents a company from giving details about its human resources byway of a supplementary information attached with its financial statements.

In-view of the growing importance of human resource accounting, many corporate enterprises in India are voluntarily giving information about their human resources. They number about 15 in all and include many important public sector enterprise viz. Bharat Heavy Electricals Ltd. (*BHEL*), Steel Authority of India Ltd.(*SAIL*), Minerals and Metal Trading corporation of India (*MMTC*), National Thermal Power Corporation (*NTPC*), Oil and Natural Gas Commission (*ONGC*) and engineers India Ltd. (*EIL*). Among all the enterprises *BHEL* is the pioneer in the field of human

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resource accounting since mid-1970. Most of the Indian companies and corporations have followed basically Lev and Schwartz Model for valuation of human resources. The model involves valuation of human resources on the basis of the present value of the estimated future earnings of the employees discounted at the cost of capital rate. *BHEL* has incorporated certain improvements in this model. The company has classified its employees into six categories based on skill, type of work, experience and qualifications. In each

category 10 to 15 salary grades have been identified to facilitate the valuation of human resources. The model adopted by *BHEL* is given below:

$$HRV = \frac{P \times 12 \times N \times E \times I}{F}$$

where

HRV = Human Resources Value of the group of employees in the particular salary grade.

$P \times 12$ = Annual compensation per, **DA**, **CCA**, **HRA**, **PF** contribution by employers etc.

N = Total number of employees in the grade.

E = Efficiency Factor. The factor varies with the amount of experience. It

decreases at about 5% for each accounting period of five or six years.

I = Incremental Factor. It is 5% for five years period. The period of 5 years

has been taken as the basic in the assumption that people with five experience are normally promoted to the next higher grade.

F = It has been taken at 12% per annum which is the weighted average cost of capital to the company.

Benefits of Human Resource Accounting

The concept of human resource accounting covers the people who constitute a valuable resource of an enterprise and information on the investment and value of such

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resources is useful for internal and external decision-making. Such accounting is of permanent importance to the nation and also to individual organizations. The following are the main benefits of Human Resource Accounting:

1. **Helpful in proper interpretation of Return on Capital Employed.**

The human resource accounting will disclose the value of human resources. This will help in proper interpretation of return on capital employed. such information will give long-term perspective of the business performance which could be more reliable than the return on capital employed based on net profit only.

2. **Improves managerial decision-making.** The maintenance of detailed records relating to internal human resources (*i.e.* employees), will improve managerial decision-making specially in situations like direct recruitment versus promotion, transfer versus retention, retrenchment or relieving versus retention, utility of cost reduction programmed in view of its possible impact on human relations and impact of budgetary control on human relations and organizational behavior and decision on relocating plants, closing down existing units, developing overseas subsidiaries etc. Thus, the use of HRA will definitely improve the quality of management.

3. **Serves social purpose.** It will serve social purpose by identification of human resource as a valuable asset which will help in prevention of misuse and under use due to thoughtless or rather reckless transfers, demotions, lay offs and day to day maltreatment by supervisors and other superiors in the administrative hierarchy; efficient allocation of resources in the economy; effecting economy

and efficiency in the use of human resources and proper understanding of the evil effects of avoidable labor unrest/disputes on the quality of the internal human resources.

4. **Increases productivity.** It will have the way for increasing productivity of the human resources because, the fact that a monetary value is attached to human resources, and that human talent, devotion and skill are considered as valuable assets and allotted a place in the financial statements of the organization, would boost the morale, loyalty and initiative of the employees creating in their mind a sense of belonging towards the organization and would act as a great incentive, giving rise to increased productivity.
5. **Invaluable contribution to humanity.** HRA will be an invaluable contribution for accounting to humanity and it will lead to improve human efficiency while preserving human dignity and honor. For this, a basic change in individual behavior, attitude and thinking is required. HRA will help in realizing the value of human resources and, thus, will influence the individual behavior, attitude and thinking in the desired direction.
6. **Essential where the human element is the prime factor.** HRA is absolutely essential in such organizations where human element is the prime factor, e.g., a professional accounting firm, a drama company, a solicitor and attorney firm, an educational institution etc.
7. **Helps in investment decisions.** The value of a firm's human resources is helpful to potential investors and other users in making long-term investment decisions.
8. **Completes MIS.** Human resource data would create a more complete management information system as it can provide information of vital importance for both short-term and long-term

decision-making as well as performance measurement. It will provide adequate basis for decision on allocation of resources *e.g.* budgeting, capital expenditure decisions and better measurement of resources of an organization. Performance measurement helps in assessing the strengths and shortcomings of an organization and helps in making better promotion policies.

9. **For successful operation of an organization.** The success of an organization very much depends on the build up of quality work force at all levels. The success stories of BHEL, ITC, Hindustan Lever, Larsen & Toubro and several other enterprises are largely due to the emphasis on human resource development. If this vital asset is not shown in the balance sheet, to that extent the public and investors are handicapped.

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Problems and Limitation of HRA

No doubt HRA can provide valuable information both for management and outsiders, yet its development and application in different industries and organizations has not been very encouraging. This accounting concept is not popular like social accounting because it may not result in providing immediate and tangible benefits and on account of the fact of lack of consensus among accountants and other concerned about the basis of measurement of the value of human resources. The reluctance on the part of the organization to introduce the HRA system can be attributed to the following:

1. There are no specific and clear-cut guidelines for finding cost and 'value' of human resources of an organization. The existing valuation systems suffer from many drawbacks.

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2. The life of human resources is uncertain and therefore, valuing them under uncertainty seems unrealistic.
3. There is a possibility that HRA may lead to dehumanizing and manipulations in employees. For example, a person having a low value may feel discouraged and thus, in itself, may affect his competency in work.
4. The much needed empirical evidence is yet to be found to support the hypothesis that HRA, as a managerial tool, facilitates better and effective management of human resources.
5. Human resources, unlike physical assets, are not capable of being owned, retained and utilized at the pleasure of the organization. Hence, treating them as 'asset' in the strict sense of the term, could not be appropriate.
6. There is a constant fear of opposition from the trade union. Placing the value on employees would prompt them to seek rewards and compensation based on such valuation.
7. In what form and manner, should their value be included in the financial statements? Is another question on which there is no consensus in the accounting profession.

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8. If a valuation has to be placed on human resources, how should it be amortized? Should the rate of amortization be decreasing, constant or increasing? Should it be the same or different for different categories of personnel?
9. Tax laws do not recognize human beings as assets. So human resource accounting has been reduced to a merely theoretical concept.

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CAPITALISATION OF SALARY

This method is based on the value of the firm's employee force by aggregating and averaging the earning profiles of homogeneous groups of employees. The age factor is important as it affects the increase and decrease and the productivity of human earnings. Hence, the value of human capital, embodied in a person of age, r , is the present value of its remaining future earnings from employment calculated as below:

$$V_r = \sum_{t=r}^T \frac{I(t)}{(1+r)^{t-r}}$$

Where,

- V_r = human capital value of a person r years old,
- $I(t)$ = personnel earnings up to retirement represented by earnings profile;
- r = a discount rate specific to each person. It is the cost of capital in capital budgeting;
- T = retirement age.

The method adopts a cost based approach to the valuation of human capital.

The firm's human capital value obtained by the application of the aforesaid equation in this manner allows the development of a net set of ratios like the ratio of human to non-human capital value, showing the degree of labor intensiveness in an organization. But the non-human assets values are not based upon the earning profile of

the assets while the human assets values are based on the earning profile of employees, so both cannot be matched together as they have no common base.

We can also know the changes in the structure of labor forces through this approach. The method also reports 'general' and 'specific value' of human capital reflecting firm recruitment and wage policy.

THE ECONOMIC VALUE METHOD

The economic value of an individual to an organization is the present worth of future services he is expected to provide during his productive life, i.e. till retirement. In considering the state of future services, the different roles likely to be assigned during the service period (productive life) and the total values of different roles are to be considered. The theory takes into consideration only individual economic value and not the added value/profit by teambuilding, and group formation as such does not reflect the value of human resource based on interpersonal relationship.

RETURN ON EFFORT EMPLOYED

It measures the return on the quantity and quality of total effort expended and the contribution made by individuals in the various functions of an organization varying from purchase and manufacturing to selling. It takes into account the factors which distinguish quantity and quality of effort expended. These factors may be as below:

- (i) Level or grade of work done.
- (ii) Effectiveness of individual on his job position.
- (iii) Experience profile.

- (iv) Measurement of total effort employed in various function of the organization on the basis of rating factors.

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ILLUSTRATION

(1) Level on Grade of work Done

Different grades of jobs are distinguished for developing wage structures:

Job Grade	Factor
10 (director)	10
7 (sales manager)	7
4 (salesman)	4
1 (typist)	1

(2) Effectiveness of individual job performance

Personal Assessment	Factor
Very good	1.5
Satisfactory	1.0

(3) Experience which increases, up to a point, the efficiency of job performance

Years of Experience	Factor
0-1	1.0

	1-2		1.1
		2-3	
1.2			
	3-4		1.3
	4-5		1.4
	Over 5		1.5

The above factors are multiplied together in measuring the effort employed by each individual. Say, a good sales manager with 5 years experience would be: 7 (job grade) $\times$ 1.5 (personal assessment) $\times$ 1.5 (job experience) = 15.75 for effort employed by a good sales manager.

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When all the calculations for every other individual are aggregated, we obtain a figure which represents the total effort employed. We may now find out the return on total effort expended on any functional area of business.

HERMANSON'S ADJUSTED DISCOUNTED FUTURE WAGES MODEL

Steps

To arrive at the value of the human assets:

- (i) Estimate annual wages and salaries payment for five years into the future.
- (ii) Calculate the present value of the estimated wage and salary payments by applying a discount factor equal to normal rate of return in the economy.
- (iii) Calculate an average efficiency ratio based on the previous five years' performance. This ratio is found by dividing the actual earnings of the firm by normal earnings for each year on an average in the results.

In making the calculation, the later years receive more weightage than the earlier years.

- (iv) Multiply the present value of the future wage salary payments by the average efficiency ratio. The resulting figure represents the estimated present value of the human resources.

EMERGING ISSUES

Human resources accounting clearly encompasses such element as:

- a) The composition of employees in different grades for five years.
- b) Productivity of human resources for five years.
- c) Programmers for employee development.
- d) Personnel payments to the employees and expenses on social welfare per employee.
- e) Human assets valuation.
- f) Human assets vis-à-vis total assets.
- g) Values of human assets in an organization.

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In India, human resources accounting until now has not been introduced as a system. So far as the statutory requirement is concerned, the Companies Act, 1956 does not require furnishing of any significant information about human resources in the financial statements of companies. The Institute of Chartered Accountants of India, too, have not issued an accounting of standard for measurement and reporting of cost and value of human resources of an organization. However, the existing accounting standards, in the absence of any negative directive, may be seen to support the adoption of human resources accounting by an organization for the purpose of meeting its own requirements.

As a result, HRA has become a sparingly implemented practice in the corporate sector in India. The result of non-disclosure of human resources cost and value information in financial statements of business enterprises has been that financial statements do not reveal any quantitative information on human resources and the state of affairs is improperly reported to different authorities.

The dichotomy in accounting between human and non-human capital is rather fundamental, while the latter is recognized as an asset and recorded as such in the financial statement, the former is totally ignored. With the accelerated growth in science and technology, the value of human capital is gradually increasing and hence it is essential for a company to reflect the investment in human resources. In the absence of HRA, the management may not realize the negative effects of certain programmes aimed at improving profits in the short run. Such programmes may result in decreased value of human assets due to fall in productivity levels, high labor turnover and low morale.

The success of an organization largely depends on the quality of workforce at various levels. The success stories of BHEL, Hindustan Lever and several other enterprises are largely due to their emphasis on human resources development. To the extent, the vital asset is not shown in the balance sheet the investors are handicapped. HRA helps the investors and the public by supplying the necessary and valuable information.

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We may now examine some implications of human capital reporting and finally some emerging issues in this connection. Disclosure of human capital values by the organization will provide valuable information to the financial statement users. The information is relevant as it concerns organizational changes in its labor force. The decision makers may draw some inferences from reported values of human capital.

- i) The determination of human capital value suggests a new set of financial ratios. The ratio of human to non-human capital indicates the degree of labor intensiveness.
- ii) Reported human capital provide information about the changes in the structure of labor force.
- iii) The difference between the general and specific values of human capital is another source of valuable information for management and the analyst.

The problem of reporting human capital values in financial statements has two dimensions:

- i) The measurement of the value of the firm's workforce and
- ii) Measurement and authorization of the organization's investment in human resources.

Some objectives are raised against in the corporation of human capital values in accounting reports. They are:

- (a) The human cannot be purchased or owned by the firm and it would not be recognized as asset.
- (b) The labor cannot be treated as asset since it has no service potential extending after a given period.

- (c) Accountants objected to report it on the ground that it cannot be objectively measured.

The first objection is true with respect to individual employee who can resign at will. But it is not true when firm's labor force is considered as a whole. Secondly, the programmers like orientation causes for new employees, training programmers, facilities for improving employees' morale and motivation creates service potential beyond the period. Thirdly, the objective in human capital measurements which are based on census data is not lower than that of many valuation in conventional accounting.

Through HRA enlarges the scope of accounting, some limitations remain inherent in the models adopted for valuation of human assets. First, the models scope is restricted to the nature and determinants of an individual's value to an organization. The models treat an individual's value as an independent phenomenon. But the validity depends upon several variables including the nature of the organization and the degree of interdependence of organizational roles. IT therefore, ignores the dynamic aspect of organizational phenomena. Moreover, there is no uniformity in the application of the models. As result, subjective ness crept in the valuation which poses a real problem. Finally, the use of differential discount rate by different organizations restricts the comparability of data so generated to reflect the human resources.

These limitations suggest for further research o this complex problem.

Human asset accounting still remains a voluntary disclosure on the part of business entities and as yet no exposure draft has been issued for such

a specialized report. Unless this minimum initiative is taken by the accounting bodies such as Indian Accounting Standards Board and also the International Accounting Standards Committee outlining the format, provisions and guidelines, real push to this additional information can scarcely be expected. One has to reckon that, accounting for people as organizational resources, though it has a high relevance evaluation, has a low objectivity evaluation.

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UNIT – V

Objectives of the study:

- ❖ **To provide a conceptual framework of Human Resource Audit.**
- ❖ **To highlight the present scenario of Human Resource Audit**
- ❖ **To bring out the future prospects of Human Resource Audit**
- ❖ **To suggest measures for betterment of Human Resource Audit**

INTRODUCTION

A resource is defined as an object which can provide expected future services. Hence, objects which do not have expected future service potential cannot by definition, be resources. People being capable rendering future services such potential services constitute a form of capital.

Certain information on the human capital can be reported by an organization in their annual reports. In the process of developing such information, organization can address the requirements of HRP integrating their HRIS. Information pertaining to employees can be listed under the following broad heads:

Basic information about human resource:

Number of employees

Categories

Grades

Total value of human resources

Value per employee

HR Acquisition:

Number of employees acquired during the year

Cost of acquisition

Levels for which they were acquired

HR development

All information pertaining to HRD activities of the organization

HR maintenance

Cost related to HR maintenance

HR Separation

Cost related to HR separation, attrition rate

Details of benefits provided to the employees

However, the extent of disclosure of such information depends on the respective organizational practices.

H R Audit

Let us first try to trace out the origin of the term 'audit'. The word 'audit' is derived from the Latin word 'audire', which means to hear. In the olden days, whenever the proprietors of a business concern suspected fraud, they appointed a person to check the accounts and to hear the explanations given by the persons responsible for keeping the accounts. The audit during those days was interested in ascertaining whether the persons responsible for maintaining accounts had properly accounted for all receipts and payments to his principal and to locate frauds and errors. Then, it was merely a cash audit. The object of modern audit is not confined to cash verification but to report on financial position of the undertaking as disclosed by its Balance Sheet and the Profit and Loss Account.

Now, auditing has been used as a part of control function. It can be defined as the examination and evaluation of policies, procedures and practices in all phases of a business to achieve the most effective administration of the organization". Let us define personnel audit.

Meaning and Objectives

Human resources or HRD audit is a systematic survey and analysis of different HRD functions with a summarized statement of findings and recommendations for correction of deficiencies. It examines and evaluates policies, procedures and practices to determine the effectiveness of HRD function in an organization. HRD audit ensures that sound and cost-effective policies are implemented

Human resource audit refers to the checking of the performance of the enterprise in its management of human resources. Human resource audit reveals how the management is doing in getting things done through the efforts of its people. It undertakes a systematic research of the effectiveness of the human resource programme. It evaluates personnel activities of an organization. It acts as an overall quality control, check on human resource function. During the conduct of audit if any deficiency is discovered, steps are taken to remove it. It reviews the effectiveness of management relating to the –

1. Measurement of the effectiveness of human resource programmes and activities, and
2. The determination of what should or should not be done in the future as a result of such measurement.

Human resource audit is one, which checks the performance of its enterprise as to the management of its human resources. Its aim is to determine how effectively the human resource programme has been implemented. It measures the performance of human resource functions, compares with the standard and discovers the variance and takes corrective action to remove them also. In short, it acts as a control mechanism as far as human resource function is concerned.

Seybord G. in his work "Studies in Personnel Policies" says "Human resource auditing refers to an examination and evaluation of policies, procedures

and practices to determine the effectiveness of human resource management. It helps the personnel department to determine what should be done and what should not be done in future".

"Extending the general meaning of auditing to the field of human resource management, human resource auditing may be defined as the analysis and evaluation of personnel policies, procedures and practices to determine the effectiveness of personnel/human resource management in an organization. In other words, human resource audit is a periodic review to measure the effectiveness of personnel management and to determine the steps required for more effective utilization of human resources.

According to Gray, "the primary objective of personnel audit is to know how the various units are functioning and how they have been able to meet the policies and guidelines which were agreed upon; and to assist the rest of the organization by identifying the gaps between objectives and results, for the end product of an evaluation should be to formulate plans for corrections of adjustments."

Objectives of HR Audit

The important objectives of human resource audit are as follows:

1. To review the whole organizational system of human resource practices, i.e., acquiring,
developing, allocating and utilizing human resources in the organization.
2. To analyze the factors involved in HRD and develop a statement of findings with
recommendations for correcting deviations, if any, on the following issues:
 - a. The extent of deviation from HRD policies
 - b. To what extent objectives are spelt out

- c. To what extent performance standards have been established
- 3. To seek explanations and information and answers to all such above questions as:

What happened? Why did it happen?

- 4. To evaluate the effectiveness of various personnel policies and practices.
- 5. To evaluate the extent of implementation of policies by line managers and the operational problems faced by them in implementing HRD policies.
- 6. Evaluating the personnel staff and employees.
- 5. Knowing how the various units are functioning and how they have been able to meet the policies and guidelines, which were agreed upon.
- 6. To study the current manpower inventory and identify shortfall or excess, if any.
- 7. To modify the existing human resource practices to meet the challenges of personnel/human resource management.
- 8. To assist the rest of the organization by identifying the gap between objectives and results.
- 9. To formulate plans for correcting deviations if any.

Scope of HR Audit

Every time the scope is to be decided. The scope of human resource audit is very wide. It represents the encompassing approach. It assumes that the management of human resources involves much more than the practice of recruiting, hiring, retaining and firing employees. In other words, human resource audit is interested in all the programmes relating to employees regardless of where they originate. In this way, the areas personnel audit includes are recruitment, selection, job analysis, training, management development, promotions and transfers, labour relations, morale development,

employee benefits, wage and salary administration, collective bargaining, industrial relations and communication. Further, the areas like leadership, grievances, and performance appraisal and employee mobility are also included within the scope of human resource audit.

For integration of personnel management with HRD functions, HRD audit now encompasses all the areas like review and integration of corporate mission, goals, policies and objectives, manpower planning, career planning and development, and transfer policies, performance appraisal systems, training and development functions, recruitment and selection, etc.

Role of HR Auditor

From the above stated objectives, the job of the HRD Auditor can be enumerated as follows:

1. To get the current facts.
2. To study the effectiveness of the present system by answering the following issues:
 - a. Why was the practice introduced?
 - b. What would be the result, if the practice is discontinued?
 - c. What needs were intended to be fulfilled and have those been fulfilled or not?
 - d. What could be the best possible alternative for fulfilling such needs?
 - e. What changes can improve effectiveness of the existing practice?
 - f. Are such intended changes economically and operationally viable?
 - g. Are such changes sustainable from the union's point of view?
 - h. What should be the time-frame for introducing the change?

Importance of HR Audit

To keep pace with the changing environment, the importance of periodic HRD audit has increased in recent years. The recent economic restructuring programme of the Government of India, as discussed earlier, prompted the need for restructuring of the organization, which, inter alia, calls for restructuring of

production, manpower, strategies, management practices and philosophies, etc.

All such possible reasons for periodic HRD audit can be enumerated as follows:

- a. Technological changes, inter alia, are calling for renewal of knowledge and skills of existing manpower. Training function, therefore, has assumed importance. Periodic HRD audit can help to identify the changing training needs and development of new training modules for effective utilization of manpower.
- b. To keep pace with the environmental changes, management philosophy and practices at the organizational level also need to be changed, like participative management (through quality circles and value engineering team), employee empowerment, total employee, involvement, etc. Need for all these can be understood only when we periodically undertake HRD audit.

Similarly, changing role of trade unions (which are now more Pro-active), Government (which is now more liberal), emergence of new working class (who are more enlightened), emergence of international quality system requirements (which call for scientific documentation of different corporate functions and infuse attitudinal changes), changing expectations of customers (which call for more customer orientation), new statutory requirements (pollution control), etc., are now influencing HRD functions at the corporate level, the effectiveness of which can only be understood by conducting periodic HR audit.

Records Used for HR Audit

Records provide ready reference and serve as future guides and reports describe an incident, event or situation. Depending upon the organization, the following records/reports are usually checked for HR audit:-

- (a) Time study records and time standards,
- (b) Cost records,
- (c) Records on scores obtained in tests and other examinations,
- (d) Medical and accident reports,

- (e) Attitudinal survey-reports,
- (f) Grievance reports,
- (g) Turnover reports,
- (h) Data on work stoppages,
- (i) Performance reports,
- (j) Pay roll data,
- (k) Labour costs data, etc.

PROCEDURE FOR CONDUCTING HR AUDIT

HR audit can be conducted by the regular staff of the personnel audit section of the personnel department (i.e. Internal Audit) or some outsider may be deputed to conduct HR audit (i.e. External Audit). Both systems of personnel audit should be followed in the organization because external audit presents a true and fair view of the personnel policies and programmes as the auditor has no personal interest in the conduct of the business.

Both quantitative and qualitative yardsticks should be used for purposes of evaluation. They may be time standards, cost records, test scores, training scores, interview records, work stoppages, medical reports, accident reports, grievance reports, turnover reports, payroll data etc. The audit report should invariably be submitted within a reasonable time after the audit work is over.

HR audit can be carried out either by attitudinal survey or by interpreting data. Interpretation of data can be done either by simple comparison over a period or by ratio analysis or by graphical or pictorial displays. T.V. Rao and Udai Pareek (1996), to measure the effectiveness of people management, developed a set of questions mostly to suggest linking of HRD to the corporate objectives, goals and strategies, effectiveness of free flow of HRD information down the ranks, application of knowledge of behavioural science and industrial psychology for HRD, etc For other HRD sub-systems too, they have developed

similar sets of questionnaire, adding responses which can help an organization to audit their HRD activities.

According to VSP Rao, the following questions can be asked to evaluate personnel policies, procedures and practices:

- (i) What are they? (i. e, policies/procedures/practices).
- (ii) How are they established?
- (iii) How are they communicated to various managers and employers concerned?
- (iv) How are they understood by individual employers, supervisors and managers at different levels?
- (v) Are they consistent with the management's organizational philosophy and human resource management philosophy?
- (vi) Are they consistent with the existing trends towards human resource management and research?
- (vii) What are the controls that exist for ensuring their effective and uniform application?
- (viii) What measures exist to modify them to meet the organizational requirements?

Using same common checklists for all organizations may not be very effective to audit human resources for its uniqueness in functional practices and philosophies.

The human resource audit should probe much deeper, evaluating personnel programmes, policies, philosophy and theory. For this, it is necessary to decide the appropriate levels of audit such as results, programmes, policies, philosophy, etc., before actually initiating the personnel audit. Experience suggests that evaluation by results sometimes becomes just superficial. For example, high absentee rates may result from a variety of causes. In order to make deeper probe, the process of personnel audit includes the following steps:

- (i) Identifying indices, indicators, statistical ratios and gross numbers in some cases.
- (ii) Examining the variations in a time frame in comparison with a similar previous corresponding period.
- (iii) Comparing the variations of different departments during different time periods.
- (iv) Examining the variations of different periods and then comparing them with the similar units working in the region.
- (v) Drawing trends, ascertaining frequency distribution and correlations between them.
- (vi) Preparing a report and send it to the top management for information and action.

Essential Steps in HR Auditing Process:

Though the process varies from organization to organization, generally it involves the following steps:

1. Orientation:

The key staff members of the organization are to be made aware of the particular issues considered as significant. They should be oriented with the plans and programmes of audit. The audit procedures must be clearly explained to them. This is required to make them understand the need of HR Audit.

2. Scanning:

The information available in the personnel records, manuals, appraisal forms, etc. are to be scrutinized thoroughly.

3. Survey:

It involves collection of information to pinpoint issues, strengths and weaknesses, managerial philosophies and needs of the organization. This may be collected from the executives.

4. Interviews:

What questions to be asked is to be decided. This is based on the issues and the information collected from surveys. The audit efforts will be fruitful if clarity is obtained as to the key factors selected for audit. Clarity can be obtained only if the accurate information is collected. The accurate information can be obtained through conducting interviews. The questions may be developed by the audit team on the following topics:-

- Information – Coverage, Source and Adequacy are the areas to be covered under this topic.
- Forecasting – Methodology, Reliability, Testability, Budgeting, Time framework and technology are the factors to be considered.
- Training and Development – Need assessment, Selection criteria, Quality, Climate, Levels covered and frequency are the factors to be carefully analyzed.
- Performance appraisal – Validity of appraisal process, Benefits and drawbacks of the problems, Uniformity in process, Linkage with pay and feedback are the ones to be taken care of.
- Management Succession Planning – Identifying key positions, availability of successors, matching future needs, responsibility for developing and non performers.
- Compensation – Adequacy of rewards, nature of job descriptions, flexibility in job evaluation systems, control over costs, rationale of reward system and opportunities for improvement are the important factor in this topic.

5. Synthesis:

The information gathered from the above step is synthesized to find out the present situation, priorities, and issues identified.

Who has to conduct Audit?

Human resource audits are not routine. The manner of conducting the audit may be self directed surveys or by the task force within the organization or may be by the outside consultants.

When to conduct HR Audit?

It may be one time affair or ongoing process within the organization. The focus may be the extent to which managers and supervisors complied with the established personnel policies and practices.

HR Research

Information on HR can be made available in two forms; the first one includes facts, terms and concepts or ideas, while the second one is the form of predictions and explanations. The second form is the product of research. HR research is the detailed analytic study about people in the organization by conducting attitudinal survey or direct interview with a structured, close ended questionnaire. By simple analysis of data also research can be carried out, but they may not give much insight on employees' attitude or intrinsic feelings.

There are different phases of HR research like, fact finding, hypothesis formation, valuation and interpretation and application of the results, etc. In India, many organizations carry out systematic HR research. However, systematic HR research can help organizations to combine people and procedures, study patterns of supervisory behavioural, supervisory skills, identify needs for changing policies and procedures, etc.

EXPERIENCES AND EXTRAPOLATIONS FOR FUTURE SCENARIOS ON HUMAN RESOURCE ACCOUNTING

Human Resource Accounting – Indian Scenario

The practice of identifying and measuring data about human resources has been developed in many Indian companies. In the paper presented by Dinesh K. Gupta titled 'The Lev and Schwartz model based human resource accounting system and the use of appropriate discount rate', he has referred that many of the organizations which have HRA systems do disclose the output details in the annual report in the supplementary form. According to him almost all the organizations having HRA except very few, calculate the human resource value based on Lev and Schwartz model which states that the values of human capital embodied in a person of age T is the present value of his remaining future earnings from employment.

The process followed to assign value to the human resources is similar to the mechanism used in evaluating the physical capital budgeting proposal. The focus is to calculate the present value of the salaries to be paid to an employee throughout his or her association with the organization till his retirement. This discounted figure represents the revenue generation potential of the human resources.

As observed in many cases, most of the organizations have followed a particular discount rate to calculate the human resource value since it happened to be the same rate as used in the evaluation of physical capital budgeting proposals. According to a survey undertaken by Dinesh. K. Gupta, NTPC (National Thermal Power Corporation) discounts projected salary stream at 12% which the NTPC uses as the minimum rate of return in its capital budgeting proposals. SPIC uses the rate of 17% to value its human resources which happens to be its weighted average cost of capital.

The existing practice concerning use of discount rate to calculate the human resource value has been debated on two points i.e.

- a) The use of one blanket discount rate which cannot do justice as all the human resources do not have the same capacity to contribute to the organization It is illogical.
- b) The use of same discount rate (as in physical capital budgeting) in the human capital project evaluation is not correct because of the differences in the times of cash outflows.

Therefore, two issues which emerge with regard to HRA valuation in India are to be clarified. They are:-.

1. Whether the organizations publishing HRA information use the appropriate model for valuation of Human Resources in India, and
2. Whether the private sector undertakings have HRA system being followed.

The answer to the first query is that many joint sector and a few private sector organizations publish HRA information in their annual reports and mostly they use Lev & Schwartz model for valuing the human resources.

On an analysis of ONGC, SAIL and CCI, Gupta found that there exists no relation between the operational results generated by employees of an organization and the value of employees given by the Lev and Schwartz model. According to him, the model might hold good in a highly competitive society where an employee is fairly compensated in relation to his contribution to the organization, but in a society like India where welfare considerations dominate work culture, the model should be used cautiously.

Further, analyzing the second issue, it is believed that private sector undertakings do use HRA and show greater concern about the growth of net assets than the growth of sales. The private sector organizations are highly physical asset growth conscious which presupposes that their attitude towards the growth in human assets is highly positive.

In India there is a growing trend towards the measurement and reporting of human assets in corporate annual reports by various public sector and private sector companies. In India Companies Act 1956 does not provide any scope for furnishing any significant information about the human resource nor there is any rigid instruction under Companies Act 1956 to require companies to attach information about the value of human resources and the result of their performance during the accounting year in notes and schedules. At the same time, there is nothing to prevent the companies to attach information about the human resource value and their performance during the accounting year in notes and schedules. Section 211 (5) of Companies Act 1956 provides that every balance sheet of a company should give the true and fair view of the financial position of the company and every profit and loss account should give true and fair view of the profit or loss of the company. This statutory requirement indirectly supports the adoption of human resource accounting by Indian Companies because due to present practice of expensing all human resources training and development expenditures in current year's profit and loss account and non-disclosure of the value of human assets in balance sheet financial statements of companies do not reveal true and fair financial position of the company as on the balance sheet date nor do they disclose true and fair profit or loss of the company for the year in profit and loss account.

As regards disclosure of statistical information regarding employees of the companies in company annual reports, section 217 2 (a) of the Companies Act, 1956 requires the companies to give the particulars of some employees drawing Rs.6000 per month or above (limit raised to Rs. 12000 per month or above applicable to accounting years ending or after 18.9.90) in the company annual reports. These particulars include name of the employee, designation and nature of duties, gross and net remuneration received, qualifications, age of the

employee, experience, date of commencement of employment and particulars of last employment held by the employees.

Recognizing the need to harmonize the diverse accounting policies and practices presently in use in India the council of the ICAI constituted the Accounting Standards Board (ASB) in April 1977. The main function of ASB is to formulate accounting standards (AS). The ICAI has so far issued accounting standards relating to accounting policies, inventory valuation, changes in financial position, construction costs, research and development costs, etc. but no accounting standards has so far been issued by the ICAI for human resources cost and value accounting.

HRD from World Perspective

In the meeting of labour ministers of non-aligned and other developing countries during 19-23 January, 1995 in New Delhi to debate on human resources, the stock of the current world economic scenario vis-à-vis its impact on human resources in developing countries is taken. The meet emphasized:

1. The need for effective workers' participation for enhancing productivity.
2. The need for adopting employment policy in congruence with the national economic and social development policy.
3. The need for education and training of workers and building economically valuable stock of technicians, scientists, technologists and management specialists by increasing access to education, making it equitable and affordable.
4. Need for vocational guidance and counselling.
5. Need for promotion of self-employment.
6. Need for striking a balance between labour protection through state intervention and market flexibility.
7. Need for eliminating gender discrimination and enhanced participation of women in all economic activities.

8. Need for elimination of child labour.
9. Need for safeguarding the interest of international migrant workers.
10. Need for establishing internal labour standards.

Regarding human resources and skill development, the meet reached to a consensus and adopted the following resolutions:

- a. To establish policies and practices to secure investment requisite, proportion of

the Gross National Income as government expenditure in education and training.

- b. To study sub-sectoral priorities (between primary, secondary and territory levels

of education), and analyze investment ratios between the sub-sectors and maximize the rate of return on investment.

- c. To enhance access to and retention in education and training and thereby avert wastage of educational investments.

HRA in Other countries:

Australia

Human resource accounting is largely an American invention and most of the early literature on HRA came from USA. In Australia there are many laws aimed at protecting the position of employees, consumers etc. an increasing number of Australian companies have the quantity and quality of social performance and human resources development. Studies by Trotman and Pang have shown that 79% of the top 100 Australian companies voluntarily provide information about their social responsibility in the areas of community development, energy, environment, human resource development and product improvement.

Newzealand

In Newzealand there is voluntary disclosure of social responsibility accounting and human asset value information in published financial statements and annual reports by companies which shows their concern for use of such information for decision making purposes. There is enough support for human resource accounting under section 153 of Companies Act 1953 and under various accounting standards issued by New Zealnad Society of Accountants which require true and fair disclosure of accounting information and disclosure of all material facts by the accounts which may influence considerably the decision making by users of financial statements.

Indonesia

In Indonesia, change in employment relationship for technology and consequently restructuring of the organization is controlled by the government for obviously surplus of labour in the labour market. The employment matters being highly regulated in Indonesia, scope of organization-wide HRD activities is limited.

Malaysia

Malaysian economy is now facing extreme recession. Termination and lay-offs are very frequent in industries, which obviously restrict the HRD activities.

Philippines

Philippines industries are facing the challenge of new technology, which resulted in large scale displacement of workers, skills-mismatch and redundancy. This situation is being settled by widespread training and development programmes in the industries.

Singapore

Singapore has established a Skills Development Fund to counter the effect of technology and train the workers.

Thailand

The extent of HRD activities in Thailand are limited. Retraining efforts to help the workers to make them adaptable to changes are also not that adequate.

HRA ORIENTED REPORTING PROCESSES**Human Resource Accounting Disclosures by Public Sector Enterprises**

The growing trend towards the measurement and reporting of human assets in corporate annual reports is particularly noticeable among public sector enterprises. The Indian public sector companies which are presently reporting human asset valuation are the following:

1. Bharat Heavy Electricals Limited (BHEL)
2. Steel Authority of India Limited (SAIL)
3. Cement Corporation of India Limited (CCI)
4. Oil and Natural Gas Commission (ONGC)
5. Electronics India Limited
6. Engineers India Limited
7. Hindustan Shipyard
8. National Thermal Power Corporation Limited (NTPC)

1. Bharat Heavy Electricals Limited

BHEL recognizes that in any organisation the value of its employees cannot be over emphasized. It has been valuing and reporting human assets in its annual reports since 1978-79. the human assets valuation is done by following the Lev and Schwartz model and application of a discount factor of 12% per annum on the future earnings to arrive at the present value of human resources. Prior to 1981-82, BHEL was using Lev and Schwartz model without any changes but since 1981-82, BHEL one change from the model has been made

which assumes the maintenance of staff strength at the existing level and replacement as and when retirement takes place. BHEL disclosure value of its human assets in its annual report in the following manner:

BHEL HUMAN ASSET ACCOUNTS
VALUE OF HUMAN ASSETS

(Rs. In million)

	1987-88	1986-87
Executives	4744	3960
Superiors	3841	3121
Artisans	5850	5169
Supporting Technical staff	74	698
Clerical and office supporting staff	1106	1036
Unskilled and semi-skilled staff	1982	1899
Total	18265	15883
Ratios		
Turnover /Human Resources	1.27	1.26
Turnover/Fixed assets at current cost	1.31	1.30
Turnover/Total Resources	0.58	0.56
Value added/ Human resources	0.49	0.50
Value added/Fixed assets	0.50	0.51
Value added/Total resources	0.22	0.22
Human Resource/Total Resources	0.46	0.44

Source: Annual Report 1987-88

Steel Authority of Indian Limited (SAIL)

In evaluating human assets SAIL adopts the “Economic Valuation Method” and the basic model as conceived by Lev and Schwartz incorporating refinements as suggested by Eric Flamholtz and Jaggi and Lau and also makes certain modifications as considered necessary to suit special circumstances of SAIL. The valuation of human capital is done by ascertaining the present value of future anticipated earnings and discounting the same to their present worth by applying a discount factor of 14%. SAIL discloses “Human resources value” in its annual report. Under the dual aspect of accounting, value for human assets is shown both on liabilities and assets side of the balance sheet. On the assets side it is shown after the fixed assets as human assets while on the liabilities side it appears after the capital as employees’ contribution. SAIL discloses human resources in its Social Balance Sheet as in the table.

SAIL Human Resource Value

(Rs. In Crores)

	Age Groups					
	Below 25	25-35	35-45	45-50	Above 50	Total
Managers	-	9.12	90.56	57.99	30.63	188.30
Executives	96.34	395.44	466.90	165.99	59.27	1183.94
Supervisors	30.34	333.46	1050.53	737.44	175.20	2326.97
Clerical Staff	20.44	261.64	292.91	57.75	9.59	642.33
Skilled Workers	131.35	889.20	1382.10	525.68	103.30	3031.63
Semi-Skilled/ Unskilled Workers	202.67	987.32	792.93	196.52	35.88	2215.63
Total	481.14	2876.18	4075.93	1741.37	413.87	9588.49
Previous Year	515.21	3008.56	4065.40	1656.44	335.52	9581.13

Social Balance Sheet of SAIL as on 31st March, 1986

Liabilities	As on 31 st March, 1986	As on 31 st March, 1985
Organization Equity	268.85	242.52
Social Equity (Employees' contribution)	9,588.49	9,581.13
Total	9,857.34	9,823.65
Assets	As on 31 st March, 1986	As on 31 st March, 1985
Social Capital Investments:		
Land	7.42	7.21
Residential and Other buildings	198.94	175.00
Roads and Bridges	16.82	16.06
Electrification	11.66	10.99
Water supply and sewages	26.87	26.11
Furniture and Fittings	1.23	1.18
Other Equipments	5.91	5.97
Human Resources	9,588.49	9,581.13
Total	9,857.34	9,823.65

Source: Annual Reports of SAIL

Cement Corporation of India Limited (CCI)

In the absence of a clear cut well defined and universally accepted model for evaluation of the economic worth of human assets to a company, CCI has made an attempt to assess the same by working out the present value of the anticipated future earnings of the employees taking into account the present pay scales and the promotion policies being followed. The computation has been made based on the guidelines and principles enunciated in the economic models

by Lev and Schwartz (1971), Eric Flamholtz (1974) and Jaggi and Lau (1974) with appropriate modifications found necessary. The table shows the progress made by CCI in human resources valuation. CCI also discloses human asset values in social Balance sheet in its annual report in the same manner as that of SAIL.

Valuation of Human Assets in CCI

(Rs. In million)

	1983-84	1984-85	1985-86	1986-87	1987-88
Managers	157	115	85	70	51
Supervisors	106	88	64	43	54
Skilled Workers	207	175	114	78	61
Semi-skilled Workers	130	101	68	49	42
Clerical and other supporting staff	96	86	59	49	44
Unskilled Workers	108	100	76	69	55
Total	804	665	466	358	287

Source: Annual Reports of CCI

Other public sector undertakings namely ONGC, MMTC, MECON, NTPC, PEC, CANFINA also treat human assets as the greatest natural assets of the organisation and report human asset values calculated as per Lev and Schwartz basic HRA model in their annual reports as 'Unaudited Supplemented Financial Information' besides disclosing human asset valuation in 'Social Balance Sheet of the organization.

Human Resource disclosure practices in Scooters India Limited and Fertiliser Corporation of India Limited includes recognition of importance of human resources in directors report, disclosure of number employed, human resources training and development programmes initiated by the company, state of affairs regarding workers participation in management, expenditures on maintenance of townships and other staff benefits by the company.

Private Sector Enterprises & Human Resource Accounting

A recent survey undertaken among some leading private and public sector organizations regarding human resources development indicates that in public sector 83 per cent organizations has a top management competent enough to take decisive role in identifying training requirements contrasted against 44% in the private sector. Only a few companies in the private sector have attempted human resources accounting and valuation.

The Associated Cement Companies Limited (ACC) regards its human resources as its prime assets. It is the only company in the private sector to which the Institute of Chartered Accountants of India awarded a 'Plaque' for the best presentation of annual accounts and report and commended the ACC's Annual Report and Accounts for the year 1983-84. the ACC evaluates its human assets by computing a net present value of the anticipated future earnings of the employees based on the guidelines enunciated in the economic models of HRA developed by Lev and Schwarts (1971), Eric Flamholtz (1974) and Jaggi and Lau (1974) with appropriate modifications as considered necessary. ACC also discloses in its annual report Total "Inventory of Human Resources" and "Age wise and Category –wise Inventory of Human resources".

Valuation of Human Assets in ACC

	Employees		Value	
	Number	%	(Rs.in Lacs)	%
Executives	56	.21	207	0.61
Managers	287	1.05	958	2.84
Officers	1949	7.15	4651	13.77
Skilled Workers	9977	36.60	3728	11.04
Clerical and other	4527	16.61	6703	19.84

supporting staff				
Unskilled Workers	6695	24.56	6741	19.95
Total	27258	100.00	33782	100.00

Source: Annual Reports of ACC (1985-86)

The Tata Iron and Steel Company Limited, Reliance Industries Limited, LML Limited, J.K. Synthetics Limited and other companies in the private sector recognize importance of human resources and their contribution in the Directors' Report which ends with the words of appreciation to the valuable services rendered by the employees of the company. Information relating to human resources is also disclosed under the heading "Payments to and Provision for Employees" in Conventional Profit and Loss Account and in other sections of annual report like Personnel and Industrial Relations, Workers Participation in Management, Employee Training and Development etc. However, majority of the private sector companies have not made any attempt to arrive at monetary value of human resources and disclose the same in their annual reports. Nor prepare any 'Social Balance Sheet'. However, they publish particulars of employees as an annexure to the directors report in their annual reports in fulfillment of the statutory requirement of section 217 (24) of the Companies Act 1956.

International Accounting Standards

The International Accounting Standards Committee (IASC) has issued International Accounting Standards (IAS) to harmonize diverse accounting practices prevalent in different member countries. To promote better disclosures, the IASC has till now issued 30 accounting standards, three exposure drafts and a framework for the preparation and presentation of financial statements on important accounting areas as disclosure of accounting policies, valuation of

inventories, changes in financial position, depreciation accounting, accounting for research and development, accounting for leases, revenue recognition etc.

As far as the inclusion or exclusion of human resource information in the Balance Sheet and Profit and Loss Account of companies, so far, no definitive accounting standard has been brought. The 'Framework for Preparation and Presentation of Financial Statements' issued by IASC clearly states that financial statements are aids to economic decision making and puts a case for human resource accounting and its inclusion in financial statements. Other International Accounting Standards like-

IAS-1; Disclosure of Accounting Policies,

IAS-4; Depreciation Accounting,

IAS-5; Information to be disclosed in Financial Statements,

IAS-7; Statement of Changes in Financial Position,

IAS-9; Accounting for Research and Development Activities,

IAS-16; Accounting for Construction Costs,

IAS-16; Accounting for Property Plant and equipment,

IAS-17; Accounting for Leases,

IAS-18; Revenue recognition,

IAS-23; Capitalization of Borrowing Costs,

IAS-29; Financial Reporting in Hyper inflationary Economics and

IAS-30; Disclosures in the Financial Statements of Banks also support the adoption of Human Resource Accounting by business entities to provide a true and fair disclosure of financial position of the business and its profitability.

The accountants, by charging expenses of recruitment, training, familiarization and development of human resources to the current period's profit and loss account, understate profits or overstate losses. By not accounting the expenses related to human resources, even when they are substantial, the accountants conceal assets and net worth to that extent.

The importance of people as a productive resource has been ignored by the accounting profession. A team of competent, devoted and motivated persons can convert a sick concern into a successful one but on the contrary, incompetent and unmotivated personnel may squander away the existing resources leading to bankruptcy. Hence, the more valid treatment of human resources development expenditure yielding future benefits is to capitalize such expenditure.

The total absence of any information regarding the value of human capital is a serious handicap to decision making both to the managers employing quantitative means to arrive at quantitative goals and to investors likewise seeking to make rational decisions concerning the shares which they hold or propose to buy. The most important argument for disclosing changes in human asset value on the balance sheet is that it is the managerial, scientific and commercial personnel which determine the company's future success. That is why investors and the public also have a vested interest in human resources/human asset accounting. Such a system has many applications in improving planning and decision making in an organization. HRA Software:

Activities:

1. Assume that you are required to conduct a Human Resource Audit in your organization. To collect adequate information, prepare a suitable questionnaire covering all aspects of information.
2. Prepare a Checklist of key questions to be asked in regard to assessment of major manpower concerns.
3. Prepare a draft report regarding the installation of Human Resource Accounting in your organization.
4. Suggest various measures to improve the Human Resource Audit system followed in your organization.

Questions:

1. Define Human Resource Audit
2. State the objectives of Human Resource Audit
3. What is the scope of Human Resource Audit?
4. What is the job of Human Resource Audit?
5. Who has to conduct Human Resource Audit?
6. List out the records required for Human Resource Audit.
7. Explain the steps involved in the Human Resource Audit Process.

Books for further study:

3. Theodore W. Schultz, "Investment in Human Capital", The American Review, Vol. I.
4. Caplan E. H. and Landekich, S., "Human Resource Accounting: Past, Present and Future".
5. Personnel / Human Resource Management (Text, Cases and Games): P. Subbarao & V.S.P. Rao.
6. Personnel / Human Resource Management: A.R. Sharma.
7. Personnel / Human Resource Management: David A. Decenzo, Stephen P. Robbins.