## HUMAN RESOURCE PLANNINg

# Human Resource planning is at times called manpower planning.

- Human Resource planning is defined by Bulla and Scott (1994), as the 'the process for ensuring that the human resource requirements of an organization are identified and plans are made for satisfying those requirements'.
- HRP as defined by the Institute of Personnel and Development is : The systematic approach and continuing process of analyzing an organization's human resource needs under changing conditions. And developing personnel policies appropriate to the longterm effectiveness of the organization. It is an integral part of corporate planning and budgeting procedures since human resources costs and forecasts both affect and are reflected by longer-term corporate plans.
- HRP is generally concerned with matching resources to business needs in the longer term (more than one year ahead) although it will sometimes address shorter-term term requirements and will constantly be looking at approaches to improving exploses utilization now as well as in the future.
- Reilly (2003) defined workforce planting as: 'A process in which an organization attempts to estimate the lemand for labour and evaluate the size, nature and sources of supple which will be required to the other demand.'

• RRP is a strategy for acquireton, utilization, improvement, and retention of an enterprise's human resources. This definition sees HRP as a strategic activity, i.e one that is concerned with securing resources on a long-term basis. For our purposes, HRP will

be taken to mean any rational and planned approach for ensuring;

- i. The recruitment of sufficient and suitable staff
- ii. Their retention in the organization
- iii. The optimum utilization of staff
- iv. The improvement of staff performance
- v. The disengagement of staff, as necessary

HRP is therefore not only a numbers game. It is concerned with the quality of personnel and with their deployment throughout the organization.

✤ In the simplest form HRP is concerned with identifying the organization's demand for

human resource and devising means to ensure that a sufficient supply of labour is

available to meet the demand. The context of HRP is dominated by;

- i. The state of demand for the organization's goods or services
- ii. The supply of people in the labour market, and

from one job to another, and exit moves. Moves between jobs can be upward moves in hierarchical level as well as moves across functions. Essentially, Markov models begin with distributions of the number of employees in various job categories at a starting point in time. These distributions are then transformed by a transition probability matrix into a forecasted distribution of employees across these same job categories one period later. The transition probabilities in each row of the matrix must total to 1. The diagonal set of transitional probabilities, after excluding the column representing exit moves, represents the proportion of employees remaining in the same job from Time 1 to Time 2.

### Table 2: Markov Model

#### Transition Matrix CO.UK .03 .09 Job 1 27 .02 66 Job 2 .06 .01 10 41 Distribution Job 🎝 08 .13 .10 11 0 JN 18 .54 .03 16 of Employees Job 5 .08 .10 .17 .45 20 26 55 57 37 44 41 Job 1 Job 2 Job 3 Job 4 Job 5 Exit

# Markov Model for Forecasting Supply

Distribution of Employees in Time 2

Markov models cannot take into account more than one move per time period. For purposes of illustration, the Markov model in Figure 2 contains only five different jobs and an exit move. Although not reflected in this example, the jobs also could be arrayed in terms of their hierarchical level, with Job 1 being lower in the job hierarchy than Job 2, and so on. The forecasted distribution of employees for period 2 is obtained by multiplying the initial distribution of employees by each column of transition probabilities. The number of employees for each job in the forecasted distribution is the sum of each of these levels of employment as multiplied by the column's transition probabilities. Although any time period

forecasts. Heneman and Sandver have pointed out that, through applications of matrix algebra, forecasts for multiple years into the future can be developed. Additionally, they have explained that such forecasts can incorporate new hires in the various jobs for individual years. Iterative approaches provide an alternative for extending Markov analysis forecasts several years into the future. With an iterative approach, the forecasted distribution of employees across job categories is used as the input for the next year's employee distribution, which is then used with the transition probabilities to derive the next forecasted distribution. This process is then repeated for a forecast of another year into the future and can be performed on computerized spreadsheets.

Forecasters must bear in mind that the validity of the transition probabilities will probably be lower as the forecast is extended further into the future since more conditions are likely to change. Aside from use in forecasting, Markov analysis also can be used for audits of the human resource function to determine whether there are any irregularities in the flow of employees through an organization's different positions. This can be done by constructing separate Markov transition matrices for minerice and females and comparing their similarity. Likewise, Markov and so have applicability in the development of affirmative action gase because it can be used to Crecast the internal supply of minorities and remains that will be available investors positions at some point in the future.

Additionally, the technique may be useful for identifying career paths and mobility patterns that may be helpful in career planning and development. Researchers also have demonstrated the feasibility of using a combination of Markov analysis and human resource accounting to forecast and depreciate the future value of an acquired firm's human resources. Although Markov models are classified here as a supply forecasting technique, they also can be used in conjunction with specifications of future demand. For example, a large computer manufacturer with many years of forecasting experience uses demand specifications with Markov models. Forecasters combine Markov analysis with demand scenarios, by beginning with a specification of the desired future distribution of employees in various job categories, typically in higher-level positions. By working backward, the forecaster then determines the magnitude of the transition probabilities that will be needed to create the flow of employees from the existing distribution into the desired future distribution. **Promotion rates and**