

UNIVERSITY OF LJUBLJANA,
FACULTY OF ECONOMICS

MASTER'S THESIS

**AN ANALYSIS OF THE PERFORMANCE APPRAISAL PROCESS
IN THE INDIAN COMPANY NALCO**

Ljubljana, November 5, 2015

Mani Prasad Samal

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INTRODUCTION

The myriad aspects and determinants of human behaviour have always perplexed researchers into the subject of organisational psychology. Yet, there has been no dearth of such studies in this field, seemingly because of the nature of challenges posed by every such study. Even when the study repeats the subject and object of research, new discoveries take place about various aspects of human behaviour with each new research.

Many researchers (Armstrong & Taylor, 2014; Bohlander & Snell, 2012; Boxall & Purcell, 2011; Ferris, Judge, Rowland, & Fitzgibbons, 1994; Lussier & Hendon, 2015; Murphy & Cleveland, 1995; Paauwe, 2004; Rao, 2004; Sahu, 2009; Schleicher, Bull, & Green, 2008) have studied the subject of performance appraisal as a part of human resource management. The theories and practices of performance appraisal have seen a lot of evolution over ages. However, with the advent of the era of industrialisation, the topic gained prominence in academic and professional research. The process and practice of performance appraisal has undergone many changes in the past five decades. Among such changes, the concept of forced ranking or forced distribution has been a most talked about one. The concept was popularised by one of the most celebrated management professional Jack Welch of the General Electric Company in the last two decades of the 20th century (GE, 2000).

The Department of Public Enterprise (hereinafter: DPE) of the government of India issued a guideline in 2008 (DPE, 2008) making it mandatory of the central public sector companies of India to adopt a bell curve shaped forced distribution in their appraisal process for the purpose of regulation of performance related pay (hereinafter: PRP). The National Aluminium Company (hereinafter: Nalco) of India has been following the system since 2009-10 in compliance of the guidelines of DPE.

This change has forced the company Nalco to mandatorily rate minimum 10% of executives as poor performers, even though there may not be so many. This seems to have affected the morale of the executives adversely in addition to career graph of some. This has also affected their pay package. There is widespread discontentment amongst executives, mostly the talented graduate engineers appointed in the earlier years of the company. This study proceeds in the above background to determine the actual state of affairs in the appraisal process and its possible effects on the morale and motivation of managers of the company and recommend steps for correction, if required.

The company Nalco chosen for this study is the researcher's employer. Incorporated in the year 1981, Nalco is an integrated producer of bauxite-alumina-aluminium with its own thermal power plant and port facilities. The company employs approximately 1800 executives managing a total workforce of roughly 5600 at different locations of the company. Implementation of the last pay revision for executives from 01/01/2007 carried

out in the year 2009-10 almost coincided with completion of the 2nd phase brownfield expansion of Nalco. Reaching a peak of all-round performance in 2006-07, Nalco embarked upon strategic growth plans to reach a target turnover of Rs.200 billion or about € 2.800 million (€ 1= Rs.72) by the year 2020. However, after completion of the 2nd phase expansion in stages since 2009-10, the company is struggling to achieve rated capacity and is currently running at almost 70% of capacity.

It is, therefore, necessary to find out whether the thoughts and reservations expressed by many researchers like Vaishnav, Khakifirooz, and Devos (2006), Sprenkle (2007), Prendergast and Topel (1993), Davis and Rogers (2000), and organisations like OECD (2012) can be connected to the situation in Nalco. In other words, can these studies be considered to conclude that, the forced ranking through ‘bell curve’ has adversely affected the morale, motivation and performance of managers in Nalco?

This study aims at examining whether the bell curve shaped forced distribution and other features in the process of performance appraisal is actually causing loss of morale, commitment, and motivation among the managers of Nalco. It also intends to propose measures to reinforce the system of performance management of executives to align the same with strategic objectives of the company within the perimeters of government guidelines. With this purpose in view, the study proceeds:

- to find empirical evidence as to whether the morale of executives has been adversely affected by the forced ranking of appraisals in Nalco;
- to examine the executive performance appraisal system of Nalco before and after 2009-10 and analyse its impact on morale and performance of the executives to find out answers to the following questions:
 - How does the process followed by Nalco for force ranking its executives compare with the theoretical framework and global practices?
 - How does it compare to the process followed by similar central public sector companies of India?
 - Do the executives of the company accept the ‘bell curve’ based ranking as an effective tool for performance management?
 - Has the forced ranking method affected or influenced the morale, motivation, commitment, and workplace attitude of the executives of Nalco?
 - Is there any alternate method of achieving the results of ‘bell curve’ intended by the DPE in its guidelines?
- to briefly discuss the performance appraisal methods of a few central public sector companies of India;

The research hypotheses arising from the above questions are:

Hypothesis 1: Managerial employees of Nalco do not consider the present appraisal system as a good system.

Hypothesis 2: The level of work place behaviours like morale, motivation, organisational commitment, and attitude of managerial employees of Nalco is low.

Hypothesis 3: The forced distribution based appraisal system is responsible for low levels of workplace behaviours demonstrated by the managerial employees of Nalco.

For answering the above research questions and testing the hypotheses, the study uses a deductive approach. Existing literature review using resources of FELU library and research engines of Google, Mendley, Jstor etc. and study of Nalco's internal records, data available on the official website of DPE has helped to establish the research questions and hypotheses. Primary data with regard to the perception of executives and managers of the company about the 'bell curve' method and about their performance/motivation levels are from a random stratified sample based questionnaire survey and by telephone interview method. The study uses the SPSS statistical tools for descriptive statistics and hypothesis testing.

The first chapter gives a succinct review of some of the literature available in the field of organisation theory, human resources management, and performance management with focus on performance appraisal using forced distribution method. The literature review shows dearth of sufficient empirical study into the practical organisational application of performance appraisal systems and leaves many important questions in an unanswered area.

The second chapter introduces the company Nalco under study. It gives a brief overview of performance appraisal practices of Nalco. A chapter regarding appraisal practices in a few other public sector companies of India follows this. It also focuses on the mandatory framework of guidelines issued by the DPE on the matter of performance appraisal for compliance of central public sector companies of India.

Based on the concepts studied in the literature review, the unanswered or partly answered questions thrown by some such literature read with the policies and practices in Nalco as well as other public sector companies of India, the thesis in its fourth chapter proceeds with an empirical study. The study employs various research methodology and statistical techniques to find out the perceptions of the managers of Nalco about the performance appraisal process and its impact on their behavioural outcomes.

The next chapter analyses the findings of the empirical study carried out in the fourth chapter and gives a critical view of the status of performance appraisal process and

employee behaviour observed amongst the managers of Nalco, within the limitations discussed therein. This is followed by a few recommendations for improving the process of appraisal as well as resultant employee behaviour in Nalco.

The concluding chapter gives a brief view of the total study and points out the need for further research by both academicians as well as practitioners to conclude as to whether there exists a measurable influence of HR systems like appraisal process on behaviour and performance outcomes of employees.

1 LITERATURE REVIEW

In order to find academic answers to the research questions for this study, this literature review proceeds from the basics of organisation theory narrowing down to literature related to performance appraisal as a part of human resource management systems. The thrust of this chapter is to discover a link, if any, between the process of performance appraisal in an organisation and the behavioural outcomes of perception of employees about such process.

1.1 An Organisation and its Human Resources

Organisations work on the popular Aristotelian premise that the whole is greater than the sum of its parts. People come together for a common cause because individually they may not have the resources to do or provide enough to achieve that cause. Combined effort of the whole yields more than sum of the individual efforts because of synergy of the organisation.

Evidence of use of the organisational principles can be traced to antiquity (Aquinas, 2009, p.42). Pre-historic archaeological evidences like the Stonehenge, the cave houses uncovered at different locations throughout the world, remnants of ancient Greek, Roman and Indus valley civilisations all point to the fact that organised human activity dates back millennia long before Christ although organisational theory as a subject of study started only in the 1940s (Scott & Davis, 2007). Earliest organisations were in the form of groups (or rather herds) of nomads staying and hunting together to maximise their own safety and gains for survival against attackers from other groups and wild animals.

Over the periods, these groups became formalised tribes and then domains, kingdoms. In 3500 B.C., the Egyptians were good at organised construction activity for raising large human habitations. Sun Tzu (Giles, 1910) in the Art of War emphasises that the human race have always been organising itself for waging wars. As kingdoms and empires were established through history, different bureaucratic set ups also emerged for enabling governance, public service, education systems etc. According to Leiden (1958), in Jacoby (1973), organisational influence of bureaucracy spread from Egypt to medieval governmental administrations of the Russian, as well as the Islamic orient and the German and the Roman occident.

The modern concept of organisation took shape in the late 18th and early 19th century with industrial revolution in the western world and with great thinkers like Adam Smith, Max Weber, and Karl Marx contributing greatly to organised economic and social activity. Social scientists like Taylor, Mayo, Gilbreths and others (Scott & Davis, 2007) added to this in the early 20th century.

Daft (2015) defines an organisation as a social entity that is goal-directed, deliberately structured and coordinated activity system linked to external environment. He further says that “an organisation is a means to an end and it has to be designed to accomplish that end” (Daft, 2015, p.13). Dam & Marcus (2007) also confer with this concept of an organisation when they say “it is about people who work together to achieve a certain goal” (p. 3). Although organisations look mechanistic (Morgan, 2006) in the sense that most of their functions are carried on in a mechanical and routine manner, they are “not mechanical” (Drucker, 2013, p.173) but organic.

Various theoretical concepts give different perspectives about organisations. These concepts reflect the stage of social and economic development in the world at the time of their conceptualisation as well as the intensity of social thinking during different periods in time. The systems view of the organisation gives three theoretical approaches of organisation (Scott & Davis, 2007), viz. 1) the Rational systems theory, 2) the Natural systems theory, and 3) the Open systems theory.

Several popular theories like Max Weber’s theory of an ideal bureaucracy (Jex, 2002), Taylor’s Scientific Management theory, Henry Fayol’s Administrative theory (Breeze, 2002), Simon’s theory of Administrative Behaviour (McShane & Glinow, 2005) support the Rational systems theory. The Open Systems theory explains that, all organisations interact with the environment in which they exist and carry out “interdependent activities” that must be constantly motivated for the organisation to survive (Scott & Davis, 2007, p.31). As said by Hughes & Wearing (2012), “organisations mediate real human conflicts between collective needs and individual wants” (p.4).

From the perspective of the structure of an organisation, it can be a formal or an informal organisation (Singla, 2010).

- Formal organisations are clearly defined and have definite structures with well laid out responsibilities and authorities of different constituents.
- Informal organisations come into being as a matter of course and are not deliberately formed or defined. Jex (2002) states that a formal organisation exhibits “some degree of continuity” and exists to “fulfil some explicitly stated purpose” (p.2). Companies or business organisations as well as non-profit or government agencies are formal organisations.

In the context of this thesis, we deliberate only the formal organisation of a business entity, a company.

Strategic management thinkers like to see a business organisation from a **resource based view**. This view of an organisation argues that “all sustainable competitive advantage is built on the value, rareness and inimitability of the unique resources the organisation has within it and the organisation’s capacity to organise those resources and exploit them in the market place” (Hubbard, Rice, & Galvin, 2014, p.18). According to Barney (1995), in Bahuguna and Kumari (2012), resource based model emphasises the competitive advantage an organisation gets when it possesses rare and valuable resources which are difficult to be imitated by the competitors. People of a firm “offer competitive advantage” (Aswathappa, 2013, p.6) to it.

One of the most important and unique organisational resource is the **human resources of the organisation**. It is unique because every human being is unique and his/her competencies, potentials are unique. Commons (1893, 1963) first used the phrase ‘human resources’ in his book ‘Distribution of Wealth’ when he said “ we are dealing with so very elastic a set of forces as human wants, human resources, and human enterprise” (p.20). However, it became popular in replacing the nomenclature of the profession of ‘Personnel Management’ to ‘Human Resource Management’ more so as an image makeover only towards the end of the 20th century (Leopold, 2002).

In the era of tough global competition to own resources and markets, the most critical and strategic differentiation among firms is the human resources they possess. “Rooted in economic theories of the firm, the resource based view has shifted its focus from external market alignment to internal human resource management in order to achieve a sustained advantage” (Barney & Wright, 1998; Cappelli & Singh, 1992; Wright, Dunford & Snell, 2001; Wright, McMahan & McWilliams, 1994 , in Stahl, Bjorkman, & Morris, 2012). Either the people in a firm need to possess different and better skills than the people of a competitor or the firm must adopt such HR practices which allow some differentiation, in order to provide a sustainable competitive advantage to the firm (Stahl et al., 2012).

The concept of human capital seeks to recognise the human resources as an asset for the firm. The term ‘human capital’ seems to have been first used by Arthur Pigou (1928) and popularised by Gary Becker (1964), in Becker (2011). Human capital theory, as stated by Ehrenberg and Smith (1997), sees every individual “embodying a set of skills” which can be “rented out” to employers (Baron & Armstrong, 2007, p.5). “Commitment to investment in human capital activities” is central to competitive advantage of firms (Beer et al., 1984; Pfeffer, 1994; Applebaum et al., 2000 , in Gilmore & William, 2012). Lawler (2003), in Baron and Armstrong (2007), points to the difficulty in effectively managing human capital without an effective performance management system, which is a “building block in every organisation’s human capital management system” (p.110).

1.2 Dimensions and Practices of Human Resource Management

Human Resources Management (hereinafter: HRM) pertains to management of those systems in an organisation which aim at effective and efficient use of its human resources to accomplish organisational goals (Mathis & Jackson, 2008, p.1). According to Mello (2014, p.4), effective organisations realise that the human element is the most important of the various factors that contribute to organisational performance. According to Haslinda (2009), “in order to maximize organizational effectiveness, human potentials, individual’s capabilities, time, and talents must be managed and developed. Hence, the practice of human resource management (HRM) and human resource development (HRD) works to ensure that employees are able to meet the organization's goals” (p.180).

The dimensions of HRM range widely starting with human resource planning, recruitment and selection, training & development, compensation & rewards, performance management, career development & succession planning, and industrial relations management, to name a few. The HRM concepts are built over more than a century based on different organisational behaviour studies. Some of the most popular theories (Armstrong & Taylor, 2014) are:

- Organisational behaviour theory;
- Contingency theory;
- Ability, Motivation, and Opportunity (AMO) theory;
- Resource based theory or view;
- Human capital theory;
- Agency theory; and
- Social exchange theory.

Some of the very important theories like the McClelland’s theory of needs, Maslow’s hierarchy of needs, and Herzberg’s two-factor theory have formed the foundation of various HRM concepts.

1.3 Human Resource Practices and Organisational Performance

A lot of research has taken place in the field of HR management systems to establish a linkage between the system and organisational performance. It is assumed that good and efficient HR practices drive improved performance. Pfeffer (1998), in Armstrong and Taylor (2014), lists some best practices like employment security, high compensation contingent on performance, training, reduction of status differentials, sharing of information etc. as having the potential to influence enhanced performance. The Table Appendix C details some of the research carried out to show the link between HR management practices and organisational performance.

Huselid's (1995, in Guest, Paauwe, & Wright, 2012) study showed that a set of HR practices he called 'high performance work systems' (HPWSs) were related to turnover, accounting profits and firm market value. Research by Bowen and Ostroff (2004) indicate that the link between HR management system and performance is likely to be greater where a strong HR system is in place. They describe the strong system as high levels of distinctiveness, consistency and consensus (Armstrong & Taylor, 2014, p.54). However, they also highlighted the importance of proper implementation of the practices for any result on performance.

Nishii, Lepak, and Schneider (2008) are of the opinion that **perceptions** about the intentions behind the practices are also important for effectiveness of the practices. In a study of organisational performance and employee well-being, Guest et al. (2012) also have concluded that, there is a partially established relationship between HRM practices and organisation performance due to the effect of HR practices on employee happiness. The emotional contagion theory of Hatfield, Cacioppo, and Rapson (1994) also explains the well-being – performance relationship. It signifies that the negative and positive emotions and consequential behavioural tendencies are contagious. Employees with high positive emotions are expected to transmit their positive mood and behaviour to other employees and customers they are associated with.

Researchers have carried out a number of theoretical works to establish a link between employee well-being and his /her performance. Most common among them is the 'happy-productive worker thesis' (Cropanzano & Wright, 2001; Staw, 1986), the inducement-contributions concept of the employment relationship (March & Simon, 1958), and the social exchange theory (Blau, 1964).

The core message of all these studies is that employees who receive positive treatment and inducement from the organisation are happy with their jobs. This job satisfaction induces high positive energy and commitment at work. These employees are more likely to work hard and contribute discretionary extra effort as well as display various forms of positive organisational citizenship behaviour (hereinafter: OCB) (Organ, 1998; Meyer & Allen, 2007; Meyer et al., 2002, in Guest et al., 2012).

The commitment-based models of HRM suggest that by enhancing organisational commitment, employees' willingness and motivation to engage in both in-role and discretionary workplace behaviours, HR practices can influence organisational performance (Arthur, 1994; Pfeffer, 1998; Applebaum et al., 2000; Whitener, 2001, in Guest et al., 2012).

The broaden-and-build (B&B) theory of Fredrickson (2001) suggests that unlike negative emotions which narrows an individual's immediate thoughts and actions, positive emotions like joy, contentment, and interest broaden awareness and promotes creative behaviours,

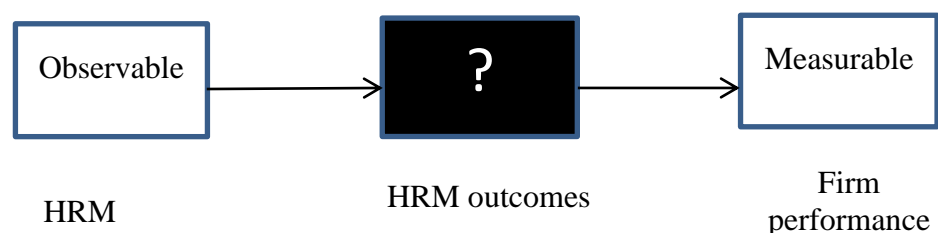
ideas and social bonds. This positive affect can be expected to contribute both to in-role and discretionary performance (D. E. Guest et al., 2012).

However, Guest et al. (2012) have raised questions about the extent to which the arguments of these individual level well-being and performance linkage theories can be used to explain organisation level performance; they leave it for further study. They also raise questions about the direction of causality between well-being and performance and call for further theoretical study in that regard.

Boselie, Dietz, and Boon (2005) question the credibility of any direct linkage between HRM input and organisational output due to existence of many variables and events both inside and outside the organisation. Armstrong (2012, p.96) cites comments of Guest, Michie, Sheehan, Conway, and Metochi (2000) to say that much of the research to establish an association between HRM and organisation performance have demonstrated the existence of such association “but left uncertainties about cause and effect”.

Armstrong and Taylor (2014) mention this causal ambiguity as the “black box phenomenon” (p.56) which they explain as a situation in which it may be difficult to identify those HRM outcomes, which “converted the input of HR practices into firm performance outputs” (p.56) conclusively. Armstrong (2012, p.97) quotes Alvesson (2009, p.56) to explain this phenomenon presented in Figure 1 further: “Research does not proceed beyond attempts to find an empirical association between HR practices and organisational performance. The phenomena are in a black box, only input and output are registered and what is happening remains clouded in the dark”.

Figure 1. The Black-box Phenomenon



Source : M. Armstrong, *Armstrong's Handbook of Management and Leadership: Developing Effective People Skills for Better Leadership and Management*, 2012, p.97, Fig.7.1

Boxall and Purcell (2011) also refers to this uncertain relationship between HR policies and desired organisational performance as the ‘black box’ problem. They give a vivid model of the ‘black box’ showing the “mediating links that influence the effectiveness of HR

systems” (Boxall & Purcell, 2011, p.250). According to them, this model “tracks intentions, actions, perceptions, and responses and aims to integrate the individual and collective levels” (p.250) of actions and outcomes. Through this model, they have explained the “centrality of employee attitudes and behaviour” (Boxall & Purcell, 2011, p.244) by citing the causal chain model of Wright & Nishii (2004), which “proposes, (1) intended HR practices, leading to (2) actual HR practices, leading to (3) perceived HR practices, leading to (4) employee reactions, and leading, finally, to (5) organisational performance”.

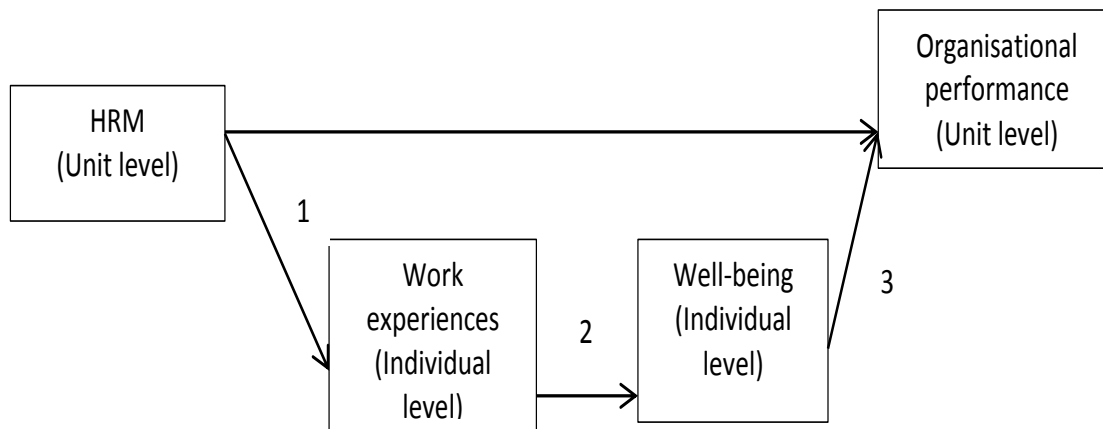
Boxall and Purcell (2011) emphasise the crucial role of line managers in the process of adjustment of HR policies to make them contextually suitable for the organisational setting or focus on the negative aspects “for their own personal or political ends” (McGovern et al., 1997; Whittaker & Marchington, 2003; Batt, 2004, in Boxall & Purcell, 2011). These policies include policies in performance appraisal and in involvement and communication, “to name two of the most obvious areas which rely on line managers for their success” (Boxall & Purcell, 2011, p.247).

The importance of shared perceptions amongst employees about management’s purposes in implementing various HR practices has been stressed by Boxall and Purcell (2011) emphasising that such perception has to be “as positive as possible with management deemed trustworthy” (p.249). According to them, a study by McKay, Avery, and Morris (2009) demonstrates the importance of shared perceptions of employees about HRM. Boxall and Purcell (2011) citing Grant (1999) simultaneously caution about the major damage that can be caused by strongly shared negative perceptions of managerial motives and behaviour.

Finally, Boxall and Purcell (2011, p.254) say that firms need to give careful thought to the ‘black box’ of links within HRM if they intend to enhance the quality of their HRM. According to them, these links are more difficult to manage in highly politicised organisations in the public sector where missed messages in HRM have contributed to low morale and on-going problems of effectiveness.

Guest et al. (2012) cite several researchers like Legge (1995), Delery and Doty (1996), Paauwe (2004), Paauwe and Boselie (2007) to argue that a multitude of contextual and contingency factors may play a significant role in shaping the HR management (HRM) – well-being (WB) – organisational performance (OP) relationship in specific organisational setting. They refer to the ‘bath tub’ type model of Coleman (1990) given in Figure 2 to depict the HRM- WB- OP relationship. They discuss the uncertain and less understood role of the first link i.e., the link between the HRM and the work experiences at the individual level, which supposedly leads to individual well-being and to organisational performance. They conclude that both universalistic (best practices) and contextual (best fit) approaches are relevant to understanding the HR process in any workplace.

Figure 2. Key Links in HRM-WB-OP Relationship



Source: D. E. Guest, J. Paauwe & P. Wright, *HRM and Performance: Achievement and Challenges*, 2012, p.217, Fig.2.4

1.4 Performance Management

Every human being comes with a quantum of human capital comprising of skill, knowledge, experience, attitude, and potential, which the organisation needs to manage deftly for converting the said capital into desired output. Left to itself, the said human capital will possibly deliver an output at best equal to the input, assuming there is no process loss. However, if managed in an organised manner, the output is likely to exceed the inputs due to synergistic benefits. Bringing about this synergy is one of the most important objectives of any performance management system.

According to Wright et al.(1994), Paauwe (1994), Kamoche (1996), and Boxall (1996), in Paauwe (2004, p.88), ‘people *par excellence* fit the criteria/assumptions of value, rareness, inimitability, and non-substitution, which according to Barney (1991) are the necessary conditions for organisational success’. It is, therefore, important to recognise the performance of this most valuable asset of the organisation and institute means to manage and improve it.

Rao (2004) says that performance is the expected delivery from an individual or a group of individuals within a time-frame and can be stated in terms of results, tasks, quality, focus, costs and other specified conditions for delivery. Sahu (2009) argues that performance is a combination of both behaviour and outcomes, differing from suggestion by Campbell (1990, in Sahu, 2009) that it is behaviour as distinguished from outcomes because the outcomes are likely to be affected by many other factors prevalent. Sahu (2009) defines performance as

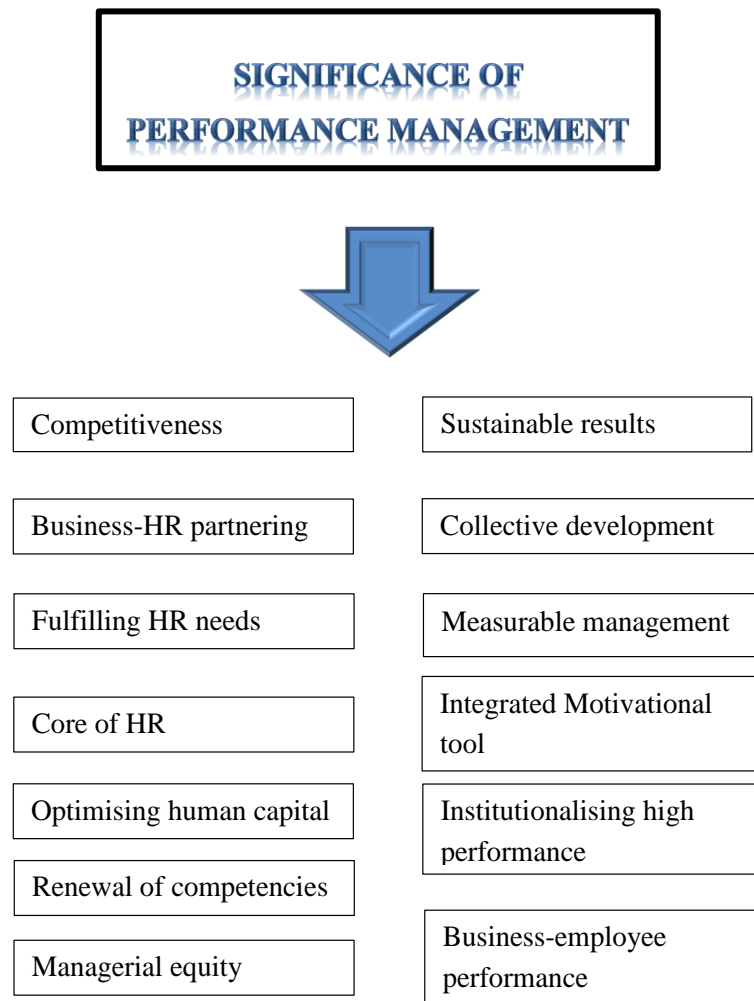
“the achievement of an employee against the expectations from his/her role along clearly defined targets” (p.2).

According to Lussier and Hendon (2015), performance management is the process of identifying, measuring, managing, and developing the performance of the human resources in an organisation. Each organisation, as per them, need to put a system in place to manage the performance of its human resources over time to ensure that they remain productive and even become more capable as they progress in their career. It is a process, which enables a number of systems and sub-systems in an organisation to facilitate the desired quality and quantity of organisational performance. The spread of performance management function depends upon the size and diversity of the organisation, affluence or criticality as well as quality of its resources and nature of its goals and objectives. This includes performance of all resources including the most important and central of all, the human resources of the organisation.

In order to make sure employees of an organisation meet its goals, and to measure performance of the employees in achieving the goals, it is necessary to adopt effective performance management procedures. In order to improve performance, it is necessary to put in place a proper system of assessment and feedback. Real gains in performance require a thoughtful and committed process of evaluation and feedback (Cardy & Leonard, 2011). Managers face the challenge of maximising the performance of the employees of the organisation (Kirkpatrick, 2006). Weiss (1997,p.3) defines performance management as “a process for establishing a shared understanding about what is to be achieved, and how it is to be achieved, and an approach to managing people that increases the probability of achieving success”.

Performance management represents a ‘pivotal element in any management system and a mechanism for exercising control over the contributions by the employee to the employment relationship’ (Krausert, 2009). Pulakos (2009) argues that performance management is the HR process, which communicates organisation’s expectations to the employees and drives their behaviour to achieve goals. “Performance management acts as an agent in converting the potential into performance by removing the intermediate barriers as well as motivating and rejuvenating the human resource” (Kandula, 2006, p.5). As Kandula (2006) puts it, performance management has the potential to fulfil both strategic requirements of the organisation as well as personal and professional needs of its employees. He gives a vivid illustration of the significance of performance management as produced in the Figure 3.

Figure 3. Significance of Performance Management



Source: S.R. Kandula, *Performance Management: Strategies, Interventions, Drivers*, 2006, p. 6, Fig.1.4

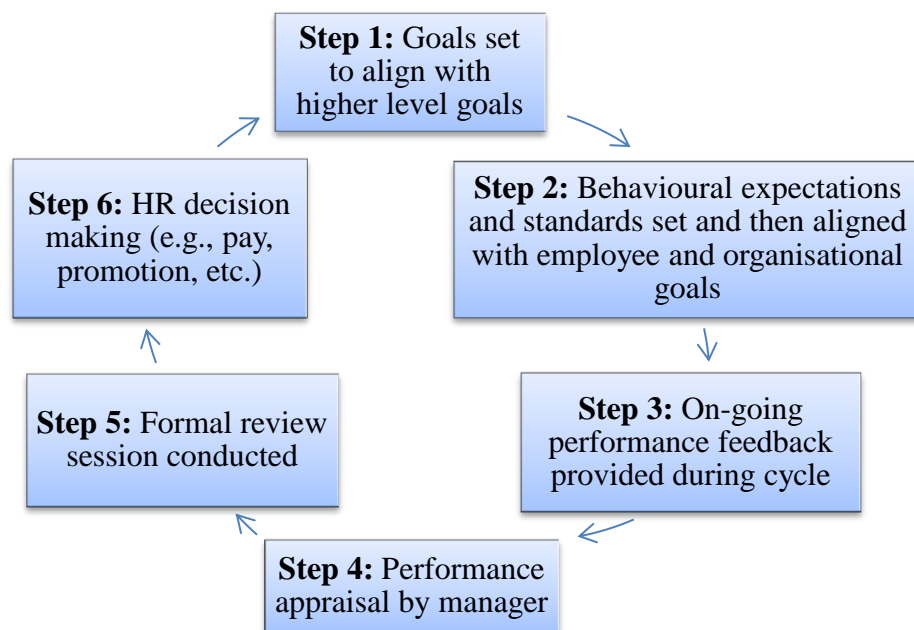
According to Rao (2004), performance management deals with various dimensions of performance, planning, reviewing, and developing and enhancing performance and related competencies. Rao (2004, p.5) lists several dimensions of performance like output or result, input, time, focus, quality and cost dimensions. Rao (2004) also explains that performance management is different from performance appraisal, which is often only a part of the performance management process. He gives different stages of the performance management process as comprising of the following:

- Defining performance
- Planning performance in terms of input, output, conditions for the performance activity
- Performance measurement
- Analysing performance to ascertain contributing or restraining factors and to identify development and support needs

- Developing performance capabilities
- Monitoring and reviewing performance
- Recognising and rewarding performance

Bohlander and Snell (2012) sum up the entire concept and process of performance management with whole lot of complex links between HR practices, employee well-being, and organisational performance in a very simple way. They define performance management as “the process of creating a work environment in which people can perform to the best of their abilities in order to meet a company’s goals” (p.322). The steps involved in the performance management process, as given by Bohlander and Snell (2012) is in Figure 4.

Figure 4. Steps in a Performance Management Process



Source: G. W. Bohlander & S. Snell, *Principles of Human Resource Management*, 2012, p. 323, Fig.8.1

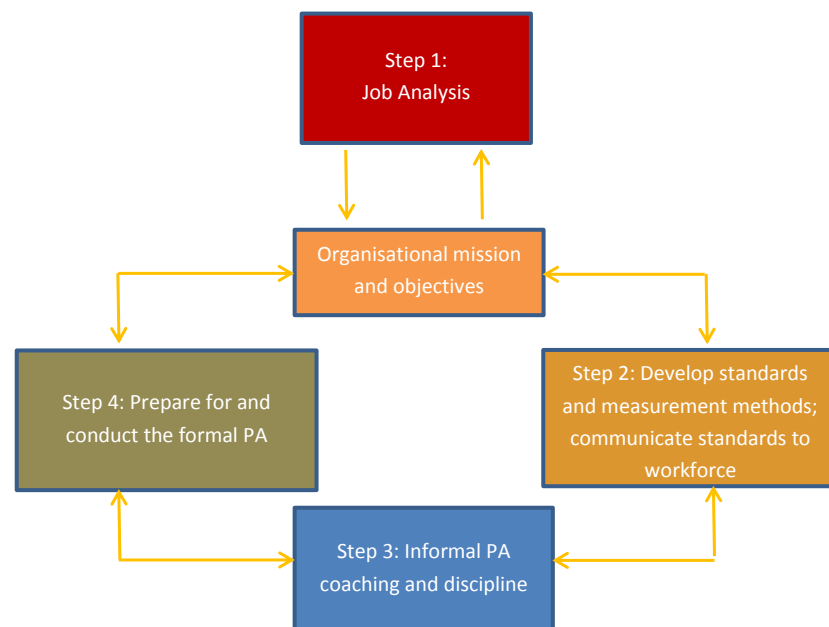
Sahu (2009) gives a similar concept of goal oriented performance management system (PMS) cycle, which he says enables employees to see clearly achievable goals and motivates them to achieve those goals to be recognised by the management.

SHRM and PDI (2000) survey on Performance Management based on responses of 480 HR professionals across many organisations gives some useful information regarding the process, its effectiveness, uses, system satisfaction and future challenges. Some of the information, represented graphically in Table 2 and Table 3, Figure 1 to Figure 5 in Appendix C give a lot of insight into the general state of performance management as part of HRM in organisations.

1.5 Performance Appraisal

The concept of performance measurement has evolved over a period of more than a century from the different theories on motivation (Kandula, 2006) like the Maslow's 'hierarchy of needs', Herzberg's 'two factor theory', Vroom's 'expectancy theory', Patton's 'managerial motivators', Locke's 'goal setting theory' and McClelland's 'achievement theory' etc. According to Lussier and Hendon (2015), performance appraisal is the on-going process of evaluating employee performance. It is a review of employee performance over time. It is just one part of performance management. They illustrate the performance appraisal process as given in Figure 5:

Figure 5. The Performance Appraisal Process



Source: R.N. Lussier & J.R. Hendon, *Human Resource Management: Functions, Applications, and Skill Development*, 2015, Ex.8-1

Progressing through the times, with personality based appraisal systems in the 1950s and goal setting and performance based abilities in the 1960s, the performance appraisal system has become an important tool in managing people and business in general since the late 1980s. Schleicher, Bull, and Green (2008) cite several authors (Bannister & Balkin, 1990; K. R. Murphy & Cleveland, 1991; T. Murphy & Cleveland, 1995) to say that performance

appraisal process is “ubiquitous, occurring in some form across all types of organisations and jobs”(p.899).

As per Sahu (2009), performance appraisal is a process of evaluation of contribution and potential of an individual. Some of the needs listed by him for the performance appraisal process are the following:

- to identify training needs of the employees;
- to objectively assess performance of the employees and to identify those with the potential for growth;
- to improve individual performance;
- to improve the efficiency and productivity of the organisation;
- to link performance with pay and reward system;
- to identify employee potential for job assignments; and
- for counselling and guidance.

The results of performance appraisal are used for several purposes from workforce decisions (Daley, 1992) like pay, promotions, transfers, and retentions to training and development. Feedback based on performance appraisal works very effectively in building trust, commitment, and helps productivity (Daly, 2011) if the appraisal process is applied diligently.

Knowledge of the use of performance appraisal is important for design of the system as well as development of human resources (Youngcourt, Leiva, & Jones, 2007). Research by Decotiis and Petit (1978), DeNisi, Cafferty, and Meglino (1984), Ostroff (1993) as well as Jawahar and Williams (1997) have shown that knowledge of use of performance ratings affects the rating process and results.

Several research studies by Taylor and Pierce (1999), Rodgers and Hunter (1991) and Schay (1988) suggest that performance appraisal activity leads to enhanced performance. These researchers say that the increase in performance and productivity results from employees' direct participation in fulfilment of company's objectives, which he/she adopts as his/her, as a part of the performance appraisal process. It is also helped by the feedback, coaching and developmental activity which follows or accompanies the appraisal process.

Ferris et al. (1994) cite several works by Dipboye (1985), Ilgen and Favero (1985), Ilgen and Feldman (1983) etc. and agree that there is need for further research to assess influence of social, situational, affective, and cognitive elements on the performance evaluation done by the supervisors. They opine that it is “important to understand the context within which performance evaluation takes place in order to meaningfully interpret the behaviour of raters” (p.127).

1.5.1 Methods and Formats of Performance Appraisal

Turgut and Mert (2014) have listed, as in Table 1, several performance appraisal methods based on extensive research by several academicians and practitioners.

Table 1. Methods of Performance Appraisal

No.	Performance appraisal methods	Explanation
01	Comparison (Sorting)	The rater ranks his/her subordinates on their working performance. Working performance of employees is compared and then sorted from the best to the worst. By putting a subordinate in a rank order, the relative position of each subordinate is tested in terms of his/her numerical rank. Paired comparison of subordinates, that involves comparing the working performance of each subordinate with every other subordinate, is also a version of this method.
02	Forced Distribution (FDS)	This method requires assignment of the subordinates to a limited number of categories. Employees (subordinates) are inevitably evaluated according to the normal distribution. For example; 10 % of employees are at the very top of scale, 20 % of employees are at the top of scale, 40 % of employees are at the middle of scale, 20 % of employees are at the bottom of scale, 10 % of employees are at the very bottom of scale.
03	Graphic Rating Scale (GRS)	Managers evaluate the employee according to defined factors, as the attributes printed on an evaluation form. Form has performance levels regarding attributes. There are numbers or scales (very good, good or weak) across the attributes on the form. Manager chooses one of them. Being an oldest and most widely used method, the graphic rating scales are forms on which the evaluator simply checks off the subordinate's working performance.

(table continues)

(continued)

No.	Performance appraisal methods	Explanation
04	Checklist	A checklist that presented work related descriptive statements, is used for every work position. Manager chooses “Yes” or “No” option that represents the effective or ineffective behavior on job that rater familiar with these work related descriptive statements.
05	Forced Choice	Manager is given some pre-defined expressions (a series of statements) to evaluate the performance of worker for each item. Managers indicate which items are most descriptive of the employee. Manager does not know the score equivalent of the expressions.
06	Composition (Essay)	Manager simply writes a narrative describing the performance of employee. This is a composition about the worker to define the worker and designates successful, unsuccessful, weaker or powerful sides of worker. This method is a non-quantitative method and rather than focusing day-to-day performance of employee it focuses on generally observed work behaviours of an employee to present a holistic view.
07	Critical Incidents	Manager writes down the extreme performances both negative and positive. These performances are named as critical incidents/events. These critical events should affect directly the success or failure of worker. This method requires the written records to be kept as highly effective and highly ineffective work behaviours. The manager maintains the logs of each employee to record the critical incidents to use them to evaluate the employee’s performance at the end of the rating period.

(table continues)

(continued)

No.	Performance appraisal methods	Explanation
08	360-Degree Feedback	Data from all sides, from multiple levels within the organization and from external sources, is collected in this method. Employees are assessed by his superior, inferior, work friends, clients and by themselves. By the way, this method provides an enhanced self-awareness for an employee about his/her work performance.
09	Management By Objectives	This is a method necessitating the attainment of the pre-defined objectives. According to this method, managers and employees determine collectively the objectives for employees to meet during a specific period. Attainment of an objective is more important than “how it was attained”. Employees are then evaluated with a view to how they have achieved their determined goals.
10	Assessment Centres	Evaluation process is performed objectively by specialists or Human Resources (HR) professionals in the centre. In this centre the job of worker is simulated and worker is observed. Additionally, some tests, social and unofficial events and exercises are used to support assessment. This method is preferred by some organization due to difficulty faced with appraisal process and tends to use an assessment centre as an adjunct to their appraisal system.
11	Team Based Performance Appraisal	As today’s work life values the team work, rather than the individual performance, it is better to evaluate an individual performance as a team member. Then, employees are assessed not as individuals but as a team.

Source: H.Turgut & I.S. Mert, *International Business Research*, 2014, pp.172-173, Table 1

Turgut and Mert (2014) are of the opinion that organisations choose a particular appraisal method depending upon their choice rather than the features of the system. They argue that

“choosing the most effective appraisal method arises as a problem that (HR) practitioners face” (p.173).

Rating formats are an important tool in PA (Landy & Farr, 1980; Latham & Wexley, 1977). Although there have been lots of debates among researchers about pros and cons of various rating formats, all of them have been successful in revealing only minor differences among various rating formats. Researchers generally agree on two types of rating formats, i.e., absolute and relative (Cascio, 1991). Murphy and Cleveland (1995) say that the relative formats carry out ratings of individual employees relative to one another, whereas the absolute formats compare the performers against absolute standards.

There have been very few studies to investigate which rating format results in a fairer assessment of performance. Roch, Sternburgh, and Caputo (2007) were the first to carry out an empirical investigation regarding the belief that absolute rating formats are fairer than the relative formats. Some researchers like Fisher, Schoenfeldt, and Shaw (1999), in Turgut and Mert (2014), have come out with a different typology rating format viz., the comparative, the behavioural, and the output-based.

Several authors discuss the importance of perception about accuracy and fairness in the different rating formats:

- **Test of Accuracy**

Heneman (1986) and Nathan & Alexander (1988) suggest based on two meta-analyses that relative ranking formats have larger correlations in a variety of performance criteria like production quantity, sales volume, general mental ability, quantitative ability, verbal ability, spatial/ mechanical ability etc. than the absolute ranking formats. Wagner & Goffin (1997) found that the relative ranking formats were more accurate in determining differential accuracy within each performance dimension. Thus, research shows that the relative rating formats provide more accurate depiction of employee performance.

- **Test of Fairness**

Researchers Roch et al. (2007) were the first to make a comparative fairness study between the two rating formats. In their initial study, absolute rating formats like BOS, BARS and GRS were revealed as more fair than the relative formats like FDS, paired comparison etc. these findings were supported even by a second study. The researchers concluded that if the outcomes of the rating process are perceived as fair, that perception enhances perception of fairness about the rating format. This study supports those previous postulations by Murphy and Cleveland (1995) that the absolute rating formats cause more perception of fairness in the rating process than the relative rating formats like forced ranking.

However, Caputo (2007) argues that in spite of studies postulating that absolute ranking formats are more fair than the relative ranking formats (Howell & Dipboye, 1986, in Caputo, 2007) supported by recent empirical studies (Roch et al., 2007, in Caputo, 2007), the issue is far from conclusive. It argues that the process rather than the outcome create the perception of low fairness against the relative ranking method. In the case of a relative rating format, discrepancy between treatment of one's own score and that of others may be more influential in determining a perception of fairness. This is not the case in absolute ranking since one sees the score as an outcome of a comparison against a set standard.

Importance of the perception about fairness in ranking format outcomes have been highlighted by Hedge and Teachout (2000), Keeping and Levy (2000), and Levy and Williams (2004), who argue that this perception may have a potential to influence productivity outcomes. Caputo (2007) explains this by saying that two mediating mechanisms are important for performance outcomes. "The first, task motivation, focuses on the motivational effort put forth on the task due to the perceived fairness of the appraisal system. The second, acceptability, suggests a fair PA will increase acceptance of the feedback and thereby increase performance" (Caputo, 2007, p.30). Tyler and Lynd (1992), in Caputo (2007), suggest that the "individual's perception of fair treatment will bolster his or her self-esteem and self-worth" (p.31). Caputo (2007) aver that fulfilment of self-esteem and self-worth needs may "lead to increased task motivation and, in turn, increased task performance" (p.32).

1.5.2 The Forced Distribution System of Appraisal

The concept of 'forced ranking' through a 'bell curve' based normalised rating distribution was popularised by Jack Welch in General Electric in the last two decades of the 20th century to identify and reward the top performers and fire the poor ones. Many Fortune 500 companies and others throughout the world have adopted the system (Kwong, 2012), though General Electric and Microsoft have given it up. However, it is also reported that many companies have benefitted from forced ranking system of appraisal in a way that would have been difficult to obtain from other conventional talent management approaches (Grote, 2005).

Forced distribution method of ranking employees based on their performance can be carried out in different ways depending upon organisational typicality and convenience. Some of the methods are lined up below.

- Allow a defined percentage of employees in different performance bands like top/excellent, very good, good, average, bottom/poor/below average etc. while giving performance ratings against set standards. This can be done by comparing performance of one against the other in a same level, group, team or trade.

- Rank employees from top to bottom in order of their performance level by comparing their performances.

Grote (2005, in Dominick, 2009) argues that there is plenty of anecdotal support to show that performance appraisal ratings are inflated to a large extent. This leads to a failure to differentiate top performers from the rest in terms of the rewards and recognition they deserve and thus alienates them.

In the context of forced ranking and its usage in organisations to ensure quality in human resources, words of Jack Welch, former Chairman & CEO of General Electric (hereinafter, GE), give insight to the process. He says, “In every evaluation and reward system, we break our population down into three categories: the top 20%, the high-performance middle 70% and the bottom 10%. The top 20% must be loved, nurtured and rewarded in the soul and wallet because they are the ones who make magic happen.” He further says, “A Company that bets its future on its people must remove that lower 10%, and keep removing it every year—always raising the bar of performance and increasing the quality of its leadership” (GE, 2000, p.4). Jack Welch popularised the concept of forced ranking in the corporate world in the last two decades of the 20th century. According to Stewart, Gruys and Storm (2010) citing several studies (Bates, 2003; Gary, 2001; Meisler, 2003; Osborne & McCann, 2004), estimates suggest that upto 25% of Fortune 500 companies use some type of forced distribution method in performance appraisal.

Grote (2005) gives one of the strongest case in favour of forced ranking method. According to him, organizations can guarantee talent differentiation by implementing forced ranking of performance. However, Grote (2005) goes on to add that differentiation of talent is not the only reason for companies to adopt forced ranking system. It is just a means, not an end in itself. According to him, it is also necessary that a company lay down criteria required for organisational success. GE, for example, under Jack Welch implemented the 4-E concept of leadership to create a leadership culture in the organisation. Krames (2005) gives an elaborate account of the 4- E leadership model, which highlights the need of combining the strategy of differentiating talent and creating a leadership culture in the organisation to make best use of the talent pool. Grote (2005) cites many critics of the forced ranking system, who argue that even though the system may improve performance initially, it makes an adverse impact on employee morale, teamwork, and collaboration in addition to creating a negative employer perception in the labour market.

However, Meisler (2003) describes the forced ranking system and the intended ‘bell curve’ as the “dead man’s curve”(p.44). He argues against the statistical validity of the forced ranking system in small groups and organisations and cites interviews with several professionals and academicians to show that there is no unanimity. Further, Meisler (2003) questions the objectivity of the process. He argues that the forced ranking leads to loss of

morale saying that people are not happy with “Darwinian struggle” at the work place. However, he quotes professionals to say that the situation in organisations with well-established forced ranking system might be different because the job entrants to these organisations are well prepared about the situation before they enter the organisation. Meisler (2003) also talks about cases of politicisation and discrimination lawsuits citing the cases of Enron and Ford Motor Company respectively. The Ford Motor Company abolished the forced ranking method in 2002 after losing the lawsuit.

According to Vaishnav et al. (2006, p.1), the ‘rigid distribution of bell-curve forces managers to label a high performer as a mediocre. A high performer, unmotivated by such artificial demotion, behaves like a mediocre. Further, managers begin to reward visible performance over the actual’.

1.5.3 Problems in Performance Appraisal

According to Rao (2004, p. 154), main problems of performance appraisal system are:

- notion of confrontation and unpleasantness of performance reviews;
- pain in giving negative feedback;
- poor commitment of managers to the process;
- mismatch between systems used and employee jobs; and
- inadequate assessor training for appraisal.

Due to the above problems, errors occur in the appraisal process. Bhattacharyya (2011) lists the following as generally occurring biases and errors during the performance appraisal process in organisations. According to him, these biases and errors connect with the lack of objectivity of the raters. Some of these usually occurring errors are:

- **The Halo and Horn effect:**

Bhattacharyya (2011) cites Solomonson and Lance (1997) to define the halo effect as “the rater’s general impression on ratings of specific rate qualities” (p.76). One or two qualities of the ratee influences the rater to give good rating about the performance of the ratee although the performance may not be as good. Bhattacharyya (2011) further cites Lefkowitz’s (2000) studies to say that the halo effect relates to positive regard for the subordinate.

Bhattacharyya (2011) mentions the opposite of ‘halo effect’ as the ‘horn effect’. According to him, the horn effect leads to poor rating for performance of a subordinate despite higher level of actual performance because the rater does not like some qualities of the subordinate and carries a general negative feeling about him/her. As a measure of reducing the halo and horn effects in performance rating, Bhattacharyya (2011) cites Uyargil (1994) to suggest

training for the raters and requiring them to cite instances and records of events to justify poor ratings.

- **The Leniency Error**

This occurs when the rater refrains from giving poor rating out of fear of a strenuous relationship with the subordinate. Jawahar and William's (1997) study indicates that performance rating for pay raises and promotions are more prone to leniency error.

- **The Error of Strictness (negative of Leniency Error)**

Bhattacharyya (2011) cites Kaynak et al. (2005) to explain the error of strictness in rating in case of raters who suffer from the problem of losing their positions when employees get high ratings. He further says that these raters "try to show that they are the best" (p. 76). In error of strictness situation, the raters usually pre-decide the highest rating score and benchmark the subordinates against this highest score.

- **The Central Tendency Error**

Citing Dessler (2000), Bhattacharyya (2011) explains that the central tendency error is the error of averaging method adopted usually by raters who are less acquainted with the subordinates in order to stay on the safer side of not committing any judgemental error. These types of raters give average score to all subordinates irrespective of varying levels of performance.

- **The Recency Effect**

In this case, the rater has a tendency to focus too much on recent happenings and experiences about employee's behaviour or performance. This ignores the actual performance for the entire previous appraisal period taking only a recent view.

- **The Contrast Error**

Contrast error occurs when raters compare employees against each other instead of their performances against pre-recorded criteria. This often leads to under evaluation of some good performers due to comparison with someone, whom the rater views as very successful.

- **The Similarity (similar-to-me) Effect**

This error is the result of a tendency in the evaluator to consider someone a high performer if the evaluator finds some similarity between himself and the ratee. This seeks similarity in background, education, attitudes, personal characteristics, or traits etc.

1.5.4 Empirical Study in the field of Performance Appraisal

Schleicher et al. (2008) state, that there is a “gap between PA research and practice (Banks & Murphy, 1985; Bretz, Milkovich, & Read, 1992; Ilgen, Barnes-Farrell, & McKellin, 1993; Levy & Williams, 2004; Maroney & Buckely, 1992; Smither, 1998)” (p.899). Out of only a few research work in this area, this study refers to work by Scullen, Bergy, and Aiman-Smith (2005), Schleicher et al. (2008), Berger, Harbring, and Sliwka (2010) and U. Bashir, M.S. Bashir, and Rohra (2011) for analysing the issue of forced ranking in appraisal systems.

- **Scullen et al. (2005)**

Scullen et al. (2005) carried out a complex and sophisticated mathematical simulation of a multi-company, multi-year forced ranking process. They named the process as forced distribution rating system or **FDRS**. In their model, one hundred companies of one hundred employees each over a thirty-year period identified the bottom 10 percent of their workforce every year, fired them, and then replaced them with the best available candidates from the applicant pool. Through the experiment, they tried to find out as to whether it was reasonably likely that an organization firing poorly performing workers and replacing them with most promising ones from the market would be able to improve the performance potential of its workforce. In case it does, they wanted to find out the extent and speed of such improvement.

- The result of the survey by Scullen et al. (2005) averred that forced distribution led to remarkable improvement in workforce potential in the early several years of introduction of the system. However, on reiteration of the simulations in the experiment for a longer period showed sharp declines in the trend.
- They indicated that firing more number of poor performers resulted in higher benefits to the organisation than doing so in a guarded manner, step-by-step. They supported a traditional and strict rank and yank system of FDRS for improving organisational performance effectively.
- They found that the remarkable benefits yielded by the FDRS, overshadowed the potential bad effects of the forced distribution method.
- Scullen et al. (2005) further concluded that there is a net positive feeling in the job market of the organisation due to the reason that the forced distribution system was seen as a merit differentiator assuring higher compensation and rewards for good performers.

- **Schleicher et al. (2008)**

Schleicher et al.'s (2008) study on the FDRS remains one of the most illustrative research works on the subject to date. They made a considerably elaborate literature review in their study to arrive at several hypotheses, which they examined empirically. In the initial part of

their study, they give an elaborate theoretical perspective of the FDRS concept. They cite several researchers (Boyle, 2001; Guralnik, Rozmarin, & So, 2004; HayGroup, 2002; Meisler, 2003), who argue that FDRS is a better approach to accurately differentiate high and low performers. Sears and McDermott (2003), in Schleicher et al. (2008), argue that this accurate differentiation amongst high and low performers helps in making strategic raises, cuts and promotions, “which should improve short and long-term performance” (p. 900).

On the other hand, (Schleicher et al., 2008) cite several authors who argue that an “FDRS can hinder teamwork and collaboration, foster competition, bring legal challenges (Guralnik et al., 2004), and facilitate political game playing and widespread insecurity (as in its use at Enron; Fusaro & Miller, 2002)” (p.900). They go on to say that there currently is “no generally accepted research that gives either side clear superiority in the debate” (Bates, 2003, p. 64). They also quote Blume, Baldwin, and Rubin (2006), who have noted, “A conspicuous gap [exists] in the empirical data with respect to the perceptions and behaviors of the *raters* (not just *ratees*) involved in an FDRS” (p.29).

Schleicher et al. (2008) focussed their research mainly upon studying factors, which affect rater behaviour under FDRS vis-à-vis traditional rating scale (TRS) systems and how these rater reactions could affect the efficacy of the FDRS. Through their studies, they established that difficulty in differentiating performances where variability is very marginal and resultant question of fairness in ranking they are forced to do, affects the confidence and self-efficacy of the raters to effectively use the FDRS. They also established “the importance of proximal contextual variables (Cleveland, Morrison & Bjerke, 1986; Levy & Williams, 2004; Murphy & Cleveland, 1991) in determining rater reactions to an FDRS” (p. 921). Their research suggested that situational differences could significantly affect raters’ reactions. According to them, “FDRS ratings are (a) more difficult when there are administrative consequences attached and (b) more difficult and perceived to be less fair when there is less variability in performance among the rates” (p.922).

Schleicher et al. (2008) recommended that to start with, an organization should base least of their administrative decisions like promotions, termination etc. on FDRS ratings to get the best of rater acceptance of the system initially. They support their recommendation by citing Blume et al. (2006), which suggested that ratees’ acceptance to FDRS also increases if the rating is not attached to administrative decisions. They also suggest that FDRS is best suited for organisations or units within organisations, which have noted significant variability in employee performance.

Schleicher et al. (2008) have suggested future research on contextual factors (e.g., organizational culture) “likely to affect rater reactions (Blume et al., 2005, p. 19)” (p.924). They also recommended research to examine “both rater and ratee reactions to an FDRS (Levy & Williams, 2004)” (p.924). They conclude by saying “If the FDRS works to break

down trust and leader–member exchange (Graen & Scandura, 1987; Graen & Uhl-Bien, 1995), this type of PA system may be an organization’s undoing rather than its strategic advantage” (p.924).

- **Berger et al. (2010)**

Berger et al. (2010) have shown in their study that the forced distribution in rating enhances performance outcomes. They ascribe this increase in performance to creation of stronger performance incentives due to differentiation. “The supervisors in the baseline setting seem to be too lenient in their rating decisions and, hence, performance decisions are too weak”(Berger et al., 2010, p.30). They go on to say that, differences in rating behaviour of supervisors due to their social preferences go away under the forced distribution system.

The findings of this study are based on a real effort laboratory exercise and are more equipped with dependability than surveys conducted in real organisational situations, which provide either a baseline setting or a forced distribution setting and not both. In the real organisational setting, no effective and reliable comparison of rater behaviour or effect of rating outcomes on organisational output under the two situations can be made because either of the two situations is only present.

In the baseline setting of their study, Berger et al. (2010) studied the outcomes without putting any restriction on rater behaviour. In the forced distribution setting, the supervisor was forced to distribute the ratings in a pre-determined percentage. The result of their study shows clearly visible differences in rating patterns under the different settings. Berger et al. (2010) explain that the rating of majority (83%) on the higher side (‘1’ or ‘2’) in the baseline setting is a result of the leniency error by the supervisors, which is ruled out in the forced distribution scenario. However, it is seen that in spite of the restriction of forced distribution, the supervisors have a tendency to maximise rating within the allowed limits. The study outcome also shows that average group performance under the forced distribution condition is higher by about 8% than that under the baseline condition.

- **Bashir et al. (2011)**

Bashir et al. (2011) found that the forced ranking process is effective in a system in which both managers and subordinates have shared perceptions about organisational goals and the extent to which the same meets the needs of both managers and subordinates. According to Bashir et al. (2011, p.1583), “Employee’s acceptance for performance appraisal system is very important, as disliking towards it can negatively affect the job performance (Vigoda 2000), and also employee satisfaction (Taylor *et al.*, 1995)”.

Bashir et al.'s (2011) research project focussed on three aspects:

- critical analysis of the forced ranking system of the Pakistan's petroleum company, Pakistan Petroleum Limited (PPL);
- contribution of forced ranking system to employee turnover; and
- to assess employee acceptance towards the system of performance management.

The sample study included 55% employees from lower management level and 45% employees from middle management level as a survey of Pakistan Petroleum Limited. The Bell curve analysis in the study depicted mixed results about forced ranking system where as questionnaire feedback showed major disliking towards the system by the lower management. However, in general, there was support for the notion that both level of management find this process along with PA to be a worthwhile organizational practice. Approximately 75% of the respondents from lower management and 100% from middle management indicated that they would participate in the appraisal program because it is vital for their organization. They did not find any directly assignable link between employee turnovers with the forced ranking system, because they found that many of those leaving the company were either promoted or given a good pay hike in the recent past. Bashir et al. (2011) argue that forced ranking system works effectively in large organisations.

1.5.5 Recent Trends in Performance Management Practices and Research

Mercer's 2013 Global Performance Management survey (Mercer, 2013) conducted in 53 countries among 1056 leading companies across a wide spectrum of government, non-profit, and for-profit entities found that only about 3% consider their performance management system as one which delivers value. Many of the respondent companies see the system as not very effective, with about 51% saying that the performance planning process requires change. As high as 48% of the respondents say that the very approach to performance management needs change. A whopping 70% of the companies say that the process of linkage of performance management system to succession planning requires rework. Only 5% of the companies agree that the forced distribution method in performance rating helped improve their performance based pay system. The survey indicates that only about 3% to 14% of their managers can effectively handle various aspects of the performance management process in their companies.

According to Rock, Davis, and Jones (2014), performance management systems in many companies are misleading, cumbersome, and can be counter-productive. They cite Kansas State University management professor Satoris Culbertson, who argues that employees can perceive the mere act of receiving a numerical rating as negative feedback. According to Corporate Executive Board (CEB), a management research group, surveys have found that about 95% of managers are dissatisfied with their performance management (PM) systems. Many companies like Adobe, Cargill, ConAgra, Gap, Intel, Juniper Networks, Medtronic, and Sears either have changed over or are in the process of changing over to new systems in place of the traditional annual rating, ranking or review systems. General Electric, which

popularised the forced ranking, has given up the system. In 2013, Microsoft changed completely into a new system, which focuses on group performance rather than individual performance.

Buckingham and Goodall (2015) cite a study by Deloitte to argue that assessing skills of employees produces inconsistent data. It depends largely upon the rater's skills, values, and rating behaviour. They cite a study by Scullen, Mount, and Goff (2000) to say that 62% of variance in ratings could be accounted for by individual rater's peculiarities of perception. Actual performance accounted for only 21% of the variance (Buckingham & Goodall, 2015).

The forced ranking process has been found to demoralise employees, create animosity and increase employee turnover (Barry, Garr, & Liakopoulos, 2014). It diminishes the value of top performers and pushes the mid-level ones towards the bottom. Barry et al. (2014) recommend a new coaching and development model of performance management in place of the traditional rating and ranking system. They also recommend delinking of the compensation system from the performance management system.

2 PRESENTATION OF NALCO AND ITS HUMAN RESOURCE MANAGEMENT

This study aims at positioning the practice of performance appraisal in Indian public sector companies vis-à-vis the theoretical framework on the subject including the aspect of forced distribution in appraisal ranking. In this context, the researcher has chosen his own company the National Aluminium Company (hereinafter: Nalco) for the empirical study, in addition to giving a brief perspective of practices and policies in some other very large Indian public sector companies. In order to assess the performance management process of the company Nalco, this study briefly discusses the activities of the company and some of its HRM processes.

2.1 Nalco: A Brief Presentation

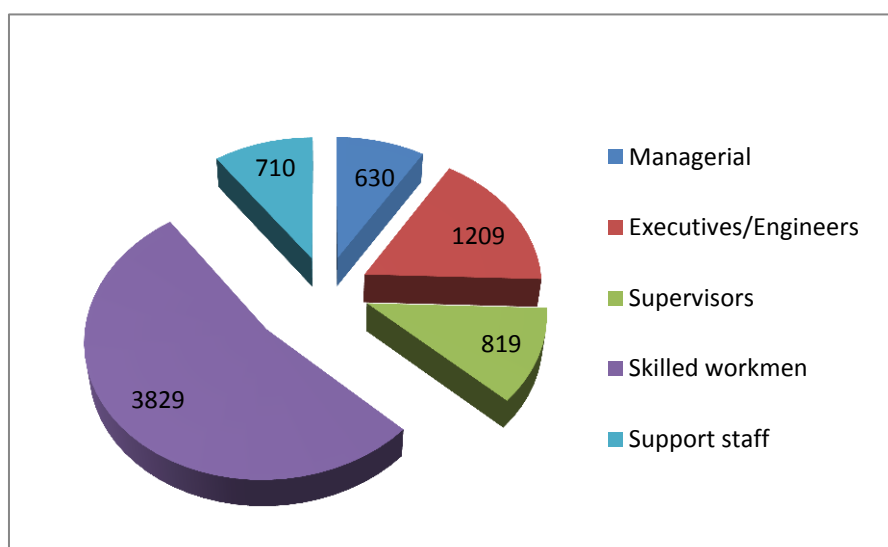
Establishment of Nalco in the public sector in the year 1981 was a turning point in the history of Indian aluminium industry. The company has not only addressed the need for self-sufficiency in aluminium, but also given the country a technological edge in producing this strategic metal on the best of world standards. Aluminium Pechiney of France (now taken over by Rio Tinto), a world leader in the field, provided the technology and basic engineering for bauxite mining, alumina refinery and smelter. Nalco has a 6,300,000 TPA bauxite mine on the Panchpatmali hills and a state-of-the art 2,100,000 TPA alumina refinery at the Koraput district of the costal state of Odisha. The company has a 460,000 TPA aluminium smelter and a 1,200 MW power plant at the Angul district in the state. The

company has fully mechanised port facilities at the major eastern port at Visakhapatnam for shipping its product to more than 30 countries in the world.

The company has been in commercial operation since 1987 and has been making profits ever since. The company has had two brownfield capacity expansions so far. It has also forayed into wind power and solar power generation. Further, the company has started joint ventures in large nuclear power plant and caustic soda plants to meet its raw material needs, as part of its long term strategy.

In order to meet the challenges of its strategic business ventures, the company has hired best of the technical and managerial talents from premier institutes and universities in India. It has a total regular employee strength of about 7197, as per the break-up given in *Figure 6* with an average age profile of 46 years. About 10,500 workers deployed through contractors support this predominantly technical workforce. The company has a well-organised HRM set up for managing the huge human resource pool and keep them motivated to achieve the laid

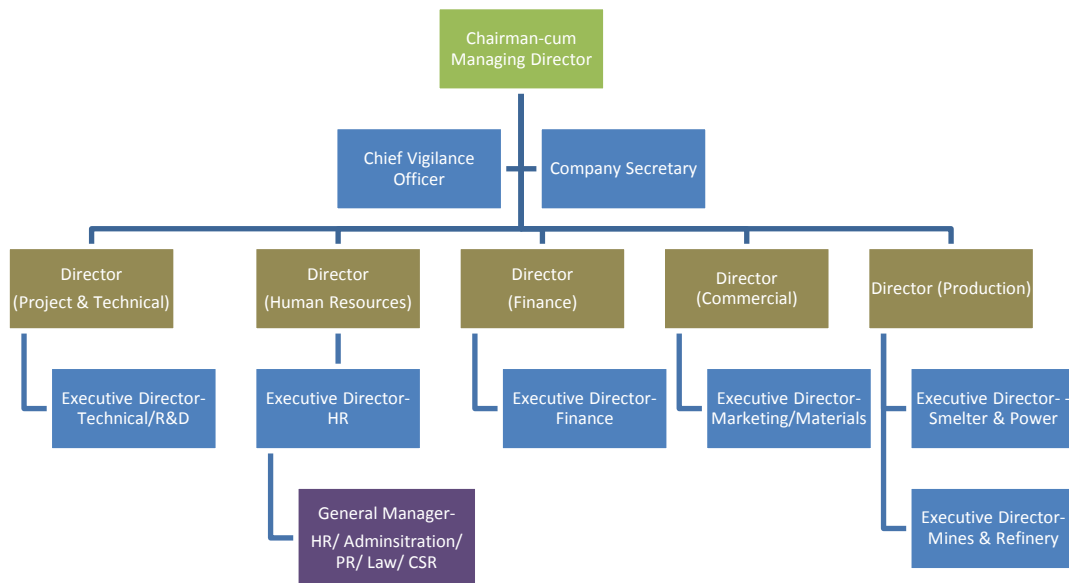
Figure 6. Number of Employees of Nalco by position in September, 2015



Source: Compiled from internal data of the company Nalco

down **mission** “to achieve growth in business with global competitive edge, providing satisfaction to the customers, employees, shareholders, and community at large” in pursuit of its **vision** to “be a reputed global company in the metal and energy sector” (“NALCO,” n.d.). The company’s goals and objectives remain aligned to the core vision and mission of the company. The organisation structure of the company given below in Figure 7 meets the stated business goals and strategies of the company. A Director at the Board level (highest decision-making level) of the company, showing the importance attached, heads the HR function of the company in line with its mission statement.

Figure 7. Organisation Structure of Nalco



Source: Compiled from internal data of the company Nalco

2.1.1 NALCO's Physical and Financial Performance

Despite cyclical demand problems, Nalco has been successfully exporting products to more than 26 countries worldwide. Being one of the cheapest producers of alumina, the company has the distinct advantage of highest exporter recognition. Nalco has been successfully adapting the change management to its processes and products. The company is ISO-9000, 14001 and OHSAS-18001 certified. Activities of total quality management, practices of 5-S and TPM are integrated to the process. The company was accorded with “Navaratna” (DPE, 2014a) status by the government of India in 2008 recognising its outstanding physical and financial performance over the previous years.

However, the downward trend in performance of the company for last 4-5 years, especially in its final product area i.e. Aluminium (Figure 6, Appendix D), is worrying the management. This, despite considerable capacity addition after the 2nd brownfield expansion has resulted in not so impressive financial results except 2014-15 (Figure 7, Appendix D) during which high global aluminium prices helped the company's bottom lines impressively. The labour productivity has been going down significantly in aluminium production (Figure 8, Appendix D). The global melt down in aluminium prices in 2015 along with rising input costs has set the alarm bell ringing. In order to stay competitive in the market, the company management is looking towards cost control and productivity enhancement. Both these efforts need active participation of the human resources of the

company. Thus, the role of the managerial staff, their morale, motivation, and well-being are factors crucial for the HRM system to take care of. Some indicators of employee well-being, satisfaction, motivation, morale as available from company's internal sources are discussed here.

2.1.2 Employee Satisfaction

The management of Nalco conducted an employee satisfaction survey in 2014-15 to identify factors that influence overall employee satisfaction and engagement in the workplace. Sample size in the survey was 919 managerial and 1222 workmen staff with different questionnaires for the two categories. Due to focus of this study on the managerial staff, the findings of the survey for them are briefly given in the following paragraph.

- The respondents are found to be endowed with a very high degree of positive **work ethic** (75.62%).
- They have a fairly high degree of **internal locus of control** (62.57%).
- The three most highly-rated dimensions of **climate** are i) benefits (68.06%), ii) job content (64.05%), and iii) interpersonal relations (55.65 %).
- On the other hand, dimensions like recognition, training, career development, and objectivity are accorded modest ratings (below 50%).

2.1.3 Employee Turnover

The employee turnover figures of Nalco has always remained considerably low since inception of the company though there have been some occasional spikes due to establishment of similar major industries mainly in the state of Odisha. The figures obtained from internal sources of the company, as given in Table 2, indicate that the rate has remained between 0.50% and 1.17% during the period from 2010 to 2014. These figures are quite modest considering the Indian average employee voluntary turnover rate of more than 9% (Elkjaer & Filmer, 2015) during almost the same period.

Table 2: Managerial turnover rate in Nalco from 2010 - 2015

Year	Turnover rate (%)
2010-11	1.17
2011-12	0.70
2012-13	0.50
2013-14	0.61
2014-15	0.91

Source: Compiled from Internal data of the company Nalco

2.1.4 HRM Systems of NALCO

The core feature of the HRM system in Nalco since inception of the company has been to create and sustain an environment of mutual trust, mutual engagement, and mutual benefit between the organisation and its people. The HR vision and mission statements (NALCO, n.d.) of the company amply reflect this ethos.

- **HR Vision of NALCO:** “To attain organisational excellence through trust, openness, commitment, creativity, innovation, and providing opportunities for growth, well-being and professional enrichment.”
- **HR Mission of NALCO:** The HR mission statement of Nalco intended to support the HR vision are given as under:
 - To create a learning and knowledge based organisation through continuous innovation, evaluation and realignment of HR practices with the business strategies;
 - To attract, nurture and retain talent ;
 - To inculcate a spirit of creativity, quest for learning;
 - To create a responsive and competent work force and inspiring & motivational organisational climate.

Employee satisfaction, which forms an integral part of the company’s vision, holds a key place in all HR policy initiatives of the company. Some of the key strengths of the HRM system are acquisition and placement of best talent, competency management with training & development, job rotations, career & succession planning, and KRA based performance appraisal system. The company encourages participative management, empowerment through delegation, transparency, and free flow of communication. It has benchmarked compensation system, social security schemes, complete and free healthcare, and has created remarkable amenities for the employees and their families. The company has a structured and joint grievance handling mechanism for employees. Major employee issues are resolved through collective bargaining process and regular bi-partite discussions. The total quality, environment & health management, and social accountability policies and practices of Nalco have received international certification. The company is a pioneer in CSR activities among Indian public sector and has allocated annual fund equal to 2% of its profit before taxes for such activities.

2.2 Performance Appraisal Process for Executives (Managers) of Nalco

The present performance appraisal system of Nalco for its managerial staff is in operation since 1995, prior to which there was a more simplistic absolute rating format system with predominantly subjective evaluation of performance and potentials. The present system, which this study seeks to discuss in detail in the following paragraphs, aims to achieve several key objectives by applying the process with several key features.

2.2.1 Key Objectives of the Appraisal System

The key objectives of the appraisal system of Nalco are:

- to integrate individual and organisational goals through a system of performance assessment which is linked to the achievement of organisational goals;
- to ensure an objective assessment of executive performance against mutually agreed target well in advance;
- to provide individual executives with continuous and periodic feedback on their performance and identify their developmental need;
- to identify and develop the potential of executive for enhanced performance;
- to build a database and to enable quick and effective administrative decision in respect of career planning, promotion, job rotation and job enrichment.

2.2.2 Key Features of the Appraisal System

The system comprises of different parts of the appraisal process recorded in different forms. These are as given in Table 3. The process operates on real time web based IT platform now

Table 3.Steps in managerial appraisal process of Nalco

Form	Description of Appraisal Process
A	<p>Performance Target Setting Exercise – The appraiser will inform the appraisee about the department/ groups's objective and targets with reference to the internal MOU (memorandum of understanding signed with corporate management) targets of the unit and hands over form A.</p> <p>The appraisee will identify a set of key task for the year and Key Performance Areas (KPAs) and fills up form A which is only an exercise sheet, to furnish a set of key task with timeframe and relative weightage.</p>
B	<p>Finalisation of tasks and targets- The appraiser and appraisee mutually agree to a set of key tasks for the year, link each key task with suitable timeframe and assign relative weightages, and finally fill up form B and sign it. This form is also countersigned by reviewing officer(higher in rank to appraiser) for his acceptance.</p>

(table continues)

(continued)

Form	Description of Appraisal Process
C	Quarterly performance review- Four quarterly performance review meetings take place in which the appraiser and appraisee review performance, record level of achievement, reason for variation and details of special task if assigned.
D1	<p>Annual target achievement appraisal– This is done by appraiser and reviewing officer in at the end of the year. The annual target is compared against achievement (in terms of quantity, quality and time frame/date as the case may be) and percentage achievement is recorded independently by appraiser and reviewing officer.</p> <p>Weighted score of a particular key task/special task is calculated by appraisal cell, giving 70% weightage to appraiser and 30% weightage to reviewing officer.</p> <p>The appraiser also gives his observation about the appraisee which is shown to the appraisee for information. Subsequently the reviewing officer makes his observation as well.</p>
D2 & D3	Managerial skill appraisal – The appraiser makes evaluation of managerial characteristics (traits) i.e. six Performance factors (in D2) and nine potential factors (in D3) at the end of the year. The forms describe the measures for the factors to limit subjectivity and remove confusion for the appraiser. The process suggests the appraiser to maintain record of specific incident separately (both positive and negative incidents) to the extent possible for removing subjectivity. The reviewing officer also rates these aspects. A five point rating scale is used with ‘1’ being ‘poor’ and ‘5’ being ‘outstanding’. Ratings by both carry 50% weightage each. The appraiser is also asked to identify three major strengths and weaknesses of the appraisee from a given list or by choosing his/ her own words.
E	<p>Training need identification- In this form, the appraisee identifies his own training need and records the details of programme with justification. The appraiser holds discussion with appraisee and records his recommendation on training need.</p> <p>Finally the reviewing officer gives his/her observation in regarding training needs of the appraisee, which is taken into consideration by the HRD department for implementation subsequently.</p>

(table continues)

(continued)

Form	Description of Appraisal Process
F	Final rating calculation- The appraisal cell of HR department calculates the rating given by the appraiser and reviewing officer and fills up final score and final overall grade of the appraisee.
G (from 2009-10)	Moderation/ normalisation/ rationalisation- The moderation committee formed at different levels reviews all final ratings based on level and work area of the manager and forces a normal distribution by keeping maximum 15% at the top and 10% at the bottom. A bell curve of rating distribution is achieved.

Source: Compiled from internal sources of the company Nalco

and there is no physical paper or record keeping. The various stages in the process are time bound and move up to the higher level if not completed on schedule. There is penal rating for delay in completion of the process.

3 GUIDELINES OF DPE ON MANAGERIAL APPRAISAL IN INDIAN PUBLIC SECTOR COMPANIES AND PRACTICE IN SOME OF THESE COMPANIES

The DPE, which was earlier known as the BPE (Bureau of Public Enterprise), government of India, has issued several guidelines from time to time starting from 1980 (DPE, n.d.) on the subject of performance appraisal of senior management personnel of public sector companies owned by the government of India. These guidelines are broadly followed by the public sector companies in respect of other levels of officers with suitable modifications.

3.1 Guidelines on Performance Appraisal issued by DPE

On a scrutiny of the format prescribed by the DPE before 2010 for performance appraisal of top managers it reveals that the system comprised of four different perspectives viz., performance (50%), competencies (20%), values (15%), and potential (15%). This division as well as the weightages have been changed from 2010 after introduction of the performance related pay (PRP) system in public sector companies. The evaluation now comprises of two parts viz., performance achievement against annual work plan (75%), and personal attributes and functional competencies (25%).

- **Performance**

Evaluation of performance is done on a five point scale (1-best, 5-lowest) against key assigned tasks decided jointly by the appraisee and the appraiser including tasks based on the memorandum of understanding (MoU) signed by the company with the government of India within two months from start of the financial year. At the year-end, a performance review is done by the appraiser after self-appraisal by the appraisee himself/ herself. The appraiser awards performance scores based on the review discussion.

- **Personal attributes and functional competencies**

This part requires the appraiser to rate ten personal attributes and functional competencies of the appraisee on a five-point scale (1- best, 5-lowest). The attributes and competencies are:

- effective communication skills;
- strategic orientation and decision making ability;
- problem solving and analytical ability;
- ability to develop and motivate team members;
- ability to coordinate and develop collaborative partnership;
- innovation and change orientation;
- planning and organising;
- result orientation;
- business acumen; and
- role based functional competency.

The scores given by the appraising officer are sent to reviewing officer for his/her review and to accepting authority for acceptance. In case the reviewing / accepting authorities differ from the scores and comments of appraising officer, he/she has to record the reasons for the same. All adverse entries are communicated to the appraisee.

The DPE has not issued specific guidelines for PMS in respect of officers/managers at lower levels and has said the company may follow system similar to above for their lower level managers.

- **Guidelines on Bell Curve approach in PMS**

In the pay revision guidelines issued in 2008 (DPE, 2008) for central public sector companies of India, the DPE has issued clear instructions for adopting a robust and transparent performance management system for improving performance of the companies. The guidelines specifically require the companies paying performance related pay (PRP) to adopt a 'Bell Curve approach' in grading the officers "so that not more than 10% to 15% executives are 'Outstanding/Excellent'. Similarly, 10% executives should be graded as 'Below' par" (DPE, 2008, p.8).

3.2 Managerial Appraisal Practices in some Large Public Sector Companies of India

Like Nalco, there are total 290 public sector companies (excluding banks and railways) in India (DPE, 2014c) under the control of the central or federal government. Out of this, 234 companies are operational and 56 are under construction companies as in 2014. Established with a total investment of about € 138 billion (total capital employed being € 242.3 billion), these companies had a total turnover of about € 286.4 billion in 2014. The total net profit in these companies in 2014 was about € 18 billion and they hold total cash reserves and surplus of about € 104 billion. Based on several factors like total investment, physical and financial performance over the years etc., the government of India have granted the status of ‘Maharatna’, ‘Navratna’ or ‘Miniratna’ (top, medium and lower categories of ‘jewels’) to the profit making public sector companies, which determines the level of their financial and administrative autonomy. The department of public enterprise (DPE) under the ministry of heavy industries of the government of India is the nodal agency for all public sector companies in India. (All figures are based on € to INR conversion rate of €1=Rs.72.36 as on 15-08-2015).

These companies employ approximately 1.7 million people directly (excluding Railways) out of which about 272,000 are managerial employees. The pay and other service conditions of these managerial employees are governed by general guidelines and policies issued by the DPE from time to time, though specifics of these policies differ from one company to the other. In the context of this thesis, the broad policy outlines on performance appraisal practices for managerial staff of some major public sector companies are collected using acquaintances in the corporate HR departments of these organisations. Brief description of these policy and practices are discussed here.

3.2.1 Oil and Natural Gas Corporation (ONGC) Ltd

Largest public sector company in India in terms of gross block (€ 38 billion approximate), ONGC had a revenue of about € 12.52 billion and PBT of about €4.4 billion in 2014 (DPE, 2014e). The eighth largest in terms of work force (about 34,600), the Oil & Natural Gas Corporation of India (ONGC) has been traditionally considered as a benchmarked employer in Indian public sector. The performance appraisal system of ONGC in respect of its approximately 24,700 managerial employees has the following objectives:

- to set norms and targets of work performance , as well as, to monitor the work performance of employees;
- to facilitate placement of employees in accordance with their suitability for different assignments;
- to provide an objective basis for determination of merit, efficiency and suitability for the promotions; and

- to identify areas requiring exposure to training and development.

The system seeks to evaluate the following aspects:

- work performance of an employee on the present job in relation to the expected levels of performance, both qualitative and quantitative;
- extent of development achieved by the employee during the period under review;
- behavioural attributes, attitudes and abilities; and
- evaluation of potentials for assuming higher responsibility.

ONGC has developed a pre-determined set of KRAs for different job positions. Based on the performance MOU (memorandum of understanding) of the company with the government at the beginning of the year, the appraisee and his/her appraiser mutually discuss and pick up relevant KRAs and fix the targets. A mid-year review discussion normally takes place.

At the end of the year, the appraisal process starts with self-appraisal. The appraisee assesses his/her own performance and lists all enabling and constraining factors. Both appraisee and the appraiser record their rating. The process distributes weightage for the KRAs as under:

- quantity or volume of output 40%;
- quality of output 30%; and
- timeliness of completion of job 30%.

An appraisal of potentials follows the above. Keeping the existing role and future positions in view, the potentials are appraised in a five point scale ('1' being 'poor' and '5' being 'excellent') based on:

- result oriented approach;
- willingness to accept challenges;
- diligence and reliability;
- initiative;
- professional competence;
- communication skills;
- commitment and dedication;
- personal conduct and discipline;
- leadership; and
- inter-personal relationship.

The total score is calculated by using a formula, which considers the performance and potential scores with different weightages for different levels of employees. A final grading

in a seven-point scale is allocated based on this score. The appraiser records justification for the score given and sends the records for review and acceptance.

After the above, reviewing and accepting authorities at higher levels review and accept the score. The accepting authority can change the scores given at the earlier two stages. At each level, justification for the review is recorded. In the absence of justification, the appraisal is considered incomplete. Moderation is done to achieve 'bell curve' shaped distribution. The whole process is carried out on line.

3.2.2 Steel Authority of India Ltd (SAIL)

Steel Authority of India Ltd (SAIL) is a 'maharatna' public sector company in India producing various types of steel with annual turnover of more than € 6.6 billion and PBT of € 445.6 million in 2014 (DPE, 2014f). It employs about 97,900 permanent employees out of whom about 14,800 are managerial employees in five major integrated steel plants, four special steel plants and many other establishments spread at various locations in India. It is the second largest public sector industrial employer in India.

The online PMS is conducted through Goal Alignment Cascade Workshops (GACW) which includes the setting up of departmental goals, thereby finalising on individual key performance areas (KPA's). The process starts every year with signing of the required memorandum between the Government and the management. From there, it moves down to the level of the individuals. The different KPA's of routine, non-routine and special projects are framed considering the memorandum signed with the government. These KPA's are quantifiable and weighted, with clear evaluation criteria. Each appraisee picks up his/her KPA's. The reporting officer (appraiser) gives his views on these KPA's after which these are finalised for the year in respect of the appraisee.

The process of appraisal comprises of two stages viz., evaluation of performance and evaluation of competencies, potential and values. Performance Management Committees (PMC) consisting of the heads of departments, reporting officers and the reviewing officers are formed. These committee members assess performance independently, the process starting with a discussion between the appraisee and the reporting officer (first appraiser). Grading is given in a scale of 1 to 5. The final grading after moderation to achieve 'bell curve' is communicated to the employees. A 24/7 performance diary is available to all managerial employees for helping them keep track of their performance levels and assessments.

3.2.3 Bharat Heavy Electricals Limited (BHEL)

BHEL, a 'maharatna' public sector company of India, is the largest power plant equipment manufacturer in India with presence in about 130 countries around the world. It had sales of about € 5.63 billion with PBT of about € 690 million in 2014 (DPE, 2014b). As on

31.03.2014, it had net worth of about € 4.6 billion (1 € = Rs. 72.36, as on 15-08-2015). BHEL employs more than 47,500 permanent employees including about 13,400 managerial staff.

BHEL has adopted a balanced scorecard approach for managing performance of its employees. The system is called BHEL e-MAP system. The e-MAP system not only measures performance, it also measures quality of performance. The behavioural traits of employees are also measured to identify futures leaders and specialists. It has an effective feedback system leading to discussions and improvements.

The balance scorecard of BHEL contains key result areas (KRAs) for each production unit/group/position. The KRAs are divided into 'mother KRA' or 'child KRA' depending upon level of the job position and role. The 'mother' KRAs in the balanced scorecard are group level KRAs and are applicable to group heads/ leaders. The 'child' KRAs are individual activity level KRAs in the scorecard. Each job/ role has some critical KRAs, which have to be selected by all incumbents of that position.

The appraisee starts the process by selecting certain KRA relevant to his/her position and job and allocating certain percentage of work rate to it. He/she then forwards it to the supervisor i.e. the appraiser. After both discuss and mutually agree to the selected KRAs and targets/ work rates, the same is finalised.

The scheme requires a mid-year review of progress as well as review of KRAs and targets, wherever required due to job/role changes. At the end of the year, the appraisee does a self-appraisal of the performance and submits the same to the appraiser. The appraiser gives his rating on both part-A (performance) and part-B (competencies) and forwards part-A to the appraisee. If the appraisee wishes, he/she may discuss with the appraiser regarding his/her score on the part-A. When both appraisee and appraiser are satisfied with their part-A score the consolidated report comprising both part-A and part-B is forwarded to the reviewer, who gives his final assessment score. All the assessments are done on a five-point scale. This ends the phase 1 process of performance appraisal.

In phase 2, intermediaries levels can only add comments to the performance score but cannot change anything. Finally the report reaches the accepting authority, who gives the final score for part B only, i.e., on individual competencies. After this, a final performance score card is generated for the appraisee for that year based on the scores of part A and part B considered with fixed weightages for both parts depending upon level of the appraisee.

The score of part-A is subjected to normalization and is used only for performance related payment. The consolidated score of both part-A and part-B is reckoned for the purpose of promotion decisions.

3.2.4 Coal India Limited (CIL)

The Coal India Limited (CIL) is the holding company for seven coal producing public sector companies in India, which recorded total annual revenue of about € 12.83 billion and PBT of € 5.20 billion in 2014 (DPE, 2014d). The total number of employees in CIL including the subsidiaries is about 343,000 out of which about 18,100 are managerial employees.

The performance management system of CIL aims to:

- ensure that the employee understands the target of the organization as a whole, and that of the Department and the specific section /unit;
- set the employee's target and assess how the employee has performed against the defined target;
- provide feedback to the employee to ensure that s/he understands his/her performance; and
- reward employee for their performance.

KRA, KPI and rating scale for each unique position in CIL have been clearly defined. Against these defined KRA and KPI, each manager needs to set his/her target for the year after discussion with his/her reporting officer (appraiser) for the year. Some common goals for the company called the superordinate goals are kept in each position's KRA inventory as a compulsory provision.

The appraiser makes a mid-year review of the progress in performance and provides feedback to the appraisee enabling him/her to understand what he /she is doing well, and what he/she needs to do differently to improve performance. No rating is given during the mid-year review.

Final review of performance is conducted between 1st and 30th of April. During this process the appraiser discusses employee's strengths and areas of development based on his / her observations during the year and seeks the employee's self-assessment.. At this stage, appraisal of "Personal Qualities" and "Special Achievement & Innovation" for the entire year is also done at this stage.

The entire appraisal process goes through three levels of review: self- review, review by the appraiser (immediate reporting officer) and review by the accepting officer (officer to whom the appraiser reports). In case of 'poor' rating, the case is reviewed by appellate authority. Normalisation process is done by moderation committee, if required. The final score is intimated to the appraisee. The individual performance reports containing details of all stages are recorded as PRIDE (performance report for individual development of executive).

There is a PMS audit committee which reviews the entire PMS process and provides report on actual adherence to processes.

4 EMPIRICAL STUDY ON APPRAISAL PROCESS AND OUTCOMES

This part of the thesis aims to define the course of research into some of the important questions thrown by the literature review of performance appraisal process in general and forced ranking in particular, examining the theoretical perspectives in the organisational context of Nalco, the Indian public sector company. For this purpose, the study follows a deductive approach.

4.1 Purpose of the Study and Research Questions

The purpose of the study is to empirically test whether the performance appraisal system of Nalco comprising of the bell curve based forced distribution method for ranking their managerial employees is strategically positioned to help the organisation improve its performance. It seeks to establish the possible linkage between overall tapering organisational performance and impact of the forced distribution system on the morale and motivation of the managers.

Based on the theoretical review and discussion of the performance appraisal practice of Nalco vis-à-vis those of other major public sector companies of India, the research questions examined in this thesis are whether:

- the appraisal process followed by Nalco compares well with the process followed by other major central public sector companies of India;
- the managers of the company accept the 'bell curve' based ranking as a necessary tool for performance management;
- the managers of Nalco perceive the performance appraisal process as fair and transparent;
- the forced distribution of performance ratings to a bell curve pattern has adversely affected morale of managers in Nalco;
- there can be any system improvement compliant with existing DPE guidelines, industry practices and employee expectations?

4.2 Research Methodology

This study follows both primary and secondary research methods for arriving at answers to the research questions. Primary research is original, first hand scientific investigation of a subject or a phenomenon to arrive at a theoretical perspective of the issue or to lead to further research in that direction. However, secondary research is an analysis and

interpretation of existing primary research conclusions. Applications of secondary research method in this study for literature review and company presentation has thrown open the foregoing research questions. These questions will be examined through further studies through both primary and secondary methods. A case study approach has been adopted for carrying out this examination. The use of diverse sources of data comprising of internal sources of the company Nalco under study, sources of DPE, government of India on their website, and sources in other public sector companies included in this study make the findings close to reality.

According to Yin (1989, in Miller & Brewer, 2003), the case study method of research is a method of “empirical enquiry that investigates a contemporary phenomenon within its real life context when the boundaries between phenomenon and context are not clearly evident, and in which multiple sources of evidence are used” (p. 22). It helps in comprehending a social phenomenon in its complex and natural context, without applying controlled experimental methods of research. A major strength of a case study data collection process is the ability to employ many diverse sources of facts (Yin, 2003). Case studies are particularly well suited to new research areas or research areas for which existing theory seems inadequate (Eisenhardt, 1989). The literature review in this thesis has shown inadequacy of theoretical research on impact of forced distribution system on employee behaviour in a real organisational set up.

For the purpose of data analysis, the study uses both qualitative and quantitative methods. The primary research idea of the perception among managers of Nalco with regard to pitfalls of the performance appraisal process and its impact on morale and motivation has been comprehended through qualitative methods. The quantitative techniques of data interpretation seek to make a reality check about these perceptions.

4.3 Qualitative Analysis on the Appraisal System

The qualitative research work for this thesis follows the interview method to ascertain how the managers in Nalco feel and think about the performance appraisal process in the company and its impact on the performance outcomes. Although there have been many arguments in favour of other forms of qualitative research like participant observation over interview method (Becker & Geer, 1957; Trow, 1957), Trow (1957) also argues that for some purposes interviewing is far superior.

The aim is often interpretation and understanding of how and why, not 'fact-finding' or getting answers to questions of how much or how many (Warren, 1988). In qualitative interviewing, the respondent's experience has diverse qualities and meanings and the interview can explore these (Gubrium & Holstein, 2001). It is a valuable research method for exploring "data on understandings, opinions, what people remember doing, attitudes, feelings, and the like, that people have in common" (Arksey & Knight, 1999, p.2).

Because one of the main goals of this thesis is to ascertain the understanding and perception of the managers of Nalco about the moderation system in their performance appraisal, the interview method is one of the best methods of enquiry (Bertaux, 1981). For this reason and considering the limitations of conducting participant observation in Nalco, India from Slovenia, this study chooses the interview method.

4.3.1 Structure of the Interview Questions

Bertaux (1981) argues, “If given a chance to talk freely, people appear to know a lot about what is going on” (p. 39). Thus, the focus of a qualitative interview is to allow people to tell their own story in their own language. The approach is to initiate the process with open-ended questions and allow the interviewee to express his/her opinion and feelings freely. The subsequent questions are built upon the course of the interview without losing track of the core theme. The general format of the interview questions adopted during the interviews is given in Appendix B.

For the purpose of the interview, all the preparatory steps like choosing a setting without distractions, explaining the purpose of interview, addressing the terms of confidentiality, explaining the format and tentative duration of the interview, on-spot noting down of responses etc. suggested by McNamara (2009, in Turner, 2010) are adopted. However, the phone interview procedure is followed due to the constraints of travelling to India to conduct the interview personally in Nalco. Considering the apprehension expressed by the interviewees with regard to confidentiality of their identity, recording of the calls on phone has not been adopted. The interviewees are assured of anonymity for the sake of eliciting free opinion without fear or favour. To this end, responses to the interviews have been summarised in subsequent sections without giving details of the interviews.

4.3.2 Data Collection Procedure

The population for the study is the approximately 1800 managerial employees of Nalco located across the more than ten locations of the company. They are also spread across 10 different levels of managerial structure and belong to more than 10 different functionalities. For choosing a sample of this population, two different sampling techniques namely the random stratified sampling method, and the non-random judgemental methods are followed. Random stratified sampling ensures elimination of bias and representation of wide varieties of samples from across the organisation. In judgmental sampling, the selection of the sample bases on judgment of the researcher that the selected interviewees are the key individuals who can give the information required for the study (Babbie, 2015; Gofton & Ness, 1997; McMurray, Pace, & Scott, 2004; Sim & Wright, 2000).

Out of total 11 subjects selected, seven are chosen on random basis by spotting every 250th manager from a jumbled list to ensure a probability of selection for each manager. On non-

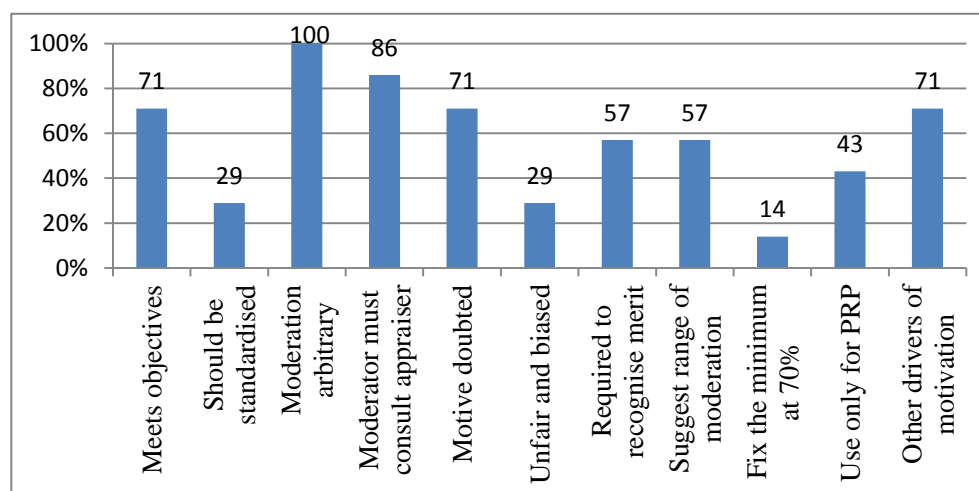
availability of the 250th manager, the next subject in the list is picked up until a successful attempt is achieved. Four subjects are picked up on judgemental sampling basis by selecting one office-bearer of each of the three associations of managers. However, success of obtaining the interview is achieved only in seven (7) cases, five (5) from random subjects, and two (2) from the non-random category. Marshall, Cardon, Poddar, and Fontenot (2013) recommended after a thorough empirical study that single case studies should generally contain 15 to 20 interviews. According to Guest (2006), data saturation in interviews occurs within first twelve interviews and the first six interviews give enough basic elements of the information sought for and variability within the data follows a similar pattern.

4.3.3 Interview Data Analysis

A review of the interview responses shows that most of the interviewees (5 out of 7, 71%) think the appraisal process up to the stage of moderation through forced distribution is well structured and meets its objectives. The balance 29% thinks that the target setting process should be 'standardised'. As regards the moderation process to achieve a normal bell-curve shaped distribution, there was 100% unanimity of responses saying that the process is done in an 'arbitrary' manner. Nearly 86% (6 out of 7) respondents felt that involving the reporting/ reviewing officers in the moderation process to obtain correct feedback will improve acceptability of the moderated rating. About 71% (5 out of 7) said that the motive behind change in ratings is doubted by managers because of lack of consistency in the moderated ratings year to year. Two (29%) of the respondents said managers consider the system unfair because the moderation is done keeping 'closeness' of the highly rated managers to the senior management.

Though almost half (4, 57%) of the respondents agreed that forced distribution is required for recognising talent, they suggested that fairness and transparency can be improved by recording the justification for lowering or raising of ratings during moderation process. About 57% (4 out of 7) said that there should be maximum correction limits say 10 - 15% during moderation. One respondent (14%) suggested that there should be a floor level of about 70-75 in total absolute rating score, so that the manager does not 'feel bad'. Three (43%) respondents said that the moderated merit scores might be used only for performance pay (because it is mandated by DPE) considering the original ratings for promotions. A majority of 71% (5 out of 7) respondents said the morale and motivation of managers is not significantly affected by the moderated ratings because there 'are many good things' in Nalco. A graphical presentation of the above analysis in Figure 8 makes the picture clearer.

Figure 8. Qualitative rating (in %) of appraisal process in Nalco by interviewed managers



The survey signals presence of arbitrariness and a requirement for making improvements in the system to make it more fair, standardised, and transparent. It suggests that in spite of the perception of bias, subjectivity and arbitrariness in the moderation process, morale, and motivation of managers are possibly not affected due to the presence of other motivating factors in the company's HR systems. Further investigation is required to establish or rule out any relationship or impact of the process of appraisal and forced distribution based moderation on the morale, motivation, and performance of the managers of the company.

4.4 Quantitative Analysis on Process Parameters and Behaviour Measures

The next step in the study is to test the significance of the observations made by the interviewees during the qualitative survey to arrive at any meaningful conclusion. In order to draw conclusions on perception of employees about the appraisal process and the employee behaviours like attitude, morale, motivation etc., appropriate statistical analyses are conducted. Further, to conclusively link the employee behaviours with the forced distribution based moderation system, correlation between the process and its various parameters with various measures of morale, motivation, satisfaction, turn over intentions, loyalty etc. is to be tested. This is best done through a quantitative analysis, which is a process of explaining phenomena through collection of numerical data and analysis of the same through appropriate statistical tools. Quantitative analysis enables testing of hypotheses for establishing a relation between the different dependent and independent variables in a phenomenon.

4.4.1 The Research Instrument and Data Collection

The study uses the questionnaire method with a 5-point Likert scale to collect data about the appraisal system of Nalco. The questionnaire comprised of three distinctive types of questions intended to find out information regarding:

- strengths and weaknesses of the Nalco performance appraisal system for managerial employees including the forced distribution based moderation process;
- impact of the various aspects of the above performance appraisal system on the general satisfaction, morale, motivation, well-being, and performance of the managerial employees; and
- basic information on the level and work location of the respondents.

In order to provide maximum level of confidentiality to the respondents, no further personal information was collected. Further, the thesis does not intend to test influence of demographic factors like gender, age, and qualification level of the respondents on the research outcomes. The questionnaire comprised of 13 measures to assess employee perception of features like fairness, transparency, ability for merit differentiation, bias, ease of use, and strategic orientation in the performance appraisal system. On the other side, the questionnaire also contained 14 constructs to assess effects of the above process features on the general satisfaction level, motivation, morale, and organisational commitment etc. of the managerial employees. The last 2 questions pertain to demographic information of the respondents.

The 13 questions pertaining to the appraisal process of Nalco are framed as direct questions on the system as it prevails in Nalco to find how the managers of Nalco perceive the different aspects of appraisal system errors and biases discussed in the literature review. The questions also follow the revelations of the qualitative survey in this paper regarding questions of transparency, favouritism, arbitrariness, and opinion of managers with regard to possible improvements in the system.

The 14 questions to measure satisfaction, motivation, morale, employee behaviour etc. have been picked up from proven constructs used in some of the major research contributions in the field of organisational psychology and employee behaviour. None of the scales could be picked up in entirety, as should have been the method to maintain the scale reliability, in order to keep the questionnaire short so that responses would be forthcoming.

- the Minnesota Satisfaction Questionnaire (MSQ) (Weiss, Dawis, England, & Lofquist, 1967);
- the Organisational Commitment Questionnaire (Porter & Smith, 1970);
- the Job Satisfaction Survey (Spector, 1997);
- the OCB- checklist (Fox, Spector, Goh, Bruursema, & Kessler, 2012);

- the Assessment of Work Environment Schedule (AWES) (Nolan, Grant, Brown, & Nolan, 1998); and
- the Brief Index of Affective Job Satisfaction Scale (Thompson & Phua, 2012).

The population of about 1800 managerial employees of Nalco is chosen for this study. However, considering almost no exposure to the appraisal system for about 150 of them who have joined the organisation within last one and a half years, the study excludes them from the survey. The questionnaire is distributed to about 150 (9%) of the rest 1650 managers via e-mail link in the form of an on-line survey. For this purpose, the Google Forms platform is used, which provides real time recording of responses and maintains anonymity of the respondent. The software does not allow any duplicate response, if logged in for response. The 150 samples were collected on stratified random sampling method by choosing every eleventh manager from the total list sorted on the bases of level and work location of the managers.

Out of the 150 samples chosen, only 91 have responded to the questionnaire. Though the number is very small (about 5%) compared to the population, this sample size is considered significant for any hypothesis testing using statistical techniques. From an analysis of the respondents' profile, reasonable representation of different strata, discipline and work location is visible, though some crowding is also noticed for some disciplines and work locations.

4.4.2 Statistical Analysis of the Survey Data

In order to make a meaningful examination of the research questions, the study carries out a detailed statistical analysis of the data captured through the on line questionnaire. It uses the SPSS (Statistical Package for the Social Sciences) statistical software package version 22 for all the statistical analyses. However, before running the package, the study carries out some data management of the responses for an effective and true analysis.

4.4.2.1 Grouping

In the beginning, the study makes a grouped analysis of the two broad aspects captured by the questionnaire; these are: a) appraisal process measures or variables, and b) employee behaviour measures or variables. In subsequent analysis, the behaviour measures are broken down based on the underlying factors through a factor analysis to get a detailed view of this most important and core aspect of the study.

- **Process Variables:** The analysis breaks up the 13 questions intended to measure employee perception of the appraisal system into two distinctive types:
 - strengths (eight questions: 1 to 7, 12); and
 - weaknesses (five questions: 8, 9, 13 to 15). However, an open-ended option was given to the respondents in question number 9 to give their own qualitative suggestion in place of choosing the given alternatives. The responses to this question

are kept out of the statistical analysis. Since these items are negative keyed measures, reverse scoring is done for scale matching.

- **Employee Behaviours:** In order to measure the state of employee behaviour/ attitude and also to examine any cause and effect relationship between the appraisal process and employee behaviour, responses to 14 questions (10, 11, and 16 to 27) are grouped together as measures of employee behaviour. These 14 questions are further sub-grouped based on nature of the behavioural aspect they are intended to measure:

- positive indicators (general satisfaction, morale, motivation, commitment): 10-11, 17 to 21, 23, 26, and 27; and
- negative indicators (dissatisfied, demotivated, and demoralised): 16, 22, 24, and 25. Reverse scoring is done in these four items for consistency.

The internal consistency of the questions in the above typologies is tested by measuring their Chornbach's alpha. The results of the test are furnished in the Table 4.

Table 4. Internal consistency statistics for the scales used

Reference no.	Measure/ parameter		Original Chronbach's Alpha	N	Moderated Chronbach's Alpha	Deleted measure/qn. No. & cause	
	Type	Question reference number				Ref. No.	Cause
01	Process	1-8, 12-15 Total=12	.789	91	.850	3, 13 (12-2=10 items considered)	Poor intra-group correlation
02	Employee behaviour	10-11, 16-27 Total=14	.875	91	.884	21 (14-1=13 items considered)	Poor intra-group correlation

The responses to the questions obtained in Likert scale of 1 to 5 (1- the least, 5- the most) are added together as per above types to obtain the total score against each. These combined scores are then considered for statistical analyses.

4.4.2.2 Level and Location wise Statistics

The managerial employees are distributed across levels and locations in the organisation structure with different levels of work responsibilities, compensation, scopes of promotion, facilities, amenities, and other features typical to each level and location. The pattern of appraisal scoring is also different at different levels. The following parametric statistics in Table 5 & Table 6 summarise the process perception and behaviour of managers at different levels and locations to identify differences, if any.

Table 5. Managerial level wise statistics on appraisal process perception and employee behaviour

Level	N	Parametric scores	
		Process (10) ^{\$}	Behaviour (13) ^{\$}
E0-E3	26	28.88	43.12
Mean*		2.88	3.32
E4-E5	23	27.87	44.35
Mean*		2.79	3.41
E6-E7	35	28.54	41.54
Mean*		2.85	3.20
E8-E9	7	32.71	50.00
Mean*		3.27	3.85
Overall sample mean (\bar{x})	91	28.79	43.35
Overall sample Mean*		2.88	3.33

Note: \$ Number of parameters; *Mean per parameter/measure

Table 6. Location-wise statistics on appraisal process perception and employee behaviour

Location	N	Parametric scores	
		Process (10) ^{\$}	Behaviour (13) ^{\$}
Corporate/RO/PF	34	29.15	44.82
Mean*		2.92	3.45
S&P	24	27.21	42.25
Mean*		2.72	3.25
M&R	33	29.58	42.64
Mean*		2.96	3.28
Overall mean (\bar{x})	91	28.79	43.35
Overall Mean*		2.88	3.33

Note: \$ Number of parameters; *Mean per parameter/measure

4.4.2.3 Extraction of Factors underlying the Employee Behaviour Measures

The scale used in the questionnaire for measuring employee behaviour is diverse and repetitive in the sense that some of the questions tend to measure the same or a similar aspect of employee behaviour. This happens when the measures are picked up from different proven scales, as done in this study with a purpose of studying consistency of employee response, when they are posed the same or similar question in several different ways.

The different aspects of employee workplace behaviour like organisational commitment, satisfaction, motivation, and morale are so interwoven with one another that in spite of a

considerable study by different analysts of organisational psychology there does not seem to be any clear-cut boundaries for these dimensions of employee behaviour.

Meyer, Becker, and Vandenberghe (2004) cite Pinder (1998) to describe motivation as a set of energizing forces; they cite Meyer and Herscovitch (2001) to define commitment as a force that binds an individual to a course of action. This implies that motivation is a broader concept than commitment and that “commitment is one among a set of energizing forces that contributes to motivated (intentional) behaviour” (Meyer, Becker, & Vandenberghe, 2004, p.994). More specifically, Meyer, Becker, and Vandenberghe (2004, p.991) suggest that commitment is one component of motivation. According to Evans (1998, p.40), individuals are motivated to participate in activities that appear to them to be oriented towards job satisfaction. Morale levels are determined by “expectancy of continued job satisfaction, and high morale, resulting from high expectations, motivates individuals towards goal-focussed activity which is expected to sustain, and increase, job satisfaction, which, in turn, raises morale” (Evans, 1998, p.40).

Considering the above very complex correlation between the different dimensions of workplace behaviour, the behavioural measures in the questionnaire of this study are statistically evaluated through an exploratory factor analysis in SPSS to reduce the number of variables for the study into a smaller number of meaningful components of the behaviour scale. Results of the factor analysis presented in the tables and figures in the Appendix E reveal that three factors can be identified out of the 13 behaviour measures considered. The analysis of the statistical output is presented below:

- Out of total 91 cases in the sample, the factor analysis dropped 3 cases due to missing values.
- Although the sample size is quite small for a factor analysis, the Kaiser-Meyer-Olkin Measure of sampling adequacy at the level of 0.87 shows that the sample size is adequate, though may not be ideal (Table 5, Appendix E) considering the number of variables used in the questionnaire. There is a reasonable ratio of 7:1 between the sample size (91) and number of variables (13) analysed. The Bartlett's Test of Sphericity (Table 5, Appendix E) strongly rejects the test's null hypothesis that the correlation matrix is an identity matrix (significance value $p < 0.02$) indicating that, a factor analysis on the variables can be conducted in this case.
- In order to analyse all variances in the item and to explore the principal scale components, the analysis is done through Principal Components method. This method takes into account total variance among the variables.
- The rotation is applied to extract three components based on the Scree plot (Figure 9, Appendix E) which shows the elbow at the third component level with an initial Eigenvalue of 0.952, with rest of the two components above elbow having Eigenvalue well above 1.0. The three components together explain 62.538 % of total variances.

- However, on running a reliability test on the factor scores of the extracted components, a low Chronbach's alpha value of 0.64 is seen. This reliability value increases to 0.748 if the third component with initial Eigenvalue of <1.0 is removed. Due to this, the extraction is applied once again to reduce the scale to two components only. The reliability test conducted further on the two components still shows a Chronbach's alpha below 0.70. Hence, considering the fact that keeping three components explains higher total variability, all the first three components are retained.
- Using the principle explained in Tabachnick and Fidell (2007, p. 646), an oblique rotation (Promax in SPSS with Kaiser Normalisation) method is first applied, which shows component correlation value $> \pm 0.32$; therefore, this oblique method of rotation in SPSS is used.
- One item in the scale (item no.22 of the questionnaire) showing a communality < 0.5 on the extracted components is not used. This enhances the resultant communality values (minimum being 0.612) of rest of the variables on the three components. This also results in the three components explaining 65.69% of variability with rotated Eigenvalue of more than 2.29 for the third component, as given in Table 6 of Appendix E.
- Based on the variables loading into the three different components as given in the Component Pattern Matrix at Table 7, the components are identified as measure for 'commitment', 'satisfaction', and 'motivation'.

Table 7. Principal Component Extraction through Rotation

Component Pattern Matrix ^a			
Scale Item	Component		
	1	2	3
	Commitment	Satisfaction	Motivation
Overall, I am satisfied with the performance ratings obtained by me so far.		.600	
I have always experienced improvement in my performance after getting my performance rating feedback.		.787	
On some occasions, I have felt like quitting NALCO after getting my moderated performance rating (-ve, reverse coded).	.773		
I always feel I am part of a team in NALCO which takes care of the team members.	.673		

(table continues)

(continued)

Component Pattern Matrix ^a			
Scale Item	Component		
	1	2	3
	Commitment	Satisfaction	Motivation
I find enough opportunities in NALCO for my career development and professional growth	.803		
I feel that the company cares about its executives.	.593		
I am committed to working in NALCO and see myself staying here for a long term career.	.947		
Most days I am enthusiastic about my job.			.806
My assessing officers at moderation level are unfair to me(-ve, reverse coded).		.531	
Often, I find it difficult to agree with this company's policies on important matters relating to its employees(-ve, reverse coded).		.995	
I feel very happy coming to work every morning			.854
I like to recommend NALCO as an employer to others	.569		
Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.			
a. Rotation converged in 5 iterations.			

- The linear correlation coefficients of the variables loaded into the three different factors, as per the component pattern matrix, are considered for calculating the Likert scale scores for the three new components. These scores are used for further analysis in hypothesis testing in place of group mean scores of behaviour measures calculated earlier.
- The descriptive statistics for these new components are shown below in Table 8. The normality curve/ histogram as well as the Q-Q normality plots show a near normal distribution fit for a t-test.

Table 8. Descriptive statistics for employee behavioural measures

Statistic		Commitment	Satisfaction	Motivation
N	Valid	91	91	91
	Missing	0	0	0
Mean		3.42	2.96	4.03
Median		3.50	2.95	4.00
Mode		4.13	4.00	4.51
Std. Deviation		.833	.832	.807
Variance		.695	.694	.652

4.4.2.4 Determining the Levels of Process Strengths and Employee Morale

For the purpose of analysis, the mean score of four (4) or above per measure is considered ‘good’ and a score of two (2) or below is considered ‘poor’. As observed from the sample means for both process strengths as well as employee behavioural parameters, it seems that both are at below ‘good’ levels. However, in order to reach a conclusion that this is true for the entire managerial population of Nalco, it is necessary to rule out the possibility that the sample analysed is not a true sample and that the true mean values for both process strengths as well as employee behaviours are ‘good’ or above. To meet this end, the study tests several hypotheses on each of the parameters.

Because the survey uses a Likert scale for recording responses, before the means are compared to test the hypotheses, normality check is conducted to see the sample distribution and rule out outliers, if any. A Q-Q normality plot for each parameter drawn using the SPSS-22 shows a normal distribution of the parameter scores. A histogram and normality curve for each drawn using SPSS also shows a normal distribution of the scores.

Following the normality check, a single sample t-test procedure is conducted on each parameter to check whether there is enough evidence to show that the current sample is not a true representative sample from the population of managerial employees of Nalco so that the mean sample score is less than the hypothesised population score.

- **Hypothesis on Process Strengths:** The mean score on strengths of the performance appraisal process (ten measures considered in the questionnaire) as perceived by managers of Nalco is ‘good’ or above. In other words, the sample mean of 28.79 is not a true representative of the population mean of process strengths, which is ≥ 40 (10 measures x 4).

Result of the single sample t-test: The p-value of 0.00 (2-tailed) at 95% confidence level for the single sample t-test (Table 7, Appendix E) shows that the sample mean score of 28.79 for the seven process strengths of Nalco performance appraisal system is statistically

significantly different from the hypothesised mean value of minimum 4.0. Thus the null hypothesis, that managers of Nalco consider the appraisal process as 'good' or above, is rejected. The alternative hypothesis that they perceive the appraisal process as below good level is established.

- **Hypotheses on behavioural parameters:** The mean score on employee 'commitment', 'satisfaction', and 'motivation' as observed in the managers of Nalco is 'good' or above. In other words, the sample means of 3.42, 2.96, and 4.03 for these parameters respectively do not truly represent the population means for these parameters, which are greater than or equal to 4.0 for all the three parameters. The alternative hypotheses are that these sample means are less than 4.0.

Result of the single sample t-test: The p-value at 95% confidence level for the single sample t-tests (Table 8 & 9, Appendix E) for the first two parameters of 'commitment' and 'satisfaction' are 0.000 (2-tailed). This low (<0.05) p-values show that the sample mean score of 3.42 and 2.96 respectively for the employee commitment and satisfaction measures of managers of Nalco are statistically significantly different from the hypothesised mean value of minimum 4.0 for each of these two parameters. Thus the null hypotheses that, managers of Nalco display good or above 'commitment' and 'satisfaction' scoring 4.0 or above against each parameter, are rejected.

However, the high p-value of .694 (2-tailed) at 95% confidence level for the single sample t-test for 'motivation' (Table 10, Appendix E) shows that the sample mean score of 4.03 for this measure of managerial behaviour is not statistically significantly different from the hypothesised mean value of minimum 4. Thus the null hypothesis that, managers of Nalco display good or above 'motivation' level scoring 4, or above, cannot be rejected.

Considering the explanation in literature with regard to the behavioural dimensions of commitment, satisfaction, and motivation that these are highly inter-related and are hard to be distinguished from one another or rather highly influence one another (Evans, 1998; Meyer et al., 2004), the three behavioural components may be responsible for 'morale' of the managers of Nalco. In order to test whether the three variables can be reduced to one single meaningful component, a factor analysis in principal component extraction method is conducted for 'commitment', 'satisfaction', and 'motivation'. The results are given in Tables 11 to 13 in Appendix E.

The analysis extracts only one component with Eigenvalue >1.0 and it explains variability of about 59%. Considering the composition of the three variables of organisational commitment, satisfaction, and motivation loading on to it and the supporting literature cited in the preceding paragraph, the extracted component is named employee 'morale'. Values for this component are built up using the component matrix loads on the three variables.

The descriptive statistics for this new variable 'employee morale' gives a mean value of 3.40 (n=91) with standard deviation of 0.649. Further, the Q-Q plots and normality curves on a histogram show a normal distribution. Since the mean value of 3.40 this measure for 'employee morale' is less than the 'good' score of 4.0 in the Likert scale considered, a single sample t-test is conducted to determine whether this is a coincidence or the mean value is actually statistically significantly less than a hypothesised mean ≥ 4.0 .

- **Hypothesis on employee morale:** The mean score on employee 'morale' as observed in the managers of Nalco is 'good' or above. In other words, the sample mean of 3.40 is not a true representative of the population mean of 'morale', which is greater than or equal to 4.0.

Result of the single sample t-test: The p-value of .000 (2-tailed) at 95% confidence level for the single sample t-test shows that the sample-mean score of 3.40 for the employee 'morale' measure of managers of Nalco is statistically significantly different from the hypothesised mean value of minimum 4.0. Thus the null hypothesis, that managers of Nalco display good or above 'morale' level scoring 4.0, or above, is rejected. The results of the single sample t-test in SPSS are produced in Table 14 in Appendix E.

4.4.2.5 Correlation between Appraisal Process and Employee Morale

After concluding that the managers of Nalco perceive the performance appraisal process including the forced distribution moderation process as not good and also that they have 'below good' level of employee morale, the study tries to find out whether there is any correlation between these two aspects of the study. This analysis helps in establishing or rejecting the hypothesis formed in qualitative data analysis, that employee behaviour in Nalco is not affected by a not-so-well performing appraisal process with forced distribution of rating, as perceived by the managerial employees of the company.

- **Hypothesis on correlation between appraisal process and employee morale:** The performance appraisal process does not affect the behavioural indicator of morale (motivation, organisational commitment, and satisfaction) for the managers of Nalco. For testing the above hypothesis, the following null and alternative hypotheses are set:

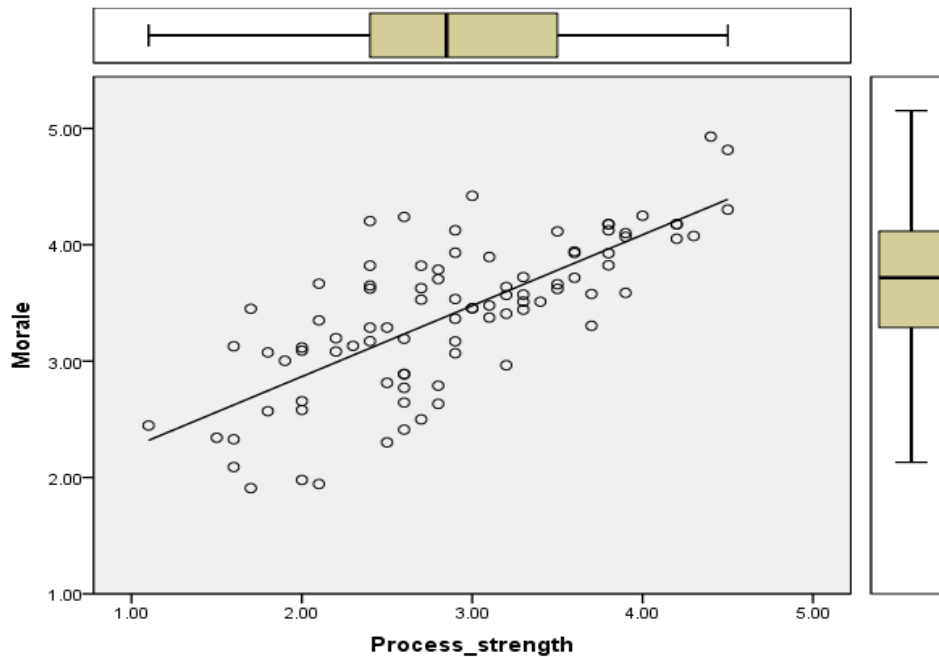
H_0 : There is no positive and significant relationship between the performance appraisal process and the employee morale.

H_1 : There is a positive and significant relationship between the above two factors.

Results of the hypothesis test: In order to test the above hypothesis, a correlation matrix between the two parametric sets of process strengths and the employee morale is drawn using the SPSS-22 and produced in Table 15 of Appendix E. This shows a significant ($p < 0.01$, two tailed; $n = 91$) Pearson correlation coefficient of 0.738 between the appraisal

process perception of managers and their workplace morale. Based on the results of the above correlation test, which gives a statistically significant ($p=.000$) positive correlation coefficient of 0.738 at $p<0.01$ (2-tailed), the null hypothesis is rejected. Thus, the alternative hypothesis, which assumes a positive and significant linear correlation between managers' perception about the performance appraisal process and their behavioural outcomes, is statistically established. The regression scatter plot for the two parameters at Figure 9 also depicts the above conclusion of the linear correlation.

Figure 9. Correlation between appraisal process perception and employee morale



5 FINDINGS AND DISCUSSION

Based on the results of both qualitative and quantitative research in the foregoing chapter, the study now proceeds to summarise the findings and discuss their importance and relevance in the backdrop of literature reviewed. This chapter also discusses the implications of the findings for Nalco and recommends certain measures for the consideration of the management of the company. It also reveals the limitations of this research to keep further researchers aware of the potential weaknesses and constraints of a study on the subject.

5.1 Summary of Research Findings

The detailed literature review on the performance appraisal process with emphasis on forced distribution process has revealed that there exist many loose ends in the academic research into this important aspect of employee management. The specific study of Nalco as an

Indian CPSE in this context tries to deal with the black-box problem described in the literature regarding correlation between employee perception of HR processes in organisations and their impact on employee behavioural outcomes. The summary of these findings are discussed below.

- **Appraisal process:** The qualitative research through both the literature review, study of secondary data from the company Nalco and other similar public sector companies in India as well as analysis of interview findings have indicated that the appraisal system of Nalco follows most of the theoretical aspects of performance management. It is largely influenced by guidelines issued by the DPE, government of India and the procedures followed by some large public sector companies in the country. However, the study has found out differences in implementation of these guidelines by different public sector companies, which indicates that there may be some issues in the application of moderation system in Nalco.

Especially, the balance scorecard approach in appraisal management recommended by DPE is conspicuous by its absence in Nalco. There is also a difference in approach to the use of the appraisal ratings among the other public sector companies and Nalco. The quantitative research through hypothesis testing shows that the managers of Nalco do not perceive the appraisal process as a good one. This negative perception is highest among the managers in the E6-E7 level band.

- **Employee behaviour:** The literature review on the subject showed to some extent that employee perception about a performance appraisal process could have both positive and negative impact on workplace behaviour. The qualitative research through interview process did not clearly indicate existence of any substantial impact of the appraisal process on the employee morale, motivation, and commitment. However, the final quantitative analysis done through test of hypothesis shows that the level of morale, motivation, commitment, and other organisational behaviours of the managers in Nalco cannot be said to be good and such behaviours are positively correlated to their perception of the appraisal system. The behavioural indicators are at the lowest levels at the E6-E7 level of managers. However, a low turnover rate of less than 1 % is not indicative of any alarm.
- **Impact of perception about the appraisal process on employee behaviour:** Though the qualitative analysis of the open-ended interviews indicated non-existence of any substantial causal relationship between perceptions of the managers of Nalco about the appraisal process comprising of forced distribution of ratings, the hypothesis testing in quantitative research has shown such a correlation. This correlation is distinctly visible at the E6-E7 level where a most negative perception about the appraisal process associates with the lowest levels of employee behaviour.

5.2 Discussion on the Findings, Implications, and Limitations

The study finds managers of Nalco across levels and locations undecided about the merits and demerits of the performance appraisal system. An average parametric score of below '3' for the process perception indicate they perceive the appraisal process not as a good system, though not quite naming it as a bad one. Analysed in terms of individual process measure, this also means that the managers see the process of appraisal as not fair, transparent, objective, and capable of merit differentiation. An item wise analysis of the process related responses shows that about 68% think the process is biased and about 59% perceive it as promoting favouritism. A very high 86% think the process needs more standardisation. High scores on these measures indicates that the perception of managers in Nalco about the forced distribution based rating system is substantially influenced by the use of the appraisal rating for both performance related pay and promotions. This substantiates findings in existing literature that, knowledge of use of ratings affects the process (Decotiis & Petit, 1978; DeNisi et al., 1984; Jawahar & Williams, 1997; Ostroff, 1993).

5.2.1 Critical Analysis of the Appraisal Process in Nalco

A careful analysis of the process followed in Nalco suggests that the company uses a combination of absolute and relative rating formats narrated in Table 1 (Turgut & Mert, 2014). The target setting process in form B and evaluation in form D1 are examples of MBO (management by objective) system. The evaluation of performance and potential factors under managerial skills in form D2 and D3 are examples of GRS (graphic rating scale) combined with the critical incidents method. The final process of moderation/rationalisation into a bell-shaped normal distribution is a method of FDS (forced distribution system) to take care of possible biases and errors in rating at the appraiser or reviewing officer level.

Since the appraiser rates the annual performance based on actual recorded targets and audited performance, bias or error in this part is ruled out. Although there is some possibility of subjectivity in evaluating the managerial skills in D2 and D3, the same is minimised due to description of individual measures of performance and potential skills and also provision of a rating scale from '1' to '5'. The suggestion of recording critical incidents, both negative and positive, while evaluating these skills in forms D2 and D3 further minimises the chances of bias and error by the appraiser by limiting his/ her subjective considerations.

Finally, the moderation done for achieving the 'bell curve' forces a relative ranking of the appraisee in his/ her group and level to remove the element of different subjective measurement applied by different raters. However, it is also observed that this final forced distribution by the moderation committee members may have the potential to negate the entire process of appraisal described above. It is because the moderation committee

members may not have full knowledge of the managerial skills of all the ratees whose ratings are moderated and may end up giving higher or lower ratings to a few they have good or bad feelings or experience about. This is similar to the possible ‘halo’ or ‘horn’ effect (Bhattacharyya, 2011) described in section 1.5.3 in Chapter 1. Further, it is also possible that the behaviour of moderation committee members may be influenced by their knowledge of use of the final moderated rating for purposes of promotion or pay distribution (Decotiis & Petit, 1978; DeNisi et al., 1984; Jawahar & Williams, 1997; Ostroff, 1993). Possible consequential errors and biases in rating might be a cause of dissatisfaction and might negatively affect the morale of the executives (Meisler, 2003).

5.2.2 Analysis of Outcomes of Appraisal Process in Nalco

Managers of Nalco do not quite display positive work attitudes and behaviours like motivation, general satisfaction, morale or positive organisational commitment though the trend is tilted in favour of agreement, as indicated by an average behavioural parametric score of more than ‘3’ but less than ‘4’. This means that the levels of motivation, morale, general satisfaction, and commitment are not very encouraging, though not considerably negative. An item wise analysis of these behavioural questions shows that as high as 90.2% feel enthusiastic and motivated. In fact, presence of this feeling of happiness, satisfaction, organisational commitment, staying intention, and motivation is reflected in high scores against several questions. However, the grouped analysis of the responses shows that out of the 90% who said they were enthusiastic and motivated, about 32% said they had a feeling of unfair and biased treatment. Out of the 78% who agreed they are committed and want to stay, about 29% said they don’t like to do more than they are required to do. The findings indicate that perhaps a much larger survey among the managers of Nalco would give a more comprehensive view of their level of morale, motivation, satisfaction, and commitment.

As regards correlation between the employee perception about the appraisal system and employee behavioural outcomes, such a possibility exists as explained by Boxall and Purcell (2011, p.244) citing the causal chain model of Wright and Nishii (2004). Several researchers as brought out in literature review of this thesis (Table 1, Appendix C) also illustrate possibility of such link. Similar picture is also evident from the survey outcomes of the SHRM & PDI (2000) survey on Performance Management. However, the presence of a ‘black box’ situation (Armstrong, 2012; Boxall & Purcell, 2011) as brought out in the literature review in Chapter 1 is not ruled out here. The quantitative research in this thesis has shown existence of a relationship between perception of Nalco’s managers about the performance appraisal process and their levels of workplace morale. However, it is difficult to say how much affect is caused by the specific HR system of performance appraisal and how much of that affect is countered or neutralised by the stronger or weaker effect of one or more other HR systems or overall organisational context.

As a manager of Nalco, this researcher has reason to believe that the morale and motivation of the managers is positively affected by systems like a relatively high compensation package, other benefits, and amenities offered by the company. The feeling of being a member of a Navaratna public sector company might also be affecting the morale positively. It is, however, a subject of further investigation as to i) whether there is a definite causal relationship between the above two organisational aspects, i.e. one HRM process and its possible behavioural outcomes; and ii) what is the degree of such affect, if any.

5.2.3 Organisational Implications

The findings of this research showing reasonably low levels of morale amongst the managers of Nalco highlight the need of urgent organisational intervention. If the lowest level of such behavioural indicators at the E6-E7 level is any indication of how the managers at this important organisational level are performing, it is a noteworthy finding from the organisational point of view. The research finding that the negative perception of managers about the forced distribution based performance appraisal system may have been responsible for the low levels of organisational commitment and motivation, necessitates a review of the appraisal process, its implementation, and use of the performance ratings. The centrality of employee perception and behaviour to individual and collective levels of actions and outcomes, as explained by Boxall and Purcell (2011) in the 'black box' model, stresses the need for such action by the organisation. Unless such strongly shared negative perception of managerial motives and behaviour are corrected, it may cause major damage to the organisation (Grant, 1999, in Boxall & Purcell, 2011).

5.2.4 Limitations

This study about the performance appraisal system of Nalco looks at the system and its effects primarily through the eyes of the researcher, who is a manager in the company at the E6-E7 level. This may have caused some amount of researcher bias in the results due to own expectancies of the researcher (Sackett, 1979). Like the historian by and large gets the kind of facts he wants (Carr, 2008), it is possible that this research findings are influenced by at least sub-conscious thoughts and perceptions of the researcher.

Another important limitation of this study is the locational limitation of the researcher stationed in Slovenia during the period of study, which focussed on a company located in India. The relatively low response to the questionnaire in quantitative research due to this limitation may have impacted the findings to some extent due to sampling errors. Further, the primary research conducted through telephone interview method has the limitation of blindness to the interviewee's reactions and other non-verbal cues, thereby limiting the ability to know whether the interviewee is truthful in his/her answers.

The lack of sufficient literature on organisational research into the aspects of performance appraisal through forced distribution has also been a major limitation of this study. Finally, the purported size of this study due to the university's regulations on master thesis and the limited access of the researcher to physical library resources in Ljubljana for carrying out a more detailed literature review may have limited the depth and extent of the research.

5.3 Recommendations

Based on the study as summarised in the preceding section, the following recommendations are made to bring about a change in perceptions of the managers with regard to the performance appraisal process and to achieve positive outcomes for both the managers and the organisation.

- The performance and potential parts of the appraisal process may be completely separated from each other. These are completely different aspects of appraisal; while the former measures past action, the later measures future possibility.
- The balance scorecard approach advised by DPE and implemented for higher management levels through MOU (memorandum of understanding) route may be adopted for all levels of managers. This will bring uniform compliance of government guidelines and provide a scientific evaluation of performance.
- The performance part may be subjected to moderation in terms of the DPE guideline, which requires a forced distribution range on both sides of the 'bell curve' to regulate performance related pay (PRP). The present pattern of distribution may be reduced to maximum five levels to match the levels of 'Excellent' (10-15%), 'Very Good', 'Good', 'Average' (three taken together 75-80%), and 'Poor' (10%).
- The potential appraisal part may not be necessarily and strictly distributed in the pattern advised by DPE for PRP regulation. A floor level of rating may not be a good idea, though a range of forcing a distribution may help in standardisation and in removing arbitrariness. The range may be kept at 10% to 20% variation level.
- Any forced distribution causing a more than say 10% change in rating may be supported by justification recorded in writing and substantiated with facts. This will restrict the scope of bias, arbitrariness, and favouritism.
- Since promotions to higher position should be primarily based on potential for future role and not only on past performance, the weightage for performance rating and potential appraisal for all levels may be kept tilted highly in favour of potentials, say at 25:75 levels. This will reduce the negative impact of moderated performance rating forced to meet the DPE guidelines on PRP.
- The entire appraisal process up to the very end may be made completely transparent to the appraise through on-line access of final ratings of each stage and aspects in which she/he scores below 'Good'.

- The discussion and feedback sessions should be genuinely carried out to increase trust between the rater and the ratee. The constraints of time may be addressed by limiting the frequency of formal feedback sessions.

However, it is highly recommended that Nalco may carry out a detailed study of the performance appraisal process, as it exists in the company and other public sector companies before embarking upon the recommended changes. An insight in to the practice in other metal and power sector companies in India and elsewhere may be very handy in this regard.

CONCLUSION

The black-box phenomenon described in the literature (Alvesson, 2009 in Armstrong, 2012; Boxall & Purcell, 2011) shrouds a lot of mystery as to what happens in between various HR processes and outcomes of those processes on the behaviour of employees and organisational performance. Linking an organisational outcome with one or more specific HR processes does not seem feasible due to the reason that these processes do not take place in isolation. The organisation under study in any research also does not operate as a sole operator in the society. The occurrences may not also lead to the same result at different points in time, even if these occur in isolation and even if the researcher seals off the organisation from external influence. This entire research has focussed on this aspect of variability of human behaviour in an organisation based on experience about an important HR process, which seeks to manage performance.

The findings of both primary and secondary research in this study lead to the conclusion that the performance appraisal process in respect of managers in Nalco does not reasonably compare with the policy and practices in other major public sector companies in India. It also does not match with the contemporary global trend, which is predominantly placed against the forced distribution in ratings. The differences observed in implementation of the DPE guidelines by the different public sector companies in the matter of appraisal and the bell shaped distribution of ratings indicate that there is scope for a review of the practice in Nalco.

Nalco as a central public sector company of India has 'Navaratna' (DPE, 2014a) status due to its overall excellent performance over the years. The performance of the organisation can be attributed to its rich human capital comprising of highly qualified and skilled managerial personnel. However, the research has found out a below good level of organisational commitment, positive workplace attitude and behaviour at present among the managers of Nalco, which is a matter of concern.

The findings indicating a positive correlation between the perception of managers about the performance appraisal process and their attitudes indicates that positive efforts of

management to improve the levels of fairness, transparency, objectivity, and standardisation in the appraisal process will have a positive effect on the managers. The finding that, these aspects of the present performance appraisal process are not perceived well by the managers at present across levels and locations, strongly point to a need for a review of the process. Thus all the research questions and hypotheses introduced in the study have been answered.

It seems that the low turnover intention seen in the company in spite of low levels of organisational commitment is influenced by job market situations in India and job security needs of a majority of managers at the mid of their career. In spite of a plethora of literature linking turnover intention to organisational commitment of employees, the researcher believes, based on his long organisational experience, that turnover intentions may not always be reflected in actual turnover rates of the company. Several other positive organisational features, social and family influences and needs, security needs, fear of leaving the comfort of a job one is skilled and confident to perform, and fear of identity crisis in a new organisation may be playing a substantial role in actual turnover of employees. The high degree of job security and a practical guarantee of handsome salary and other benefits irrespective of individual contribution to performance in the public sector also seems to be a major cause of a low and deceptive turnover rate. However, further research is required to establish these assumptions beyond doubt.

Further research is required to find out the possibility and extent of impact of other HR systems of Nalco on the positive workplace behaviour of the managers. Further study is also required to find out to what extent the negative or positive impact of various aspects of the performance appraisal process is shadowed by other HR systems of the company like the pay and benefits, career planning and development policies, social security measures, job security needs of managers, work culture, and organisational discipline etc.

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APPENDIXES

TABLE OF APPENDIXES

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Appendix A: List of Abbreviations

B.C.	Before Christ
BARS	Behaviourally Anchored Rating Scales
BHEL	Bharat Heavy Electricals Limited, India
BOS	Behavioural Observation Scale
CIL	Coal India Limited
df	Degrees of Freedom
DPE	Department of Public Enterprise, Government of India
FDRS	Forced Distribution Rating Scale
FDS	Forced Distribution System
FELU	Faculty of Economics, Ljubljana University
GE	General Electric
GRS	Graphic Rating Scale
HR	Human Resources
HRD	Human Resource Development
HRM	Human Resource Management
INR	Indian Rupee
ISO	International Organisation for Standardisation
KPA	Key Performance Area
KPI	Key Performance Indicator
KRA	Key Result Areas
M&R	Mines & Refinery complex
MBO	Management By Objective

MOU	Memorandum of Understanding
MSQ	Minesotta Satisfaction Questionnaire
NALCO	National Aluminium Company
OCB	Organisational Citizenship Behaviour
OECD	Organisation for Economic Co-operation and Development
OHSAS	Occupational Health and Safety Assessment Series
ONGC	Oil & Natural Gas Corporation, India
OP	Organisational Performance
PA	Performance Appraisal
PBT	Profit Before Taxes
PDI	Personnel Decisions International
PF	Port Facilities
PMS	Performance Management System
PRP	Performance related Pay
RO	Regional Offices
S&P	Smelter & Power complex
SAIL	Steel Authority of Inda Limited
SHRM	Society for Human Resource Management
Sig	Significance
SPSS	Statistical Package for the Social Sciences
TPA	Tonnes Per Annum
UK	United Kingdom
WB	Well-Being
WERS	Workplace Employment Relations Study (Government of UK)

Appendix B: Interview Questions

1. What role do you see for a performance appraisal system in an industry like ours?
2. What do you think about our performance appraisal process?
3. How effective is the appraisal system?
4. Do you see our moderation process as a fair system? Is it transparent?
5. Please narrate your experience as an appraisee. How do you feel when you receive a feedback?
6. Have you ever been involved in the moderation process? If yes, what thoughts dominated your actions during the process?
7. Is the overall process successful in recognising merit?
8. What do you feel about the level of commitment and motivation of our managers?
9. What measures would you suggest to make the process more effective?

Appendix C: Additional Tables & Figures (Literature Review)

Table 1. Link between HRM and Organisational Performance

Researcher(s)	Methodology	Outcomes
Patterson et al. (1997)	The research examined the link between business performance and organisation culture and the use of number of HR practices	HR practices explained significant variations in profitability and productivity (19% and 18% respectively). Two HR practices were particularly significant: 1) the acquisition and development of employee skills, and 2) job design including flexibility, responsibility and variety.
Guest et al. (2000a)	An analysis of the 1998 WERS survey, which sampled some 2000 workplaces and obtained the view of about 28000 employees	A strong association exists between HRM and both employee attitude and workplace performance
Thompson (2002)	A study of the impact of high performance work practices such as team working, appraisal, job rotation, broad banded grade structures and sharing of business information in UK aerospace establishments.	The number of HR practices and the proportion of the workforce covered appeared to be the key differentiating factor between more and less successful firms.
West et al. (2002)	Research conducted in 61 UK hospitals obtaining information on HR strategy, policy, and procedures from chief executives to HR directors and mortality rates.	An association between certain HR practices and lower mortality rates was identified. As noted by West: 'If you have HR practices that focus on effort and skill; develop people's skills; encourage cooperation, collaboration, innovation, and synergy in teams for most, if not all employees, the whole system functions and performs better.'

(table continues)

(continued)

Researcher(s)	Methodology	Outcomes
Purcell et al. (2003)	A University of Bath longitudinal study of 12 companies to establish how people management impacts on organisational performance	The most successful companies had 'the big idea'. They had a clear vision and a set of integrated values. They were concerned with sustaining performance and flexibility. Clear evidence existed between positive attitudes towards HR policies and practices, levels of satisfaction, motivation and commitment, and operational performance. Policy and practice implementation (not the number of HR practices adopted) is the vital ingredient in linking people management to business performance and this is primarily the task of line managers.
Birdi et al. (2008)	A longitudinal research study by the Institute of Work Psychology, University of Sheffield covering 308 companies over 22 years, designed to establish the impact of various HRM and operational practices on company productivity	It was found that the impact of empowerment (job enrichment) was to produce a gain of nearly 7% of value added per employee, while the gain for extensive training was nearly 6%. But teamwork did not make a significant impact, neither did total quality management or just-in-time.

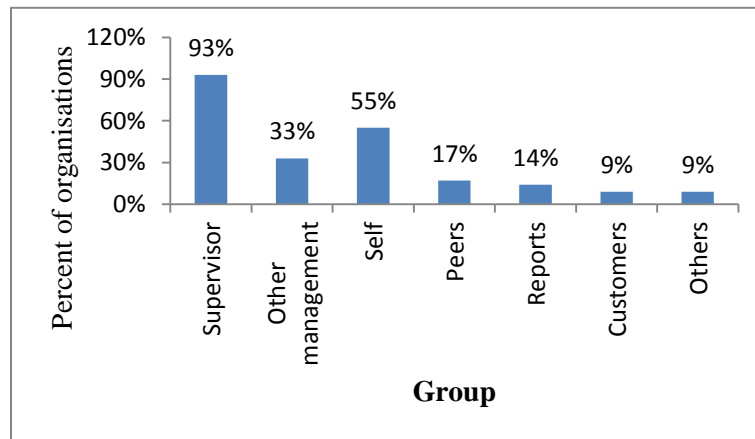
Source: M. Armstrong & S. Taylor, *Armstrong's Handbook of Human Resource Management Practice*, 2014, Table 4.1, p.55

Table 2. Objectives of Performance Management

Objectives	Average
Provide information to employees about their performance	2.8
Clarify organizational expectations of employees	2.8
Identify developmental needs	3.7
Gather information for pay decisions	4.0
Gather information for coaching	4.2
Document performance for employee records	4.6
Gather information for promotion decisions	5.2

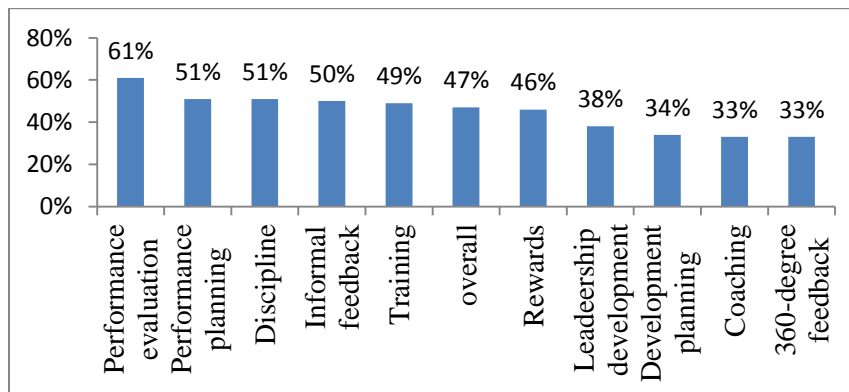
Source: SHRM ®/PDI, 2000 *Performance Management Survey*,p.7,Fig.1

Figure 1. Input into Appraisals



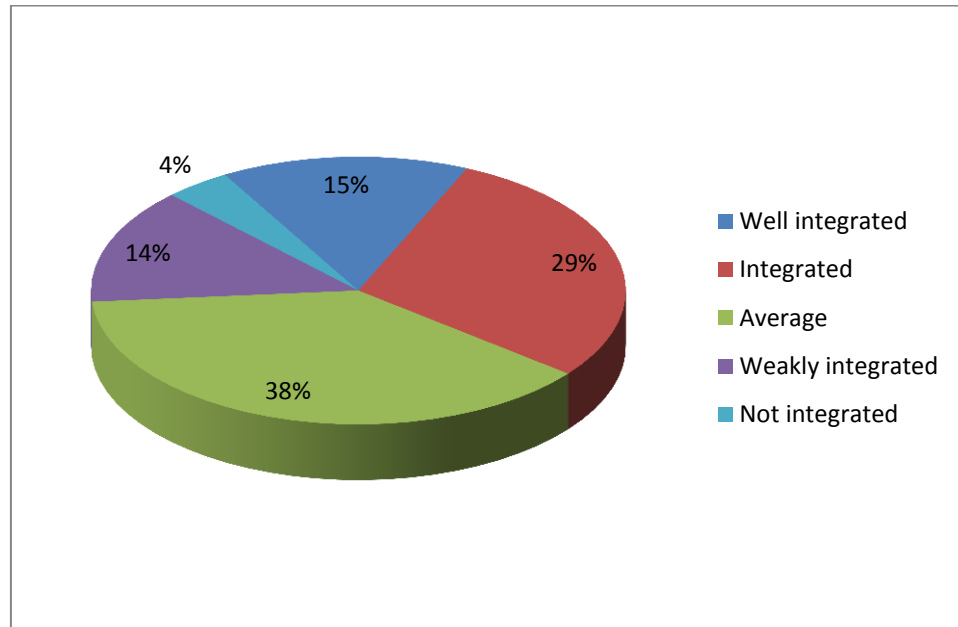
Source: SHRM ®/PDI, 2000 *Performance Management Survey*,p.12,Fig.7

Figure 2. System Satisfaction



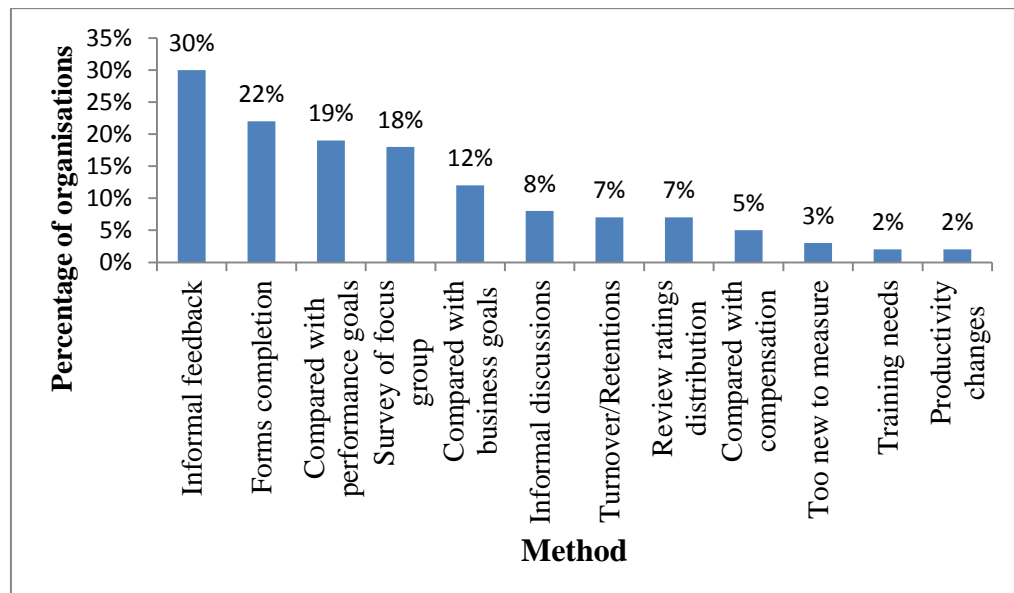
Source: SHRM ®/PDI, 2000 *Performance Management Survey*,p.8,Fig.2

Figure 3.Integration of System



Source: SHRM ®/PDI, 2000 Performance Management Survey,p.11,Fig.6

Figure 4.Measures of System Effectiveness



Source: SHRM ®/PDI, 2000 Performance Management Survey,p.10,Fig.5

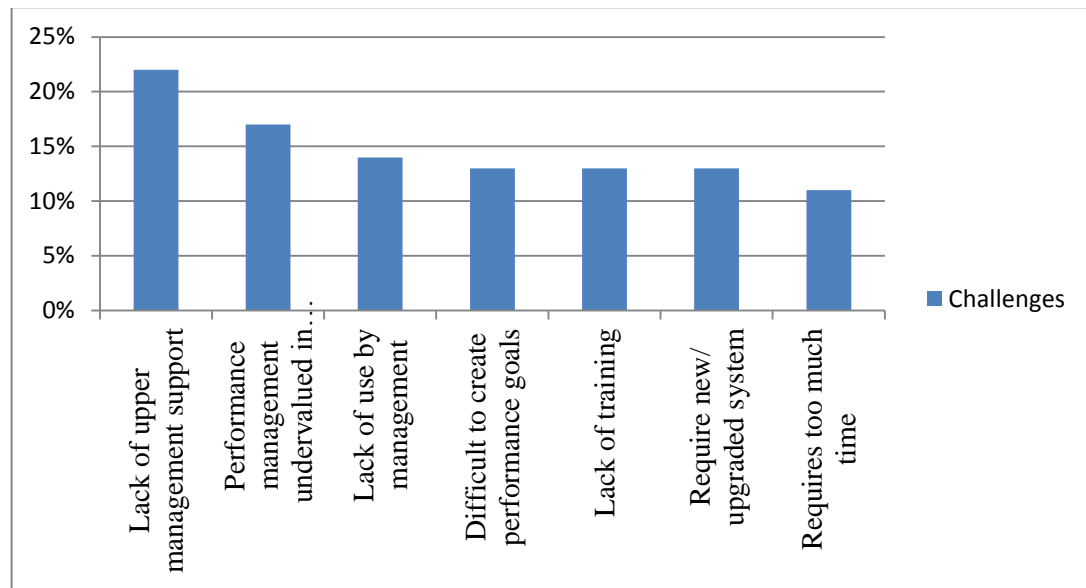
Table 3. Usage of Performance Management Tools by Industry Groups

Performance Management Tool	Technology Industry Group (n=99)	Manufacturing Industry Group (n=166)	Services/Other Industry Group (n=192)
Performance plans for most* non-exempt employees	60%	37%	46%
Development plans for most* non-exempt employees	26%	17%	16%
Career plans for non-exempt employees	35%	27%	21%
Link performance goals to operating results for non-exempt employees	77%	63%	53%
Performance pay for non-exempt employees	89%	71%	53%
Online independent study	57%	41%	42%
Classroom training, average annual hours per employee Executives Exempt employees Non-exempt employees	21 hours 26 hours 23 hours	18 hours 20 hours 16 hours	17 hours 20 hours 16 hours

*Denotes at least three out of four non-exempt employees

Source: SHRM ®/PDI, 2000 *Performance Management Survey*, p.16, Fig.11

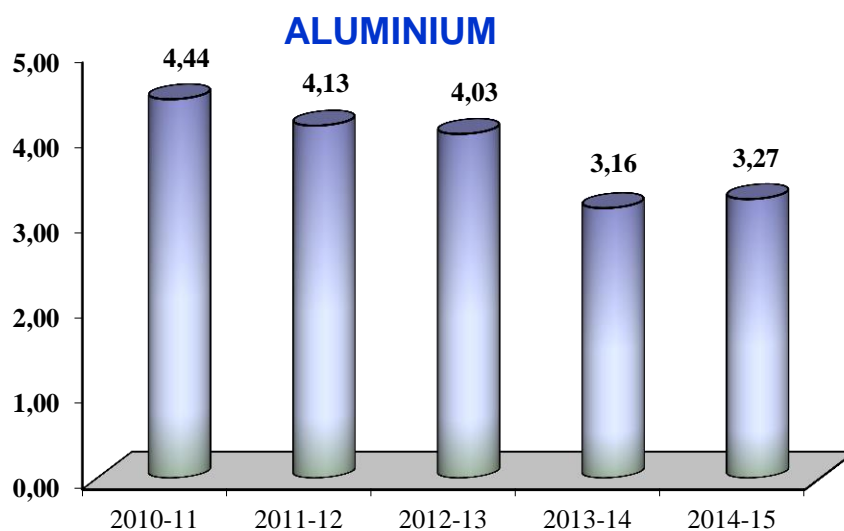
Figure 5.Future Challenges



Source: SHRM ®/PDI, 2000 Performance Management Survey,p.9,Fig.3

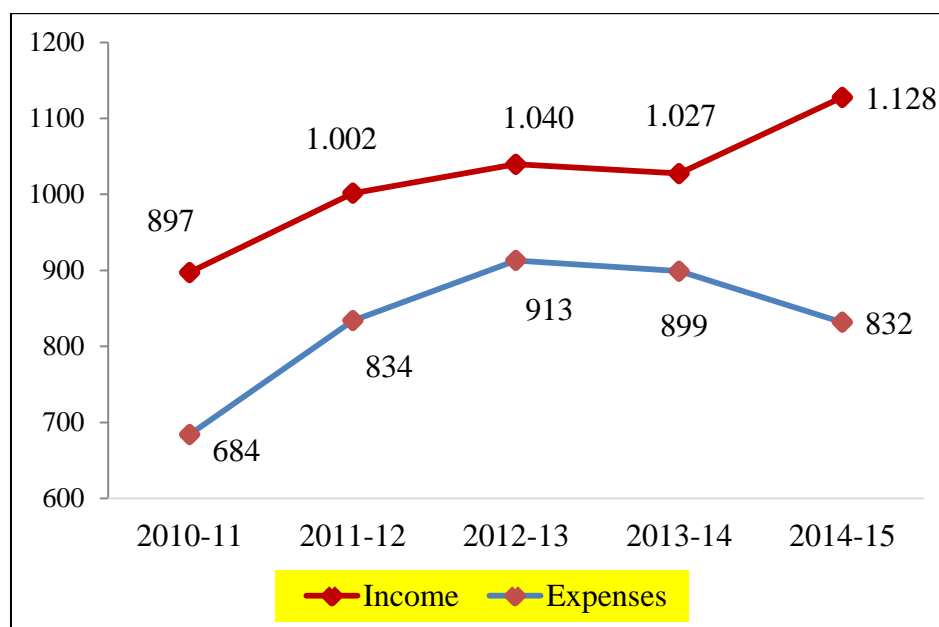
Appendix D: Additional Figures (Company Presentation)

Figure 6. Nalco's Aluminium Production (in hundred thousand Tonnes) during 2010-2015



Source: Compiled from internal data of company Nalco

Figure 7. Nalco's Financial Performance (in million €) during 2010-15



(€1= 72.36 INR, as on 15-08-2015)

Source: Compiled from internal data of company Nalco

Figure 8.Nalco's Labour Productivity (in Aluminium production) during 2010-15



Source: Compiled from internal data of company Nalco

Appendix E: Tables & Figures of Statistical Analysis

Table 4. Descriptive Statistics of Survey Responses

Item No.	Item	STATISTIC						
		Mean	Median	Mode	Standard Deviation	Minimum	Maximum	Count (N)
1	The executive performance appraisal system in NALCO is successful in distinguishing performers from non-performers.	3.121	4	4	1.307	1	5	91
2	The executive performance appraisal system is transparent	2.912	3	2	1.170	1	5	91
3	The executive performance appraisal system of NALCO has very little subjectivity.	3.157	4	4	1.043	1	5	89
4	The forced ranking (moderation) in appraisal process of NALCO is essential to compare performance of executives working under different Controlling Officers(Appraisers)	3.143	4	4	1.287	1	5	91
5	The forced ranking (moderation) in executive appraisal process of NALCO is unbiased	2.330	2	2	1.116	1	5	91
6	The forced ranking (moderation) in executive appraisal process of NALCO is effective in recognising talent and good performance.	2.615	2	2	1.143	1	5	91

(table continues)

(continued)

Item No.	Item	STATISTIC						
		Mean	Median	Mode	Standard Deviation	Minimum	Maximum	Count (N)
7	The forced ranking (moderation) process in executive appraisal system of NALCO motivates high performers.	2.725	2	2	1.146	1	5	91
8	The forced ranking (moderation) in appraisal process of NALCO is a management tool to promote personal favourites.	2.407	2	2	1.115	1	5	91
9	Possible bias in the moderation process can be minimised by using standard factors based on KPA, role/position, geographical location, past records, measured potential rating etc.	1.802	2	2	0.806	0	5	91
10	Overall, I am satisfied with the performance ratings obtained by me so far.	3.099	3	4	1.155	1	5	91
11	I have always experienced improvement in my performance after getting my performance rating feedback.	3.077	3	4	1.077	1	5	91

(table continues)

(continued)

Item No.	Item	STATISTIC						
		Mean	Median	Mode	Standard Deviation	Minimum	Maximum	Count (N)
12	NALCO's executive performance appraisal system is well aligned with company's mission and objectives.	3.033	3	4	1.086	1	5	90
13	I agree that subjectivity and arbitrariness in the target setting process in performance appraisal system can be minimised if the KPA/KRA for all job positions are standardised and made available in drop-down menu.	2.187	2	2	0.906	1	6	91
14	I find the existing appraisal process as an extra burden on me as an appraisee.	3.615	4	4	0.866	1	5	91
15	As an appraiser, I find the existing appraisal system highly cumbersome process to complete.	2.923	4	4	1.621	0	5	91
16	On some occasions, I have felt like quitting NALCO after getting my moderated performance rating.	3.143	3	4	1.131	0	5	91
17	I always feel I am part of a team in NALCO which takes care of the team members.	3.467	4	4	1.124	1	5	90

(table continues)

(continued)

Item No.	Item	STATISTIC						
		Mean	Median	Mode	Standard Deviation	Minimum	Maximum	Count (N)
18	I find enough opportunities in NALCO for my career development and professional growth	3.297	4	4	1.150	1	5	91
19	I feel that the company cares about its executives.	2.912	3	4	1.112	1	5	91
20	I am committed to working in NALCO and see myself staying here for a long term career.	3.890	4	4	0.836	1	5	91
21	I like to volunteer for extra work assignments.	3.945	4	4	0.780	2	5	91
22	I don't feel my efforts are rewarded the way they should be.	2.945	3	3	0.993	1	5	91
23	Most days I am enthusiastic about my job.	4.079	4	4	0.727	1	5	89
24	My assessing officers at moderation level are unfair to me.	3.088	3	4	1.018	1	5	91
25	Often, I find it difficult to agree with this company's policies on important matters relating to its employees	2.703	2	2	0.994	1	5	91
26	I feel very happy coming to work every morning	4.077	4	5	1.088	1	5	91
27	I like to recommend NALCO as an employer to others	3.703	4	5	1.252	1	5	91

Table 5. Sample Adequacy & Sphericity Tests

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.870
Bartlett's Test of Sphericity	Approx. Chi-Square	478.130
	df	78
	Sig.	.000

Figure 9. Component Extraction

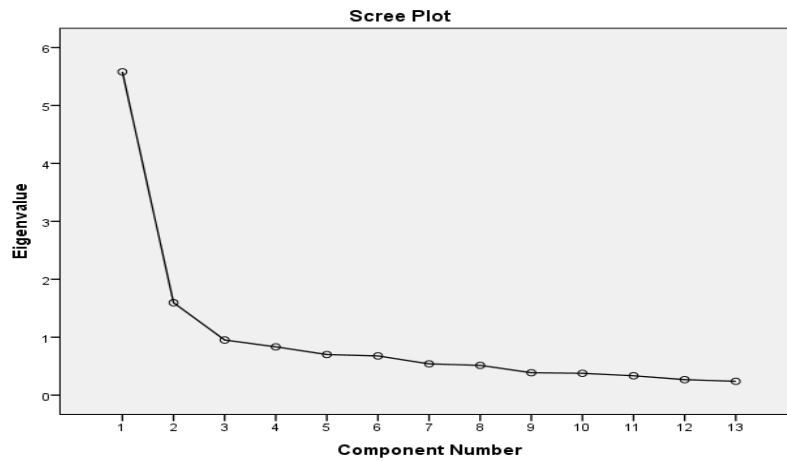


Table 6. Variance Explained by Components

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	5.398	44.983	44.983	5.398	44.983	44.983	4.904
2	1.539	12.824	57.806	1.539	12.824	57.806	3.970
3	.946	7.885	65.691	.946	7.885	65.691	2.294
4	.719	5.994	71.685				
5	.677	5.640	77.325				
6	.546	4.549	81.874				
7	.514	4.286	86.160				
8	.426	3.551	89.711				
9	.379	3.157	92.868				
10	.342	2.852	95.720				
11	.275	2.293	98.013				
12	.238	1.987	100.00				
Extraction Method: Principal Component Analysis.							

Table 7. Hypothesis Test for Appraisal Process Perception by Managers in Nalco

Single-sample statistics						
	N		Mean		Std. Deviation	
Process (10 measures)	91		28.79		7.8705	
	Single-sample t- test					
	Test Value = 40					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
	-13.586	90	.000	-11.2088	-12.848	-9.570

Table 8. Hypothesis Test for Commitment level of Managers in Nalco

Single-sample statistics						
	N	Mean			Std. Deviation	
Commitment	91	3.42			0.8336	
	Single-sample t-test					
	Test Value = 4					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
	-6.646	90	.000	-0.5807	-0.7544	-0.4071

Table 9. Hypothesis Test for Satisfaction Level of Managers in Nalco

Single-sample statistics						
Satisfaction	N	Mean			Std. Deviation	
	91	2.96			0.8329	
	Single-sample t-test					
	Test Value = 4					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
	-11.960	90	.000	-1.04429	-1.2178	-0.8708

Table 10. Hypothesis Test for Motivation Level of Managers in Nalco

Single-sample statistics						
Motivation	N	Mean			Std. Deviation	
	91	4.03			0.8077	
	Single-sample t-test					
	Test Value = 4					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
	0.395	90	.694	0.03341	-0.1348	0.2016

Table 11. Factor Analysis on the Extracted Behaviour Measures

Communalities		
	Initial	Extraction
Commitment	1.000	.805
Satisfaction	1.000	.670
Motivation	1.000	.299
Extraction Method: Principal Component Analysis.		

Table 12. Variance explained by the Principal Behavioural Component

Total Variance Explained						
Comp onent	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.774	59.128	59.128	1.774	59.128	59.128
2	.882	29.385	88.513			
3	.345	11.487	100.000			
Extraction Method: Principal Component Analysis.						

Table 13. Component Loadings on the Extracted Factor for Morale

Component Matrix ^a	
	Component
	Morale
Commitment	.897
Satisfaction	.818
Motivation	.547
Extraction Method: Principal Component Analysis.	
a. 1 components extracted.	

Table 14. Hypothesis Test for Morale Levels of Managers in Nalco

Single-sample statistics						
	N	Mean			Std. Deviation	
Morale	91	3.40			0.64986	
	Single-sample t-test					
	Test Value = 4					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
	-8.8001	90	.000	-0.59953	-0.7349	-0.4642

Table 15. Correlation between appraisal process and employee morale

Item	Statistic	Appraisal process perception	Employee morale
Appraisal process perception	Pearson Correlation	1	.738**
	Sig. (2-tailed)		.000
	N	91	91
Employee morale	Pearson Correlation	.738**	1
	Sig. (2-tailed)	.000	
	N	91	91
**. Correlation is significant at the 0.01 level (2-tailed).			

Appendix F: Survey Questionnaire for Quantitative Analysis

1. The executive performance appraisal system of NALCO is successful in distinguishing performers from non-performers.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

2. The executive performance appraisal system is transparent.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

3. The executive performance appraisal system of NALCO has very little subjectivity.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

4. The forced ranking (moderation) in appraisal process of NALCO is essential to compare performance of executives working under different Controlling Officers (Appraisers).

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

5. The forced ranking (moderation) in executive appraisal process of NALCO is unbiased.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

6. The forced ranking (moderation) in executive appraisal process of NALCO is effective in recognizing talent and good performance.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

7. The forced ranking (moderation) process in executive appraisal system of NALCO motivates high performers.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

8. The forced ranking (moderation) in appraisal process of NALCO is a management tool to promote personal favourites.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

9. Possible bias in the moderation process can be minimised by using standard factors based on KPA, role/position, geographical location, past records, measured potential rating etc.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Other (Please give your comment/suggestion)

10. Overall, I am satisfied with the performance ratings obtained by me so far.

Highly satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Highly dissatisfied

11. I have always experienced improvement in my performance after getting my performance rating feedback.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

12. NALCO's executive performance appraisal system is well aligned with company's mission and objectives.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

13. I agree that subjectivity and arbitrariness in the target setting process in performance appraisal system can be minimised if the KPA/KRA for all job positions are standardised and made available in drop-down menu.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

14. I find the existing appraisal process as an extra burden on me as an appraisee.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

15. As an appraiser, I find the existing appraisal system highly cumbersome process to complete.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

16. On some occasions, I have felt like quitting NALCO after getting my moderated performance rating.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

17. I always feel I am part of a team in NALCO which takes care of the team members.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

18. I find enough opportunities in NALCO for my career development and professional growth.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

19. I feel that the company cares about its executives.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

20. I am committed to working in NALCO and see myself staying here for a long term career.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

21. I like to volunteer for extra work assignments.

Very frequently	Frequently	Occasionally	Rarely	Very rarely

22. I don't feel my efforts are rewarded the way they should be.

Very frequently	Frequently	Occasionally	Rarely	Very rarely

23. Most days I am enthusiastic about my job.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

24. My assessing officers at moderation level are unfair to me.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

25. Often, I find it difficult to agree with this company's policies on important matters relating to its employees.

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree

26. I feel very happy coming to work every morning.

Always	Often	Usually	Sometimes	Never

27. I like to recommend NALCO as an employer to others

Always	Often	Usually	Sometimes	Never

DEMOGRAPHIC INFORMATION

28. My work area is :

☐ S&P Operation ☐ S&P Maintenance ☐ S&P Services

- ☐ M&R Operation ☐ M&R Maintenance ☐ M&R Services
- ☐ CO/RO/PF Services ☐ CO/RO/PF Technical

29. I am in the following band:

- ☐ E0-E3 ☐ E4-E5 ☐ E6-E7 ☐ E8-E9