

(ii) *Replacement Needs.* The need for replacement arises due to death, retirement, resignation and termination of employees. The examination of replacement needs may relate to specific manpower groups : supervisory, skilled, clerical, unskilled, etc. For some groups like managerial or supervisory, it is very difficult to predict the needs. One of the major difficulties involved in predicting the need for managerial skill is that the management development cycle takes a long time. So the needs for managerial manpower should be anticipated sufficiently in advance.

Forecasts of manpower may be based to a great extent on the analysis of historical data. It is presumed that the factors causing past occurrences will also play a similar role in the future. But these data must be adjusted in the light of other known information about the future. Certain losses of key personnel can be predicted with a substantial degree of accuracy. These include losses from retirement, physical disabilities and cases of sub-standard performance. But retirement is the most common type of anticipated separation which gives rise to the need for replacement. This category would include all employees who will reach the normal retirement age during the period under consideration. In the same way, losses from known physical disabilities and for substandard performance can be predicted. There will, of course, be other losses of personnel. This estimate may also be based upon past experience. An examination of the number of deaths, discharges, releases and quits during the last five years may provide a basis for projecting the need for replacement in the future because of these reasons. Another important factor influencing the replacement needs is transfer of some employees to other departments of the organisation or promotion of some employees to higher jobs. This number can be estimated on the basis of a review of the persons promoted or transferred during the previous years and the records of performance of various employees during the past years.

(iii) *Productivity.* An important area to which the manpower planning is related is the improvement in productivity. Gains in productivity add to the growth potential of the organisation and can make possible healthy wage increase. Gains in productivity will also influence the requirements of manpower.

Planning for productivity gains has several aspects. The first and the important one relates to affecting gains by improvements in existing manpower utilisation. Current levels of utilisation and indications about the needed improvement can be obtained by the application of various analytical techniques of industrial engineering or work study such as activity charts, flow charts, multiple activity charts, activity sampling studies and so on. Methods improvement techniques help reduce work content. Conceptually, similar approaches aimed at upgrading management performance help secure productivity gains at the managerial level.

The second aspect relates to installation of more productive tools equipments or processes. Any anticipated change due to the introduction of