MODULE 2

SESSION 1

GALGOTIAS
UNIVERSITY

TOPICS TO BE COVERED

- Introduction
- Objectives of Manpower Forecasts
- Ascertaining demand and supply of Human Resource.; Causes of demand
- Methods of demand forecasting

- In manpower literature, one finds it's difficult to differentiate between the words 'demand', 'need', 'requirements', 'projections', 'estimates' and 'forecasts'. Some use these terms as synonymous while others use them in distinct senses.

- 'Demand', from the economists' angle, is a schedule of relationships between quantities of that particular category of manpower demanded and a series of possible wage rates, i.e., manpower demanded varies with the wage rates - more at a lower wage rate than at a higher one.

- 'Need' refers to the number of people required to provide an ideal level of service. What is ideal is never achieved, because of structural, technological and other constraints.

- 'Requirements' are the functional composition of employment that will be necessary to produce goods and services within a specified timeframe to achieve social, cultural; economic and technological targets.

- 'Projections' predict the outcome of spontaneous forces, i.e., the outcome which is expected in the normal course of events and in the absence of external stimulus. They are mathematical extensions of 'data on. manpower into the future

- 'Estimates' are educated guesses based on experience.

- 'Forecasts', on the other hand, refer to a prediction of the outcome when normal course of events are influenced and altered by external forces. Forecasts usually take into account both the projections and the estimates. For example, forecasts at the macro level could result in a statement of what would happen if economic growth was deliberately , manipulated by government policy.

Objectives of Manpower Forecasts

▶ The basic rationale for making manpower forecasts is the long gestation lags in the production of skilled professional people.

▶ The second major reason is the observed imperfections in the labour market

▶ The third major reason is that in the short-run at least, elasticises of substitution among various skills have been observed to be either zero or near zero.

▶ Production of goods and services, therefore, requires various categories of skilled manpower in fixed proportion. Shortage of any skilled category of manpower, in such a situation would adversely affect the production of goods and services within the economy.

▶ Manpower forecasts would help avoid such a situation by facilitating anticipation of skill shortages and planning ski1l supplies accordingly.

Ascertaining demand and supply of Human Resource.; Causes of demand

•Forecasting human resource demand is the process of estimating the future human resource requirement of right quality and right number.

•Demand forecasting helps in determining the number and type of personnel/human resources required in future.

•Potential human resource requirement is to be estimated keeping in view the organisation's plans over a given period of time.

•Human Resource Demand Forecasting depends on several factors, some of which are given below. Employment trends;

1. Replacement needs;
2. Productivity;
3. Absenteeism; and
4. Expansion and growth.

•Analysis of employment trends; replacement needs of employees due to death, resignations, retirement termination; productivity of employees; growth and expansion of organisation; absenteeism and labour turnover are the relevant factors for human resourced forecasting.

Methods of demand forecasting

▶ **There are number of techniques of estimating/forecasting human resources demand:**

(a) Managerial Judgement
(b) Work Study Technique
(c) Ratio-trend Analysis

(d) Econometric Models
(e) Delphi Model
(f) Other Techniques

Managerial Judgement

▶ Managerial judgement technique is very common technique of demand forecasting. This approach is applied by small as well as large scale organisations. This technique involves two types of approaches i.e. 'bottom-up approach' and 'top-down approach'. Under the 'bottom-up approach', line mangers send their departmental requirement of human resources to top management. Top management ultimately forecasts the human resource requirement for the overall organisation on the basis of proposals of departmental heads. Under the Top-down approach', top management forecasts the human resource requirement for the entire organisation and various departments.

▶ However, a combination of both the approaches i.e. 'Participative Approach' should be applied for demand forecasting. Under this approach, top management and departmental heads meet and decide about the future human resource requirement. So, demand of human resources can be forecasted with unanimity under   this   approach.
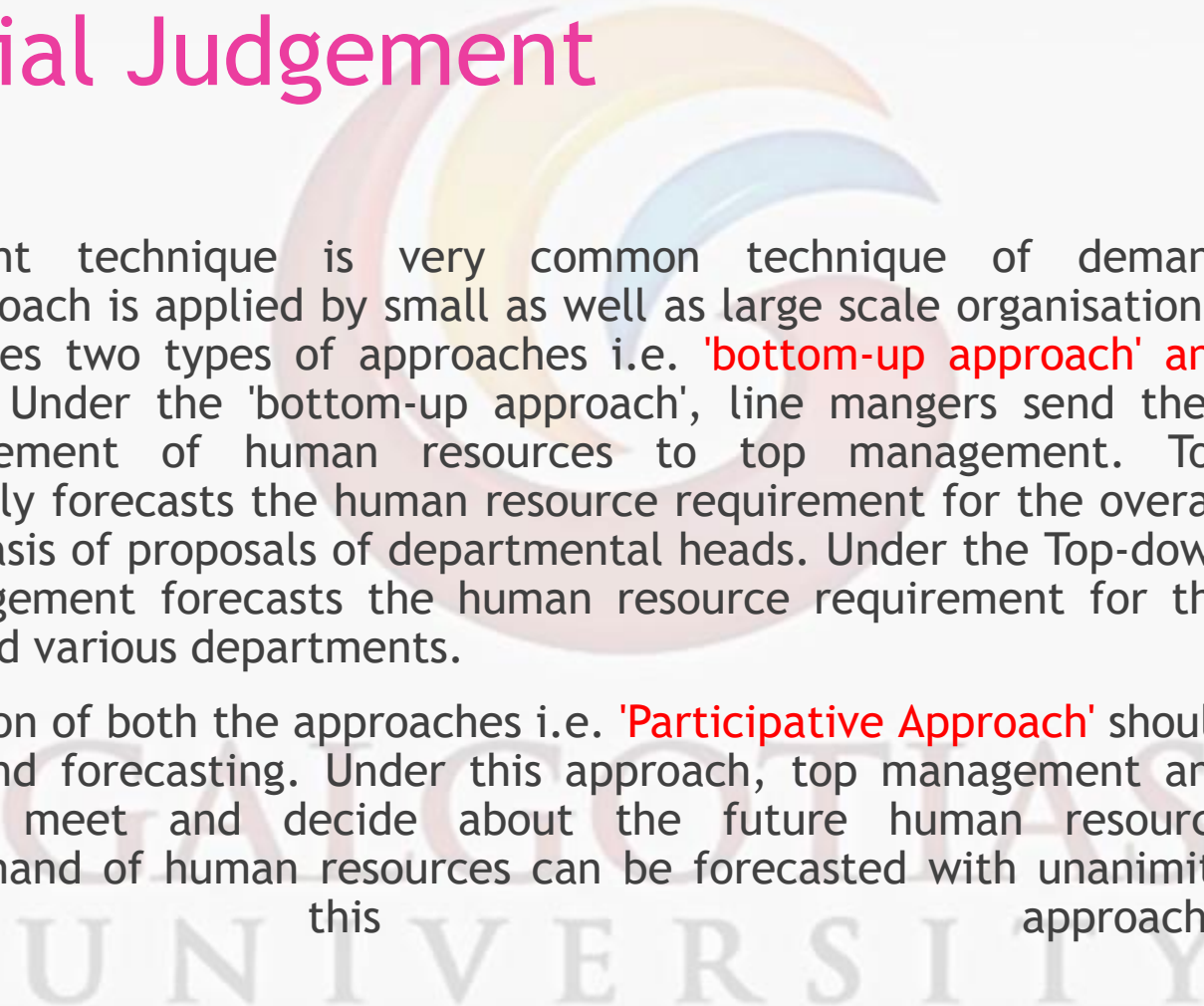
Work-Study Technique

▶ This technique is also known as 'work-load analysis'. This technique is suitable where the estimated work-load is easily measureable. Under this method, estimated total production and activities for a specific future period are predicted. This information is translated into number of man-hours required to produce per units taking into consideration the capability of the workforce. Past-experience of the management can help in translating the work-loads into number of man-hours required. Thus, demand of human resources is forecasted on the basis of estimated total production and contribution of each employee in producing each unit items. The following example gives clear idea about this technique.

Let us assume that the estimated production of an organisation is 3.00.000 units. The standard man-hours required to produce each unit are 2 hours. The past experiences show that the work ability of each employee in man-hours is 1500 hours per annum. The work-load and demand of human resources can be calculated as under:
Estimated total annual production = 300000 units

▶ Standard man-hours needed to produce each unit = 2 hrs

▶ Estimated man-hours needed to meet estimated annual production (i x ii) = 600000 hrs

▶ Work ability/contribution per employee in terms of man-hour = 1500 units

▶ Estimated no. of workers needed (iii / iv) = 600000/1500 = 400 units

The above example clearly shows that 400 workers are needed for the year. Further, absenteeism rate, rate of labour turnover, resignations, deaths, machine break-down, strikes, power-failure etc. should also be taken into consideration while estimating future demand of human resources/manpower.

Ratio-Trend Analysis

Demand for manpower/human resources is also estimated on the basis of ratio of production level and number of workers available. This ratio will be used to estimate demand of human resources. The following example will help in clearly understanding this technique.

Estimated production for next year = 1,40,000 units
Estimated no. of workers needed
(on the basis of ratio-trend of 1: 200) will be = 700

Econometrics Models

These models are based on mathematical and statistical techniques for estimating future demand.

Under these models relationship is established between the dependent variable to be predicted (e.g. manpower/human resources) and the independent variables (e.g., sales, total production, work-load, etc.).

Using these models, estimated demand of human resources can be predicted.

Delphi Technique

Delphi technique is also very important technique used for estimating demand of human resources.

This technique takes into consideration human resources requirements given by a group of experts i.e. mangers.

The human resource experts collect the manpower needs, summarises the various responses and prepare a report.

This process is continued until all experts agree on estimated human resources requirement.

Statistical Forecasting

Time Series analysis

To predict future hr demand, past staffing levels are examined to isolate different variations, long-term trends and other random movements.

Simple Regression & Multiple Linear Regression Analysis

It's an extension of simple linear regression analysis

Instead of considering one variable, more than one variable is considered such as volume of events/activities, productivity, and or technical equipments are considered to determine future hr demand.

Other Techniques

The other techniques of Human Resources demand forecasting are specified as under:

(a) Following the techniques of demand forecasting of human resources used by other similar organisations
(b) Organisation-cum-succession-charts
(c) Estimation based on techniques of production
(d) Estimates based on historical records
(e) Statistical techniques e.g. correlation and regression analysis.

REFERENCES

► D K Bhattacharyya Excel Books India, 2009

► M. Sudhir Reddy - Human Resource Planning-2017

► Web Resources

https://www.youtube.com/watch?v=tXLk8Q1OklA
https://www.youtube.com/watch?v=wcP976S8DsM
https://www.youtube.com/watch?v=_cR0Ygj8X8I