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## UNIT 3 METHODS AND TECHNIQUES OF DEMAND MANAGEMENT

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### Objectives

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

- 1 the concept of human resource forecasting and the various factors contributing to demand forecasting,
- 1 the issues in demand forecasting and its relevance to the factors influences to change,
- 1 the various techniques used in forecasting human resource requirements, and
- 1 the creation of an HR/staffing plan.

### Structure

- 3.1 Introduction
- 3.2 HR Forecasting
- 3.3 Forecasting Demand for Employees
- 3.4 Issues in Demand Forecasting
- 3.5 Forecasting Techniques
- 3.6 Other Forecasting Methods
- 3.7 Creation of an HR/Staffing Plan
- 3.8 Summary
- 3.9 Self-Assessment Questions
- 3.10 Further Readings

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### 3.1 INTRODUCTION

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In this unit, the focus is on the understanding of business shifts in a dynamic environment and, on the basis of such shifts, preparation of estimates of human resource needs. An understanding of the trends and an estimation of the needs of an enterprise provide possible clues to planners on the future, and thereby enables them to take suitable steps to bridge the gap between demand and supply. In the absence of any systematic work in this area, an organisation may face surprises and therefore be unable to face challenges. The absence of the right resources at the right time, may prohibit the accomplishment of corporate plans, and also lead to losses because of the organisations' inability to cash in on opportunities.

Forecasting of demand of human resource needs is the first and most important step in any human resource planning process. This step results in an estimation of staffing requirement of an organisation, for both the short and long term and is, therefore, the foundation of the planning activity. Here, both the quantitative as well as qualitative aspects of human resource requirements are dealt with.

It is pertinent to note at this point that demand forecasting is not a very accurate exercise over a long-term period. For short range planning of less than a year, a fairly accurate forecast is perhaps possible. No processes or techniques exist that can take into account all the parameters and circumstances required for accurate long-term estimation of manpower needs. Dynamic business circumstances, rapidly

changing technologies and their impact on products and methods of production, political and social changes and ever increasing competition keep changing the set of circumstances assumed at the time to forecast. Exhibit 1 illustrates the set of assumptions that a human resource planner has to make at the time of demand estimation.

In the 1980s, because of international economic competition, staffing planning had to reorient its contribution to organisations, focussing more on reducing staffing levels and building in a capacity for flexibility and change. The 1987 report of the Staffing Services Commission (UK) emphasised ‘competence, commitment and the capacity to change’ and drew little on the traditions of staffing planning. More realistically, therefore, the state of contemporary staffing planning will have restructure itself and reorient its own values and approach to the regulation of employment. In a 1990 study, it has been reported that organisations ‘prefer neither to use the term “staffing” nor to return to the large and elaborate planning documents produced by head offices a decade ago’. Many organisations are placing the responsibility for staffing planning with production line managers while maintaining strategic hold and direction at corporate level as against the earlier practice of centralised and specialised staffing planning. You will appreciate, no doubt, that this is consistent with some of the supposed moves towards human resource management in general.

Now let us look at the nomenclature, HR Planning. Traditional practices are giving way to flexible staffing use, novel forms and contracts of employment, together with innovative approaches and succession planning. Does the term “HR Planning” capture the essence of contemporary and HR Planning? Bennison and Casson (1984) do not seem to think so. According to them, planning ‘belongs to the world of calculation, computers and big bureaucracies’. Many theories recommending that organisations seek to develop strategies and policies that address ‘labour shortages and cultural change rather than hierarchical structures, succession plans, and mathematical modelling’ (Cowling and Walters 1990: 3).

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## 3.2 HR FORECASTING

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What is certain is the uncertainty of the future. As time passes, the working environment changes internally as well externally. Internal changes in the organisational environment include product mix and capacity utilisation, acquisition and mergers, and union-management relations among many other areas. Changes in the external environment include government regulations, consumerism, and competence levels of employees, among a host of other factors.

HR plans depend heavily on forecasts, expectations, and anticipation of future events, to which the requirements of staffing in terms of quality and quantity are directly linked. Uncertainty adds complexity of forecasting. However, change does not obviate the need for staffing planning, though this is the argument raised by those who oppose the concept. Where the futures are certain, there would be no need to plan.

Justifications for planning are threefold:

- 1 Planning involves developing alternatives and contingency plans.
- 1 As long as survival and success are the main objectives of any enterprise, the uncertainty future is no excuse for not trying.
- 1 Science has developed a lot of knowledge for the use of mankind. Scientific management has developed operations research techniques and statistical methods to predict the future with accuracy and reliability.

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### 3.3 FORECASTING DEMAND FOR EMPLOYEES

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**Economic factors:** As business is an economic activity, forecasts must consider economic aspects like per capita income, employees' expectations of wages and salaries, cost and price of raw materials, inflation rate, etc. Fiscal policies and liberalisation of trade will also influence requirements.

**Social factors:** Here, we consider the expectations of existing and potential employees on wages, working condition and government regulations and future trends in political influences and public opinions.

**Demographic factors:** Decisively influential upon future requirements, these include availability of youth, training facilities, women in the active labour force, sex ratio, facilities for professional education, income level, education/literacy, etc.

**Competition:** Competitors strategies, including advertising, quality of product, pricing, and distribution influence future staffing in a variety of ways. For example, if we can only preserve our market share by improving the quality of our product, we may have to employ competent R & D engineers to tackle the product design.

**Technological factors:** Technology has to be state of the art if company is to survive the competition. Technology, both in terms of quality and extent to which it is used, will determine the capital and labour force requirements. Given that our future staffing needs obviously depend on expected trends in technology, 'technology forecasting' has become a specialist field in modern management.

**Growth and expansion of business:** Future growth and expansion plans will affect future staffing requirements. Growth is possible through:

- 1 Product diversification
- 1 Increased capacity of production.

**Expansion plans are executed through:**

- 1 Merger
- 1 Acquisition
- 1 Joint venture participation
- 1 Formation of horizontal and vertical integration
- 1 Establishment of national and international value chains.

All these activities require additional staffing with right qualities in the right numbers at the right times.

**Management philosophy/Leadership:** Top management ultimately decides what levels of staffing are required. The philosophy of the top management will largely determine the policies that inform decisions on future staffing needs. In many developing countries, there are 'public-sector enterprises' and 'private-sector enterprises'. The public-sector enterprises owned by the government very often adopt a liberal philosophy of employing labour, leading to enterprises that are overstaffed. Managers in the private sector, whose philosophies are more, determined by economic and entrepreneurial considerations than by social policy, try to employ the optimum number of employees.

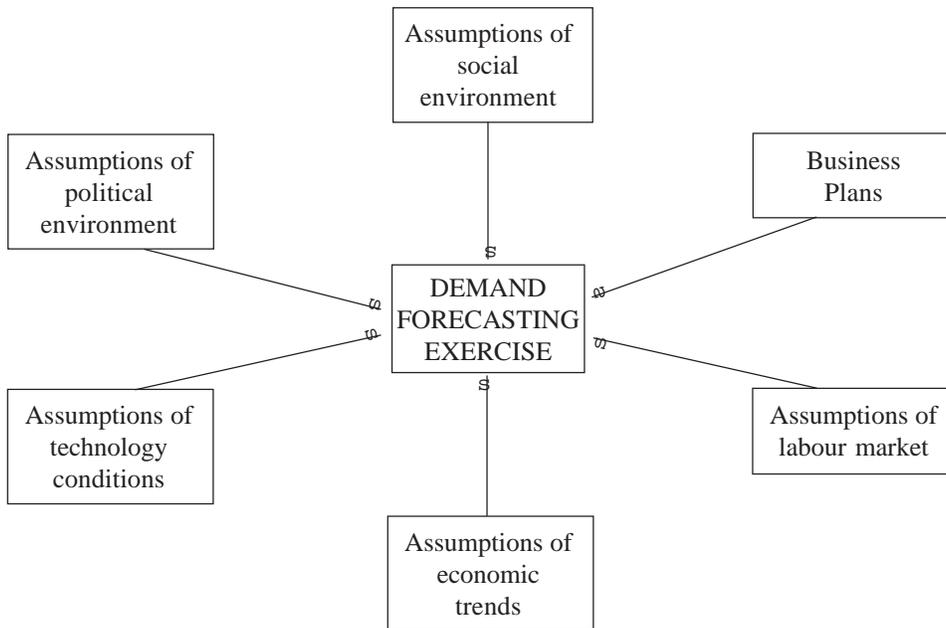
**Innovative management:** As competition increases with globalization and liberalization of trade, management needs to be innovative to stay afloat and sustain competitive advantage. Emotionally intelligent workplaces, continuous improvement, relationship management, customer, loyalty, economics of variety, etc., are the

innovations in management that need to be adopted. Future staffing needs will be influenced by these innovative practices.

### Managerial Dilemma

Questions that always confront the managers are: why should I worry about future needs when the future is uncertain? Why should I spend my time in human resource planning when I know for sure that the forecast made today will not survive over the long term? Examples of giants like IBM and Digital which had to layoff or retrench several thousand employees loom large in the minds of planners.

**Exhibit 1 : Assumptions at the Time of demand Forecasting**



**Source:** Strategic Human Resource Planning, Vivek Paranjpe, Hewlett-Packard, p. 57.

The answer to these and such other questions will, however, depend on what one is looking for in human resource forecasting? Are we looking for an accurate number or for some trends that will enable us to take proactive steps? If one is looking for accurate numbers in the long range, no existing human resource-planning model will help. One can, however, look at the trends which do provide invaluable data and can help to prepare an organisation face possible changes in a proactive manner.

Another issue, which often confronts managers, is the differentiation between the annual budgeting exercise and human resource planning. In the annual budgeting exercise, managers are expected to broadly indicate the number of employees required during the year. Such input enables the finance group to estimate employee costs for incorporation in the budget. In the larger, long term context of the business of such an exercise is not only inadequate but is also inaccurate and unrealistic. The managers generally have a tendency to overestimate their departmental needs during such an exercise. The reasons for such a tendency could be attributed to the following factors either singularly or collectively:

- Many managers believe that their superiors will cut down the budgets in any case. Such a curtailment is assumed to be a normal trait in order to establish the locus of power. It is, therefore, considered prudent to over-estimate, so that after the axe falls on the estimates, the final budget will hopefully be near realistic.
- Absence of forecasting skills may also lead to managers playing safe games. Excess forecasting, if approved, (in case of expenses and manpower deployment) cannot create any damage to individual performance, and in fact, could be very

helpful. Managing expenses and deploying staff at levels lower than those indicated in the budget, while producing desired results, may lead to a pat on the back of the manager.

- In those organisations where job evaluation has some linkage to the span of control and the number of people in the department, the tendency to overstaff does exist. If a higher number of people are budgeted and approved, the chances of the managerial job getting reviewed for higher level of scoping is excellent. This leads not only to over-staffing, but also to acrimonious battles and debates on staffing with hidden agendas in the minds of the warring factions.
- The human tendency to control a large number of people in order to satisfy the “power need” can lead to over-budgeting and excess staffing in an enterprise.

An annual budgeting exercise which is the only form of human resource planning in many organisations sometimes fails to consider the qualitative aspects of manpower requirements and ignores the long-term needs of the enterprise. Annual budgeting programmes get focussed on annual revenue, costs, cash flows and annual profitability. This annual number crunching activity or the activity of counting heads, popularly known as “headcounts” is aimed at projecting and controlling employee costs rather than at the finer aspects of the quality of workforce, its deployment, long-term utility, long-term adequacy, ability to retain and hire etc. In most enterprises, managers spend a lot of their valuable time in negotiating, demanding and worrying about numbers rather than the finer, long-term objectives. Enterprises are often seen approving 0.5 headcount for certain departments and in some cases, they go to ridiculous levels of approving 0.25 headcount for a given work, with a promise to review in future. In this numbers game, the issue of productivity improvement opportunities, employee development issues, training etc., get side-tracked. The enterprise’s inability or refusal to focus, beyond the short term, which in turn leads to non-recognition of the long term demands of the business, scarcity of the right resources, finally resulting in compromises “by re-deployment or by hiring of talents which do necessarily meet requirements”. One can see several instances of wrong per holding important positions in various enterprises. A conservative estimate that at least 8 to 10 per cent of the positions in any organisation are staffed by the wrong persons, making them a drag on the organisation. One of the reasons for such a mismatch is lack of planning.

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### **3.4 ISSUES IN DEMAND FORECASTING**

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Before discussing possible techniques of human resource demand estimation it is worth examining related factors that influence the process. In this section some such factors are discussed, with a view to trigger readers to consider other similar issues that may influence their own enterprises.

#### **Social Factors**

It is common experience that a number of well-conceived projects either do not take off or get delayed due to social pressures. For example, a large-scale petrochemical project might get delayed or even shelved due to the pressures created for environmental and other reasons. In such an event, the human resource demand forecasts made by the planners will undergo substantial changes. Delays result in cost escalation, changes in technology to accommodate the needs/sentiments of society, changes in the location of the project etc. If careful, conservative hiring is not done by the enterprise, when such major changes occur, there is a possibility that the enterprise will be saddled with surplus staff right at the beginning of the project. A change of location or of technology may result in the non-availability of planned resources and therefore further delay the activities.

More examples can be seen in the form of product formulations, which are unacceptable because of religious or cultural reasons, such as the unacceptability in the Indian market of food products using fat extracted from beef.

### **Technological Factors**

Rapid changes in technology many a times adversely affect human resources forecasts. From the time a project is conceived to the time is implemented, substantial time lag may occur during which, changes in technology may make the entire project unviable. Businesses then have to quickly catch up with new technology in order that the losses are minimized. Several examples of this can be found in the electronic industry.

### **Political Factors**

Unforeseen political factors might make considerable impact on the business plans of enterprises. This is true especially for those organisations which depend mostly only on international markets either for the sourcing of their raw materials or for selling of their products and services. Several examples can be seen in the recent past. Indian enterprises were dependent on the export market to the erstwhile USSR. With the changed political scenario, the market suddenly vanished, compelling some enterprises to either close or restructure their business. The Gulf War similarly made a major impact on some enterprises, which were dependent on the construction business in that part of the world.

### **Economic Factors**

Economic factors often result in several planned activities being forced to undergo considerable change. Recent examples are found in India, with economic reforms being introduced in the early nineties. The traditional concept of manufacturing everything indigenously, even if it meant just assemble at the component level had to undergo substantial change and several organisation that had set up or were in the process of setting up manufacturing activities suddenly found local manufacturing an unviable proposition. This resulted in major changes in business strategies and for some enterprises, even the threat of closure.

### **Demand Generation**

Before dwelling on demand forecasting techniques, it is essential to examine the reasons for the creation of employee demands. This will help us focussing only on those factors that create demands.

### **Growth**

Growth, in traditional business, may lead to demand for higher levels of production, sales volumes and services. If all possible productivity technique are already applied and there is no further scope of improvement at that relevant time, simple statistical models discussed in the later part of this chapter can be applied to forecast future manpower needs of an enterprise.

### **Employee Turnover**

Employee turnover or attrition is another reason for generation of manpower demands in an organisation. Exhibit 2 shows a model of the trends employee turnover of certain jobs and the resultant demand that gets created in an enterprise. While it is necessary to look at the trends of employee attrition, it might not be appropriate to simply make a forecast based on the trends. Changing business scenario and environment have to be considered before any assumptions on future turnover of employees can be made. To illustrate this point, in India, till the end of the eighties and before the opening of

the Indian economy, a turnover of not more than 5-6 per cent amongst the profession and managerial personnel is stable, well managed organisations could be safely assumed. This picture, however, changed with the economic reforms, which brought several new multinationals into the country and woke up traditionally managed Indian business houses. Past trends of low turnover have now changed to moderate and might go up still further. Such changes in employee turnover trends vary from profession to profession and skill to skill depending on the demand and supply position. In Exhibit 2, based on business forecast and the analysis of employee turnover, a gap between

**Exhibit 2: Demand Generation due to Employee Turnover and Business Growth**

Job Category	Employee Turnover Rate(%)			Level of Employment as of 1.1.96 (A)	Requirement as of 1.1.97 (B)*	Expected Turnover 1996		Normal Retirements during 1996 (D)	Cap** (B + A) + C + D
	1993	1994	1995			Rate %	Number (C)		
Manager in Sales and Marketing	9.5	10	11	13	14	12	1.5	1	3
Sales Executives	8	12	14	100	120	15	16	Nil	35
Advertising and Marketing Services Professionals	10	13	14	15	16	15	2.25	1	4
Managers in Application Engineering Group	10	12	12	17	18	11	1.87	3	5
Application Engineers	22	20	21	70	79	20	14	Nil	23
Hardware Engineers	2	4	6	20	22	6	1.2	3	6
Commercial Clerks	2	2.5	4	25	26	5	1.25	4	6

\* As per business projections.

\* Rounded off to lower whole number

**Source:** Strategic Human Resource Planning, Vivek Paranjpe, Hewlett-Packard, p. 61.

the existing inventory of skills and future demand is worked out for certain jobs. Such an analysis gives ample time to the staffing group to fill the vacancies.

### Technological Shifts

Changes in technology makes an impact on an enterprise in more than one fashion. This may change the methods of manufacturing, processes and techniques, selling strategies could also become different and in the office, automation could bring about a major change in the nature of work. Such changes may result in a redundant and surplus workforce and might also bring about shortages in the new skills required to manage the technology. A technological change in an enterprise does not happen overnight but is always forewarned, over a short or long period of time. Hence, whenever any shift is planned, either on the basis of previous experience with similar technology or on the basis of the experience of other enterprises, a demand forecast can be made of the skills that might soon be in short supply internally.

There are several good reasons to conduct demand forecasting. It can help:

- (i) quantify the jobs necessary for producing a given number of goods, or offering a given amount of services;
- (ii) determine what staff-mix is desirable in the future;
- (iii) assess appropriate staffing levels in different parts of the organisation so as to avoid unnecessary costs;
- (iv) prevent shortages of people where and when they are needed most;
- (v) monitor compliance with legal requirements with regard to reservation of jobs.

### Activity A

Suppose HR planners estimate that because of several technological innovations, your company will need 25 per cent fewer employees in three years. What action would you take today?

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### Activity B

Why should HR plan be integrated with the overall organisational strategic plan? How can this integration be achieved?

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## 3.5 FORECASTING TECHNIQUES

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Forecasting techniques vary from simple to sophisticated ones. Before describing each technique, it may be stated that organisation generally follow more than one technique. The techniques are:

1. Managerial judgement
2. Ratio-trend analysis
3. Work study techniques
4. Delphi technique
5. Flow models
6. Others

### Managerial Judgement

This technique is very simple. In this, managers sit together, discuss and arrive at a figure, which would be the future demand for labour. The technique may involve a ‘bottom-up’ or a ‘top-down’ approach. In the first, line managers submit their departmental proposals to top managers who arrive at the company forecasts. In the ‘top-down’ approach, top managers prepare company and departmental forecasts. These forecasts are reviewed with departmental heads and agreed upon. Neither of these approaches is accurate – a combination of the two could yield positive results. In the ‘bottom-up’ and ‘top-down’ approaches, departmental heads are provided with broad guidelines. Armed with such guidelines, and a consultation with the HRP section in the HRM department, departmental managers can prepare forecasts for their respective departments. Simultaneously, top HR managers prepare company forecasts. A committee comprising departmental managers and HR managers will review the two sets of forecasts, arrive at a unanimity, which is then presented to top managers for their approval. Exhibit 3 is a typical forecast prepared using this technique. Needless to say, this technique is used in smaller organisations or in those companies where sufficient database is not available.

**Exhibit 3 : Staff Forecast Form**

Category of Staff.....			Year.....		
Sl.No.	Staff Members and Movements		No. of staff to be provided	Remarks	
1.	Number of staff at 1.1 (excluding known resignations)	75	–	Age groups: Under 25 25-34 35-44 45 and over	30 20 15 10
2.	a) Expected retirements, transfers out and promotions during year b) Less expected transfers in promotions and new appointments already made	8 3	5	(dates to be specified)	
3.	a) Number of staff required on 1 January, next year b) Less present staff	80 75	5	Increase in number to be substantiated by O & M report	
4.	Expected staff losses due to normal wastage of existing staff	15		Estimated by age groups: Under 25 25-34 35-44 45 and over	12 2 1 –
5.	Expected losses of staff to be recruited in the period	5	5	Short service staff turnover at 20% of 25 (events 2 + 3 + 4) above)	
6.	Total staff to be provided during the period		30	5 to be recruited by 1 February, others to be programmed later.	

**Source:** Handbook of Personnel Management by Armstrong

**Ratio-trend Analysis**

This is the quickest forecasting technique. The technique involves studying past ratios, say, between the number of workers and sales in an organisation and forecasting future ratios, making some allowance for changes in the organisation or its methods. Exhibit 4 shows how an analysis of actual and forecast ratios, between the number of routine proposals to be processed by an insurance company's underwriting department and the number of underwriters employed could be used to forecast future requirements.

**Exhibit 4 : Demand Forecast – Inspectors**

	Year	No. of Employees		Ratio Inspector: Production
	–3	1500	150	1 : 10
Actual	–2	1800	180	1 : 10
	Last year	2000	180	1 : 11
	Next year	2200*	200**	1 : 11
	+ 2	2500*	210**	1 : 12
	+ 3	2750	230**	1 : 12

## Work-study Technique

Work-study techniques can be used when it is possible to apply work measurement to calculate the length of operations and the amount of labour required. The starting point in a manufacturing company is the production budget, prepared in terms of volumes of salable products for the company as a whole, or volumes of output for individual departments. The budgets of productive hours per unit of output are then multiplied by the planned volume of units to be produced to give the total number of planned hours for the period. This is then divided by the number of actual working hours for an individual operator to show the number of operators required. Allowance will have to be made for absenteeism and idle time. Following is a highly simplified example of this procedure:

1.	Planned output for next year	20,000 units
2.	Standard hours per unit	5
3.	Planned hours for the year	1,00,000
4.	Productive hours per man/year (allowing normal overtime, absenteeism and idle time)	2,000
5.	Number of direct workers required (4/5)	50

Work-study techniques for direct workers can be combined with ratio-trend analysis to forecast for indirect workers, establishing the ratio between the two categories. The same logic can be extended to any other category of employees.

## Delphi Technique

The Delphi technique is a method of forecasting human resource needs. It is a decision Making tool. It is been used in estimating personnel needs from a group of experts, usually managers. The HR experts act as intermediaries, summarises the various responses and reports the findings back to experts. The experts survey again after they get this feedback. Summaries and surveys are repeated until the experts opinions begin to agree. This agreement reached is the forecasting of the human resource needs.

## Flow Models

Flow models are very frequently associated with forecasting personnel needs. The simplest one is called the Markov model. In this technique, the forecasters will :

1. Determine the time that should be covered. Shorter lengths of time are generally accurate than longer ones. However, the time horizon depends on the length of the HR plan which, in turn, is determined by the strategic plan of the organisation.
2. Establish categories, also called states, to which employees can be assigned. These categories must not overlap and must take into account every possible category to which an individual can be assigned. The number of states can neither be too large nor too small.
3. Count annual movements (also called 'flows') among states for several time periods. These states are defined as absorbing (gains or losses to the company) or non-absorbing (change in position levels or employment status). Losses include death or disability, absences, resignations and retirements. Gains include hiring, rehiring, transfer and movement by position level.
4. Estimate the probability of transitions from one state to another based on past trends. Demands a function of replacing those who make a transition.

There are alternatives to the simple Markov model. One, called the semi-Markov, takes into account not just the category but also the tenure of individuals in each category. After all, likelihood of movements increases with tenure. Another method is called the Vacancy Model, which predicts probabilities of movement and number of vacancies. While the semi-Markov model helps estimate movement among those whose situations and tenure are similar, the vacancy model produces the best results for an organisation.

Markove analysis is advantageous because it makes sense to decision makers. They can easily understand its underlying assumptions. They are, therefore, likely to accept results. The disadvantages include: (i) heavy reliance on past-oriented data, which may not be accurate in periods of turbulent change, and (ii) accuracy in forecasts about individuals is sacrificed to achieve accuracy across groups.

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### 3.6 OTHER FORECASTING METHODS

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As in other fields, mathematical models are used in human need forecasting too. One such widely used technique is the one given below:

$$E_n = \frac{(Lagg_n + G)^{lx}}{y}$$

where,  $E_n$  is the estimated level of personnel demand in  $n$  planning periods (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. *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 a conversion figure relating today's overall activity to personnel required (total level of today's business activity divided by the current number of personnel). It reflects the level of business activity per person.

The main purpose of this model is to predict  $E_n$ , the level of personnel necessary in  $n$  periods. Prior to applying this model, estimates of  $G$ ,  $x$  and  $y$  must be made. Such estimates may be based on the previous experiences of management, as well as on future strategic choices to which the organisation's decision-makers are committed.

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### 3.7 CREATION OF AN HR/STAFFING PLAN

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Now that you have been exposed to the techniques employed in HR planning let's look more closely at those factors – both internal and external – which contribute to or influence the final outcome of the staffing plan.

#### Internal Considerations

As people are leaving the organisation, we often will have to replace them. In small organisations, a person's departure will be more evident than in a large organisation. Staffing planners will be concerned with the average number of employees who leave and therefore need replacing just in order to maintain a constant number of employee resources in the organisation.

#### Wastage Analysis

In large organisations, it requires a far more rigorous calculation of 'wastage' than the rule of thumb and management-owner discretion in smaller firms. The simplest way of calculating wastage is through turnover analysis that reviews features such as the

positions being vacated, the average ages of the people who are leaving, the type of skills that are being lost, etc. Such an analysis gives only a broad picture of the current state of employees and it is usual to consider a 25% turnover rate as acceptable in modern large organisations. If the turnover analysis approaches 30-35%, then the situation warrants deeper analysis.

There are features that the turnover analysis will not reveal, so you may prefer an alternative calculation called the Labour Stability Index. This index is calculated from the following formula:

$$\frac{\text{Number of employee exceeding one year's service}}{\text{Total number of employees one year ago}} \times 100 = y\%$$

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### 3.8 SUMMARY

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The best business plans are subject to change in today's dynamic world and no matter how well a planner considers the various contributing factors, there always exists a certain amount of uncertainty and chance. This requires that instead of attempting to forecast the precise number of people required by an organisation, the trends be studied, in order to understand the possible changes in the business and evolve a strategy to cope with an emergent scenario.

It may be prudent to make two different forecasts:

- 1 A forecast of manpower requirements as per the business plan. Here the assumption is that the plans will go through without any major changes.
- 1 A forecast needs, which is conservative. Here, the impact of various negative factors on the business can be considered.

When it comes to actual advance hiring, it is wise to hire people against only the key positions of the first forecast and the balance staff based on the second forecast. Such a strategy will enable an enterprise to sail through without any major problems. Here, key jobs are defined as those where skills are scarce and therefore require a longer lead time to hire, or those jobs where skills are not available in the market, therefore requiring the organisations to invest training where once again the lead time is considerable.

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### 3.9 SELF-ASSESSMENT QUESTIONS

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- 1) Explain the concept of human resource forecasting. Discuss various techniques used in forecasting human resource planning.
- 2) Explain the issues in demand forecasting. Discuss the different factors contributing to demand forecasting.

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### 3.10 FURTHER READINGS

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Gautam, V. 1988. *Comparative Manpower Practices*, National Publishing House, New Delhi.

Mozina, S. 1984. *Guide to Planning for Manpower Development*, ICPE: Ljubljana (Yugoslavia).

Agrawal, Satya Prakash 1970. *Manpower Demand: Concepts and Methodology*, Meenakshi Prakashan, Meerut.

Armstrong, Michael 1988. *A Handbook of Human Resource Management*, Kogan Page, London.

**Basics of Human  
Resource Planning**

Beer Michael et al. 1985. *Human Resource Management: A General Manager's Perspective Text and Cases*, Free Press, New York.

Suri, G.K. 1988. *Human Resource Development and Productivity: New Perspectives*, National Productivity Council.

Vetter, Eric W. 1962. *Manpower Planning for High Talented Personnel*, Ann Arbor Bureau of Industrial Relations, Graduate School of Business Administration, University of Michigan, Ann Arbor.

Bramham, J. 1989. *Human Resource Planning*. London: IPM.

Bramham, J. 1990. *Practical Staffing Planning*; London: IPM.

Cowling, A. and Walters, M. 1990. *Staffing Planning – Where Are We Today?* Personnel Review 19 (3).