



## Effective manpower planning: The strategy for movement from current manpower position to desired manpower position

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### Abstract

Manpower planning is an important aspect of Human Resource Management. It may be defined as the strategy for the acquisition, utilisation, improvement and retention of human resources of an enterprise. Manpower planning is basically the process by which it is determined how an organisation should move from its current manpower position to its desired manpower position. The significance of systematic and comprehensive manpower planning has been recognised by all organisations. Earlier, the management of small organisations had the common belief that they could always obtain the personnel it required whenever it needed. However, in present corporate environment, formal manpower planning is essential for all big organisations which must meet and manage changes in technical know-how, products, markets and internal organisation, and which utilise lot of personnel talent.

**Keywords:** Manpower inventory, manpower planning, quantitative and qualitative aspects, recruitment plan, training and development

### Introduction

Manpower is the primary resource without which other resources like money, material, etc. cannot be put to use. Even a fully automatic unit such as an unmanned satellite requires manpower to execute it and make further improvements. That is why man learnt the use of manpower much before he learnt to use other resources.

Manpower planning is the process by which an organisation ensures that it has the right number and kind of people at right places at the right time, capable of effectively and efficiently completing the tasks that will help the organisation to achieve its overall objectives. It translates the organisation's objectives and plans into number of workers needed to meet these objectives. In simple words, manpower planning is a strategy for procurement, development and allocation and utilisation of organisations' human resources.

### Manpower Planning: An Important Aspect of HRM

Manpower planning is an important aspect of Human Resource Management. It may be defined as the strategy for the acquisition, utilisation, improvement and retention of human resources of an enterprise. Manpower planning is basically the process by which it is determined how an organisation should move from its current manpower position to its desired manpower position. Different management scholars have defined the term *manpower planning* differently. According to Edwin B Gester, manpower planning is a process including forecasting, developing, implementing and controlling by which a firm ensures that it has the right number of people and right kind of people at the right place and at the right time for things for which they are economically useful". Manpower planning, in the words of Dale S. Beach, "is the process of determining and assuring that organisation will have an adequate number of qualified persons available at proper

times, performing jobs which meet the needs of entire enterprise and which provides satisfactions for the individuals involved."

### Characteristics of Manpower Planning

Some of the major characteristics of manpower planning are listed as under:

- It is an ongoing process.
- It includes the planning and development of human resources.
- It is not just forecasting demand and supply of human resources.
- It is not a matter concerned with individual career planning and development.
- It is not just a planning for changing organisational structure.

### Objectives of Manpower Planning

The major objectives of manpower planning in an organisation are to-

1. Ensure optimum use of human resources currently employed;
2. Avoid unbalances in the distribution and allocation of manpower;
3. Assess or forecast future skill requirements of the organisation's overall objectives;
4. Provide control measure to ensure availability of necessary resources when required;
5. Control the cost aspect of human resources;
6. Formulate transfer and succession policy.

### Steps in Manpower Planning

Broadly speaking, manpower planning in an organisation consists of the following major steps-

1. Assessment of current manpower requirement;
2. Forecast of future manpower requirement;
3. Drawing up recruitment plan;
4. Designing training and development plan.

**Manpower Inventory:** This involves taking an inventory of the personnel to compare what exist in stock and what can be expected in stock at future dates. This would indicate the shortfall in terms of organisational expansion requirements. The inventory must be supplemented by appraisal of existing performance and assessment of future potential to indicate training and development plans required to make the existing supply suitable for future needs. The management must also try to develop in advance the talented employees to occupy managerial positions in the future. It cannot rely upon finding talented manpower just when it is needed. Current skill must be properly analysed to draw employment and development programmes.

**Forecast of Future Manpower Requirement:** The second step in manpower planning is to forecast or assess the manpower requirement in terms of (quantity and quality) anticipating the future plans and programmes of the company and translate these into talent and skill requirements. Basically, manpower forecast is concerned with anticipating the number of replacements required due to resignation, retirement, death, dismissal, transfer, and promotion. Determining the company manpower requirement involves two projections for each functional area:

1. the incremental number of positions needed as a result of growth; and
2. Number of vacancies created by retirement and terminations.

The projection or forecast of manpower requirement may be made by executive judgement, past trend, work study and productivity. In practice these approaches should be used to supplement each other so that the degree of accuracy of forecast may be increased. It would also be desirable to prepare forecasts based on alternative assumptions so that if one assumption fails, another may be tried. Flexibility is essential to meet sudden and unanticipated changes.

**Drawing up Recruitment Plan:** A realistic recruitment plan for manpower is drawn by comparing present manpower resources with the future requirement of manpower and ascertaining additional requirement of manpower. Thus, it entails anticipating manpower problems by projecting the present manpower resources into future and comparing them with the forecast of requirement to determining their adequacy both quantitatively and qualitatively.

**Designing Training and Development Plan:** Concurrently with the recruitment plan, manpower training and development plan is designed. This is aimed at conditioning the manpower acquisitions to the organisation's exacting requirements. Manpower becomes a resource only when appropriate knowledge, skills, and attitudes are provided to transform them into appropriate productive work force. This transformation is possible through training and development. This plan is not only necessary for existing manpower but also for the future acquisition of manpower in the plan period to achieve the manpower plan targets.

In short, steps in manpower planning consist of projecting future manpower requirements and developing manpower plans for the implementation of the projection. It cannot and should not be regarded as a rigid formulation; it should be

amenable to modification, review and adjustment according to the needs of an organisation or changing circumstances. The effectiveness of a manpower plan depends on how soundly the organisation has considered and planned its corporate strategy and integrated the objectives of its constituent departments, once these fundamental details have been thoroughly examined and decided, the senior directing staff of the organisation can consider the implications in terms of human resources. Because of constantly changing environment in which all work organisations operate whether they market a product or provide a service, the corporate strategy and objectives will necessarily require continuous monitoring and revision from time to time.

## Quantitative Aspects of Manpower Planning

### Demand Aspect

This is concerned with determination of the total number of employees required in an organisation. For proper assessment, the planner must have thorough knowledge of the company's future production and sales plans because the demand for human resource should be related with the overall organisational objectives which provide the basis of estimating manpower requirements in terms of the number and characteristics of employees. Management experts have suggested various methods to assess the number of employees required in an organisation. Some of these methods are:

1. **Workload Analysis:** This is concerned with the total volume of work which may be anticipated on the basis of distribution, administration, research, etc. budgeted production, sales and
2. **Workforce Analysis:** This involves detailed analysis of the existing workforce, rate of absenteeism, and vacancies likely to be caused by transfer and promotion, retirement, resignation etc.
3. **Management Judgement Approach:** It has been observed that majority of small-scale units do not have sound data base for manpower information and job analysis. Such organisations resort to management judgement approach to determine manpower requirement. Under this method, personnel executives who are well acquainted with the workload, efficiency and ability of employees, think about the future workload and capabilities of employees, and then decide on the number and types of employees to be recruited.
4. **Statistical and Mathematical Techniques:** The above types of analysis provide only a rough approximation of the number of employees required. These techniques are suitable only for short range demand forecast. Long range personnel forecasting is more amenable to statistical and mathematical techniques. This has been particularly true in recent years as new mathematical techniques have been developed and high-speed computers may be used to rapidly analyse large amount of personnel planning data. Some of the important statistical and mathematical tools for forecasting are being discussed hereunder:

- a. Ratios and Trend Analysis:** Under this method, the main emphasis is on the ratios which are calculated for the past data relating to number of employees of each category of production level, sales level, activity level/workload level, and direct employees and indirect employees. Future production level, sales level, activity level/work load are estimated with an allowance for changes in organisation, methods and jobs. Future ratios are also estimated when there are changes to come in organisation and human resources. Then future manpower requirement is calculated on the basis of established ratios.
- b. Linear Regression:** This technique is also used to estimate the manpower requirement of an organisation at a future point of time, based upon such factors as sales, output, services rendered, etc. The analysis is used when dependent and independent variables are functionally related to each other.
- c. Econometric Models:** Econometric analysis refers to application of mathematical and statistical procedure to economic data in order to find quantitative results; Economic models take the form of a set of simultaneous equations. Under this method, Econometric models for manpower planning are built up by analysing the past statistical data and by establishing the relationship among variables. These include those factors which affect manpower requirement directly and indirectly.
- d. Bureks-Smith Model:** Elmer H Bureks and Robert D. Smith have developed a mathematical model for personnel forecasting based on selected key variables that affect the organisations overall human resource needs. The basic equation of the model is

$$E_n = \frac{(Lagg + G) \frac{1}{X}}{Y}$$

Where  $E_n$  is estimated level of personnel demand in  $n$  planning period (e.g. years).

Lagg is the overall or aggregate level of current business activity in rupees.

G- is the total growth in business activity anticipated through period  $n$  in today's rupees.

X- is the average productivity improvement anticipated from today through planning period  $n$  (e.g. if  $x = 1.08$  it means an average productivity improvement of 8%),

Y- is conversion figure relating today's overall activity to personnel required (Total level of today's business activity divided by the current number of persons. It reflects the level of business activity per person).

It should be emphasised that application of personnel (employment) forecasting model depends heavily on obtaining accurate estimates of total growth (G), average productivity improvement (X) and conversion rates (Y). In order to obtain these parameters, separate statistical techniques may be used.

The use of these models requires knowledge of the underlying assumptions and limitations of a particular model. Besides this, persons attempting to take a quantitative approach to personnel should have strong

background in statistics, operations research, management science, or computer science. Equally important, the quality of information used to generate estimates and predictions from these models must be timely, accurate and carefully collected.

### Supply Aspects

This is concerned with the estimate of supply of manpower given the analysis of current resources, and future availability. Here the personnel planner must consider both the external supply (employees available for higher position in the organisation's geographic work force) and the internal supply (organisation's current employees). External supply of personnel is important for two reasons. First, the normal attention of employees through voluntary turnover, retirement, illness, death and discharge may require that the organisation look to employment agencies, colleges and universities and other sources to replenish lost personnel. Second, organisational growth and diversification require the use of external sources to obtain additional numbers and types of employees. Planner must be cognizant of available sources of employees.

The internal supply of personnel is influenced by changes that occur to employees over a period of time as a result of training and development programme, promotion policy and job-related experiences that contribute to shifting of personnel within the firm. Environmental factors such as changes in local wage rates and competitive posture of rival organisations may have an impact on employee turn-over if employees leave. Changes in retirement legislation also alter the internal supply of personnel as older workers re-evaluate their plans and objectives. As employees leave or are transferred to new positions within the organisation, vacancies must be filled. Many organisations look first to internal sources of personnel to fill these needs.

Therefore, it is important for the personnel planners to anticipate and pin-point changes in the personnel supply. Some of the important methods which are used to anticipate manpower supply are discussed below:

- 1. Markov Analysis:** This method uses historical information on the personnel movement that takes place during a typical planning period. Data are collected and reviewed for a number of years in order to estimate the likelihood that persons in a particular job will remain in that job or be transferred, promoted, demoted, terminated or retired. These historical flows of personnel (transitions) through the organisation are represented by probabilities. The probabilities are arranged in a 'transition matrix' and future personnel flows are estimated on the basis of the matrix.
- 2. Simulation:** Based on Markov Analysis, this technique considers alternative (than historical) flows which are examined for effects on future manpower availabilities. Alternative flows reflect the anticipated results of policy or programme changes concerning voluntary and involuntary turnover, retirement, promotion, etc.
- 3. Renewal Analysis:** This technique estimates future flows and availabilities of manpower by calculating (i) vacancies created by the organisation, (ii) the results of decision rules governing the filling of vacancies. Alternative models may assess the effect of changes in growth estimates, turnover, promotions or decision rules.

**4. Goal Programming:** Under this operational research technique, the per-sonnel planner optimises goal. In this case, the goal to optimise is desired staffing pattern subject to a set of constraints concerning such factors as the upper limits on flows, the percentage of new recruits permitted in each state and total salary budget.

#### **Reconciliation of Personnel Data**

Once personnel need and demand are determined, and the current supply of employees assessed, the supply and demand must be reconciled or balanced so that vacancies can be filled up by right employees at the proper time. Reconciling supply and demand is largely a matter of planning, timing and use of various personnel related programmes to achieve the desired result.

#### **Qualitative Aspect of Manpower Planning**

To assess the quality of manpower required in the organisation, various attributes have to be taken into account such as, qualification, experience, aptitude etc. of the employees required by the enterprise. This calls for job analysis and design. Job analysis refers to the detailed and systematic study of all elements of a job, like task included in it, duties, abilities, responsibilities working conditions, skill and knowledge required to perform it, and its relation to other jobs. According to Milkwoich & Boudrev, job analysis is a systematic process of collecting data and making certain judgement about all of the important information related to the nature of a specific job. Results of job analysis serve as input for many human resource activities". In the opinion of David A. Decenzo and Stephan P. Robins, job analysis is a systematic exploration of the activities within a job. It is the basic technical procedure, one that is used to define the duties and responsibilities and accountabilities of a job. This analysis involves compiling a detailed description of tasks, determining the relationship of job and examining the knowledge qualifications or employment standard, accountabilities and other incumbent requirements. In short, we can say that job analysis indicates what activities and accountabilities a job entails. There is no mystery about job analysis, it is just an accurate recording of the activities involved. Thus, job analysis collects information about specific tasks or what a person does. A group of tasks performed by one person makes up a position. Identical positions make a job, and broadly similar jobs combine into an occupation.

Basically, the process of job analysis results in preparing two essential documents viz.

1. Job Description and
2. Job Specification.

#### **Job Description**

It is the systematic outline of information gained from notes taken and recorded in the process of job analysis. It is a factual statement and summary of the job contents in terms of the job title, job duties, equipment to be used, working conditions, supervision needed, hazards, relationship with other jobs, and personnel requirements of the job.

Job description is not a permanent reflection of the job; it can go out of date as jobs tend to be dynamic. It should be revised periodically and kept up-to-date with changing circumstances. Personnel and other departmental heads should be apprised of changes in the job description.

#### **Job Specifications**

Job specification states the minimum acceptable qualifications that its incumbent must possess to perform the job satisfactorily. Based on information acquired through job analysis, job specification identifies the job requirements such as educational qualifications, job related experience, knowledge skills and abilities needed to do the job effectively. Individuals possessing the attributes identified in the job specification were likely to perform the job more effectively than individuals lacking these characteristics. Job specification therefore is an important tool in the selection process, for it keeps the selectors' attention on the list of qualifications necessary for an incumbent to perform the job and assists in determining whether a candidate is qualified.

#### **Significance of Manpower Planning**

The significance of systematic and comprehensive manpower planning has been recognised by all organisations. Earlier, the management of small organisations had the common belief that they could always obtain the personnel it required whenever it needed. However, in present corporate environment, formal manpower planning is essential for all big organisations which must meet and manage changes in technical know-how, products, markets and internal organisation, and which utilise lot of personnel talent.

Some of the major points of significance of manpower planning in an organisation are:

- Manpower planning is vital because it helps in determining the personnel needs of the organisation;
- It enables the organisation to cope with changes in competitive forces, markets, technology, product, etc. all of which often generate changes in job contents, skill demands, number and type of personnel.
- It is an essential component of strategic planning.
- It helps in selection and development of employees as it ensures that adequate number of persons are selected well in advance and developed for anticipated openings. This also ensures a smooth working of the organisation.
- It enables the organisation to procure personnel with necessary qualifications, skill, knowledge, work experience and aptitude for work.
- It helps in finalising managerial succession plan as a part of the replacement process by providing enough opportunity for identifying and developing managers to move up the corporate leader.
- Suitable manpower planning helps to ascertain and identify the areas of critical shortages of skilled employees and enable management to avoid breakdown in production process or under utilisation of plant capacity, by taking timely corrective action.
- It also helps to identify the surplus manpower if any in the organisation.

#### **Summing up**

Although there are several benefits and uses of manpower planning, yet it is not free from limitations. Generally, manpower plans suffer from inaccuracy as it is difficult to prepare long range forecast accurately. Changes in economic conditions, technology, marketing conditions and labour force conditions tend to make long range forecasts unreliable. However, there is greater danger in not forecasting at all.

It is possible to certain extents to predict with a reasonable degree of accuracy based on experience the future vacancies resulting from retirements, deaths and resignations. However, it is more difficult to anticipate which particular member of the personnel will be required to be so replaced. It is also risky to take action on general estimates of personnel requirements which are not specific enough. At times, lack of top management's support frustrates those in charge of manpower planning. Again, inaccuracies are caused when forecast from several operating deviations are merely totalled together without a critical scrutiny. Thus, limitation in manpower planning emerges both from the uncertainty of forecasting itself as well as at times from the methods used in manpower planning. However, with the experience gained through manpower planning over a period of years, it is possible to become more accurate, although manpower management cannot yet lay claim to being a science.

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