

**THE DIFFERENT MOTIVATIONAL FACTORS
THAT AFFECT PERFORMANCE: A CASE STUDY
OF THE KENYA RAILWAYS CORPORATION**

BY

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DECLARATION

This Management project is my original work and has not been presented for a degree in any other University.

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DEDICATION

This project is dedicated first to my husband, Maurice K. Musomba without whose assistance and moral support I would not have managed to complete the course. Secondly to my son Martin for persevering during the long hours when I neglected him while studying. Finally to my mother and sister for their moral support and intense prayers during this period.

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ABSTRACT

The purpose of the study was to get the most important factors that motivate the employees of Kenya Railways. This was to compare with the factors that are deemed important in the Western World and are reported in the literature. The study also aimed to get whether different personal attributes has an effect on the factors that motivate employees.

Work environment is the factor that employees mostly value. A good working environment is important especially now in times of financial hardships as it gives emotional support, affiliation and a sense of belonging. The pay levels which are inadequate in the Corporation also act as an important motivating factor, as the basic needs of these employees are still to be met. Leadership styles also affect employee motivation as good styles more give hope for tomorrow.

CHAPTER ONE

INTRODUCTION

The human factor is of the highest importance for successful management of a public enterprise, (Ndegwa et al, 1987). The major problem for personnel managers and other professionals is how to motivate all members of a work group to contribute to the efficiency and positive results of a public organization as a whole. Many writers have stressed the importance of human resources in the successful implementation of corporate goals and objectives, (Reddy, 1990 and Kamoche, 1991).

The performance of employees is said to depend on both their skills and their attitudes about work, (Nollen and Gaertner, 1991). These two determine their capacity and willingness to perform. Regardless of the degree of skills involved, when work tasks are routines, strongly influenced by machine pacing and characterized by clear cut paths, there is minimum scope for variations in willingness to work hard to increase output.

1.1 What is motivation and why study it?

The question of what motivates human beings and why they behave the way they do has been asked since mankind began creating its own history, (Chung, 1977;pp 19)

The term motivation is often used as a synonym for productivity, or as a description of the energetic behaviour desired by Management, (Herzberg, 1991). It refers to goal directed behavior, which behaviour is not only influenced by an individual's characteristics but also by organizational conditions, (Chung, 1977).

From the Organization's point of view, the employees who usually constitute the largest part of costs should thus be the most important asset for the organization. In the developing world especially, labour costs constitute the largest share of expenditure and the most difficult asset to manage. As a result, therefore, increasing the output of human resources is an important element in reversing the productivity decline that most public organizations in Kenya and Africa in general, are currently undergoing.

The attainment of individual and organizational goals is mutually interdependent and linked by a common denominator which is employee work motivation. As a means of achieving personal goals, employees contribute their efforts to the attainment of organizational objectives as a means of achieving these personal goals, which they are motivated to achieve. As Chung, (1977) points out, motivation is thus the key to individual well being and organizational success.

1.2 Motivation and Performance

Does motivation lead to high performance? Several theoretical propositions have been advanced by scholars regarding the relationships between motivation, satisfaction, and performance, (Chung, 1977). Among those quoted are; performance is a function of ability and motivation, (Viteles, 1953; Vroom, 1964 and Lawler, 1966); satisfied needs cause motivation (Maslow, 1954 and 1970 and McGregor, 1960) and performance causes satisfaction, (Porter and Lawler, 1968 and Vroom, 1964). However, as Chung (1977) points out, motivation alone does not lead to increased performance. Ability and technology moderates the relationship between motivation and performance.

1.3 Sources of Information on Motivation

Employees are the best source of information about the kinds of problems that they experience in an organization, and which problems are most likely to affect their performance on the job. One of the traps that most managers face in organizations is assuming that they know what is best for the employees. When asked by reporters why the 20,000 rail workers were demoralized and many already resigning, a top management official of the Kenya Railways Corporation automatically gave the cause to be due to poor pay, (Daily Nation, 7th March, 1993;20). On the same daily, striking locomotive drivers had given the cause for their strike to be due to dissatisfaction with the management and lack of security for their lives, (Daily Nation, 7th March, 1993;16).

When getting the opinions of employees, a conceptual framework should be used. This includes the following two ideas ; utilization, that is what the company gets from the employees and equity, what the employee gets from the company. One of the key determinants of an employee's motivation and commitment to an organization is his feeling of how he is being utilized - this is how the organization uses the skills and talents of its workers, (Sirota and Wolfson, 1991). The equity concept on the other hand is almost similar to the hygiene factors proposed by Herzberg and involves such issues as compensation, fringe benefits and work standards. The absence or deficiency in such issues can lead to such things like work stoppage for example.

When discussing motivation, one cannot ignore the issue of job satisfaction. Job satisfaction refers to the attitudes and feelings people have about their work. Positive and favourable attitudes towards the job indicate job satisfaction while the opposite holds true for job dissatisfaction. Morale has also been equated to job satisfaction. It is the extent to which an individual's needs are satisfied and the extent to which the individual perceives that satisfaction as originating from his total work situation.

1.4 The history of Kenya Railways Corporation

In January, 1978, the Kenya Government enacted the Kenya Railways Corporation Act, 1978. This was as a result of the collapse of the East African Community and consequently the East African Railways and Harbours Corporation in late 1976. The first task of the appointed board was to consider and approve an integrated manpower structure for the Kenya Railways. Before the breakup of the East African Railways Corporation, there were both regional and headquarters staff and thus careful integration

was a priority to avoid unnecessary duplication of work or displacement of staff as well as to reinstate staff morale which was at a very low ebb, (Annual Report, 1978). One of the steps taken was the upward adjustment of staff emoluments.

Today, the Railways has an Executive Chairman who is responsible to the Minister of Transport and Communications, a General Manager and several chief officers. Since 1987/88, the Railways has operated under a Memorandum of Understanding (MOU) with the Government. The MOU provides a formal statement of the intentions and obligations between the government and KRC which includes the setting of financial and non-financial targets for the system.

In 1981, the K.R.C system was fully dieselized as only diesel locomotives were in operation having phased out the steam engines in 1980. Their performance measured in terms of locomotive availability and reliability was still reasonably high. Locomotive availability expressed in percentage form is the percentage of average locomotives available for traffic at any given time when compared to the number of locomotives in the system. Locomotive reliability expressed in number of kilometers, measures the average number of kilometers a locomotive covers before it fails. Failing is becoming defective.

Table 1 below shows the past performance of the Corporation and the staff strength over these years. The volume of traffic railed, mainly goods traffic is one of the most important indicators used to measure performance. Locomotive availability and reliability have always been the major factors that determine volume of traffic railed.

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Table 1 thus attempts to show the trends in these performance indicators and bring out the relationship between traffic railed and locomotive availability and reliability. The number of staff employed is given to show that there does not seem to be any relationship between staff numbers and performance. In other words, there is no matching of human resources and performance.

Table 1. KRC Corporate Performance Indicators, 1978 - 1991/92

| | 1978 | 1980 | 1982 | 1984 | 1989/90 | 1990/91 | 1991/92 | 1992/93* |
|--|--------|--------|--------|--------|---------|---------|---------|----------|
| Freight tonnes (Mn) | 3.85 | 4.5 | 4.2 | 3.6 | 3.55 | 3.47 | 3.09 | 2.5 |
| Locomotive Availability(%) | 63.60 | 68.30 | 68.90 | 58.21 | 63.96 | 53.57 | 60.0 | |
| Locomotive reliability (Km per failure) ('000) | 6.6 | 8.2 | 7.1 | 7.0 | 5.8 | 4.8 | 3.3 | |
| No. of staff | 21,282 | 21,534 | 22,287 | 22,318 | 21,131 | 20,617 | 20,908 | |

Note* Freight tonnage for 1992/93 is a projection based on the performance for 9 months (July 1992 - March 1993)

Productivity if measured by net tonne-km per employee, has shown no improvement during the years, 1990/91 to 1992/93. However, productivity has improved from 76 in 1986/87 to 93 in 1990/91. This increase in productivity was solely due to the reduction in the total workforce which decreased from 22,778 in 1986/87 to 20,617 in 1990/91. Salary and wages account for about 37% to 48% of total expenditure during the period, 1986/87 to 1990/91 thus making it KRC's most expensive asset.

1.8 Organization of the Study

This study is divided into five chapters. The first chapter, the introduction gives the importance of motivation in so far as effecting motivation and hence the reasons for studying it. It also gives a brief history of the Corporation under study. From the above two, the statement of the problem is derived as are the objectives of the study and its importance. Chapter two gives the literature review composed of both theoretical and empirical evidence. The third chapter explains the methodology used during the collection of the data and in the analysis stage itself. Chapter four discusses the results of the data analysis. The final chapter is a discussion of the implications of the findings of the study, its limitations and areas for further research.

CHAPTER TWO

LITERATURE REVIEW

2.0 THEORIES OF MOTIVATION

Motives can be defined as the combination of forces which initiate, direct, and sustain behaviour towards a goal. Motives can be distinguished by their origin.

These are:-

(i) Biogenic motives which originate as a result of physiological necessities and self regulating process within individuals. These self-regulating processes seek to maintain physiological equilibrium within our system, (Sherif et al, 1956).

(ii) Psychogenic motives which are those internal motivators that result from internally-set goals, with ill-regard from any social influence.

(iii) Sociogenic motives are acquired in the course of one's growth and maturation into a social setting. Often formed as a result of interpersonal relationships, group relations and/or the influence of established societal values and norms.

Various studies have been conducted that centre around three questions; What are the forces energizing and arousing behaviour? How can one influence or manipulate human behaviour toward certain desirable objectives?, and why are individuals different in their responses to the same stimuli and how can they be influenced? The Needs, Incentives and Expectancy theories of motivation answer the above questions. However, before briefly discussing the theories of motivation, it is important to look at the various schools of thought on motivation as it is from these schools of thought that the motivation theories arose.

2.1 Schools of motivation theories

Adopted below are four approaches developed by Schein (1965) and a fifth described as "Japanese man in search of excellence" brought about by Ouchi, (1981) and Pascale and Athos (1981).

The first approach has its basis from the scientific management methods of F. Taylor. This is where man is viewed as a rational and economic being. It argues that man is primarily motivated by economic rewards. Man is motivated to work if rewards and penalties are tied directly to performance. It is from this that the "carrot and stick" strategy originated. Elton Mayo and his colleagues however found this approach too simplistic as it was only based exclusively on a system of external controls and fails to recognize a number of other human needs like the need for belonging. It looks at man as a social animal who has social needs. This "social man" approach recognizes man's need for belonging thus bringing in

the idea of teamwork. This concept later developed into the human relations school which believed that an individual's output was directly affected by the satisfaction that he derived from his job and not only financial rewards.

Psychologists have however found the rational/economic and social man views to be too simplistic in their view of man and what motivates him, (Armstrong, 1988). They argue that man is motivated by a number of different needs and this gave rise to the theories by such people as Maslow, Alderfer, McGregor, Argyris and Herzberg. The most important of these needs are the higher order needs for self-fulfillment, actualization and growth. Schein classified this approach as the "Self actualizing man"

With time however, motivation was found to be a more complex subject than the above approaches reflect. This is because man himself is complicated. Secondly, the situations under which man works and is motivated vary. And thirdly these situations keep changing with time. Satisfaction that cannot be sustained cannot increase motivation, (Schein, 1965). Schein, (1965) based his argument on the open-system theory that recognizes the fact that the human being is constantly interacting with and is affected by his environment. Lawrence and Lorsch, (1969) argued that an individual can usually be conceived as a system of biological needs, psychological motives, values and perceptions, (Armstrong, 1988). This approach is the "Complex man" classification by Schein (1965).

While attempting to discover the secret behind the Japanese business success, writers have come to the idea that the best way to motivate people is to get their full commitment to the values of the organization by leadership and involvement. This approach has however been criticized in that it is too over-simplified and does not take sufficient account of the reactance effect, employees could resist attempts to force togetherness.

2.2 Needs Theories of Motivation

The needs theories of motivation attempt to answer the first question. The study of needs as a unit of human motivation is important for understanding work motivation. It helps the manager in the prediction of employee behaviour at work.

Armstrong (1988) states that an unsatisfied need creates tension and a state of disequilibrium and thus to restore balance, a goal should be identified that will satisfy this need. The various needs models that have been advanced are such as Maslow's hierarchy of needs, Herzberg's two factor model of satisfiers and dissatisfiers, and McClelland's achievement-affiliation-power needs, (Armstrong, 1988 and Chung, 1977).

Maslow's theory is based on a hierarchy of five needs with each need assumed to motivate behaviour in varying precedence. Behaviour is directed towards satisfying these needs sufficiently to make the next higher order need dominate.

These needs are:-

- Physiological needs such as food, water and air
- Safety needs such as security and stability

- Social needs such as affection, belonging and love
- Esteem needs such as achievement and self esteem
- Self actualization needs such as the need to become all one is capable of becoming, to realize one's own potential, or achieve self fulfillment

Alderfer (1972), with his ERG theory, Existence, Relatedness and Growth needs is a build up on Maslow's theory but removes some of the ambiguities in the hierarchy of needs, where for example safety needs can either be concerned with material matters or interpersonal affairs, and esteem can be either interpersonal or self-confirmed, (Armstrong, 1988). The existence needs reflect the requirement people have for material and energy exchange, and the need to reach and maintain a homeostatic equilibrium with regard to the provision of certain material substances like hunger and thirst which represent deficiencies in existence needs, while pay and working conditions represent other types of existence needs.

The relatedness needs acknowledge the fact that people are social animals that must interact with their environments. Satisfaction thus depends on a process of sharing or mutuality. Among the elements of these needs are acceptance and understanding. The third set of needs, the growth needs are as a result of the open systems emerging from the "Complex man" school of thought. The ERG theory unlike Maslow's does not suggest a hierarchy through which people progress from the lower level to the higher level.

Still under the needs theories, one could discuss Herzberg's two factor theory of satisfiers and dissatisfiers. The satisfiers are seen to be effective in motivating the individual to superior performance and effort while the dissatisfiers are those the absence of which will lead to dissatisfaction, but their presence does not necessarily mean an improvement in performance. The dissatisfiers, Herzberg called the hygiene factors.

McClelland introduces a different way of classifying needs. He identified the needs for achievement, affiliation and power as the most important needs. These needs have, however, been argued to lie among the managerial and highly placed employees as they are all higher level or order needs.

2.3 Process or Incentives theories of motivation

The effects of environmental factors on behaviour have been studied and classified under the incentive theories of motivation. Behaviour is said to be a function of its consequences, people behave to receive rewards and avoid punishment, thus by manipulating the potential consequences or incentive, one can control the behaviour of other people, (Chung, 1977). Influencing employees' motivation is more difficult than influencing employees' abilities through staffing or training. According to the expectancy theory, employees are motivated if they believe that exerting increased effort leads to rewarded behaviors and that achieving certain behaviors leads to desired outcomes. This theory has also been called the reinforcement theory, (Armstrong, 1988). Chung (1977), states that the major task of a powerful reinforcement system are two-fold; one is the selection of

powerful reinforcers or incentives, and second the proper use of these reinforcers.

Among these reinforcers are substantive incentives that refer to mostly tangible reinforcers capable of satisfying existence needs. Money, physical working conditions and job security are some of these. Scholars like Taylor (1910), concluded that workers will put forth extra efforts on the job to maximize their economic gains if wages are differentiated by differential outputs. Viteles (1953), reported that surveys of companies experienced with wage incentive plans showed substantial increases in productivity following the installation of the incentive wage system. Herzberg's satisfiers-dissatisfiers theory of motivation (1991) appears to destroy the concept of pay as a motivator. However all other findings are inclined to emphasize the motivational value of financial incentives, (Chung, 1977). The Hawthorne experiments and others minimized the importance of the effects of physical working conditions on productivity and ranked them as least contributors to productivity. The physical working conditions may therefore be classified as hygiene factors which have no motivational value when they are adequate, but become detriments to productivity when they are not adequate.

Social reinforcers such as praise, attention and a pat on the back have been found to improve performance, (Madsen et al, 1968 and Kazdin, et al 1973). The Hawthorne experiments once again revealed that the performance of individual workers was affected by their relationship with other co-workers, (Reothlisberger and Dickson, 1939). Other studies showed that production-centered supervision led to low productivity, while employee-centered supervision led to high

productivity. There have been some inconsistencies in the research findings that lead to the conclusion that supervision styles which result in effective group performance depend upon such variables as the traits of the supervisor, the traits of the group and the job situation. The size of the work group and increased level of education and standard of living of the workforce, have all been found to influence employee satisfaction and the value they place on work. The motivational consequences of job content have been highlighted by many scholars also, (Chung, 1977).

2.4 Motivation in African Organizations

It is expected that effective motivators will vary between the industrialized and developing countries, the latter of which are characterized by abject scarcity, higher unemployment, a lower per capita income and other unfavourable social conditions, (Johnson, 1975). This implies that a worker in a poor African country like Zaire for example might be more or better motivated by the set of biogenic motivators as opposed to sociogenic motivators. This is contrary to Herzberg's two factor theory which terms the hygiene factors as those which when missing will lead to dissatisfaction but the presence of which will not lead to higher performance. Herzberg's theory stresses on job content which may not necessarily be the case for those poor African workers who are working to satisfy those basic needs as specified in Maslow's hierarchy of needs, food, thirst and so on.

A study of some non-managerial hotel workers revealed that the most important need is the need for affiliation and it follows that training and development strategies which are likely to be appropriate, are those which build upon co-operativeness and the development of good working relationships, (Abwao, 1981). The argument was that once an individual enters an industry, the driving force which propelled him there is fulfilled and a new driving force, beginning with his employment, should move in to dominate his behaviour and to motivate him to fulfill those human needs which are the root of motivation itself.

The above contradicts Maslow's need hierarchy, where in the same study, security proved to be the least important area of motivation as employees have aspects peripheral to the work situation which provide better security measures than those provided within the work environment. Due to culture, the non managerial hotel workers find security in their traditional homes, by owning a house or a piece of land, (Abwao, 1981). This however contradicts a study conducted by Blunt (1986), on managerial motivation in Kenya and Malawi which found that there was high importance attached to security needs.

A study of some private companies in Kenya revealed that due to the low incomes and high unemployment levels, more concern is given to material rewards and security of job tenure, (Kamoche, 1992). In the industrialized countries however, while financial incentives are widely used in the private sector, there is considerable controversy as to the appropriateness of these programs for public sector use. Such limiting factors as civil service policies and procedures make it difficult. A study by Greiner et al, (1977) recognized the constraining influence

of public sector barriers but stressed that if properly planned and implemented, they can be among the most effective organizational change technologies available.

The use of the traditional authority and financial incentives has however, become increasingly difficult in the western world as employees become economically secure and their dependence on any one organization decreases, (Lawler, 1973 and Vroom, 1964). The importance of job content is increasing in the Western world.

2.5 Motivation in the Public Sector

This chapter would be incomplete without special reference to the public sector organizations under which the Kenya Railways Corporation, that is 100% owned by the Kenya Government, falls. The following section looks at how some of the factors of motivation earlier discussed under the theories of motivation are practised in this sector.

A study of African Railway men maintained that for one particular organization, the then East African Railways and Harbours, now KRC, individual interactions between superiors and subordinates were characterized by extreme deference on the part of the subordinate, (Grillo, 1973). African managers do not also share information and objectives with their subordinates, (Jones, 1988). This fact could be explained by the authoritarian leadership styles prevailing in most African traditions, (Aosa, 1992; Blunt, 1986 and Jones, 1988). The ages of most of the managers especially in the public service could account for this practice where most of the managers were those that worked with the colonialists, and who have

through the use of seniority been promoted to decision making positions. A study of managers conducted in Kenya and Malawi however revealed that the ages of managers are reducing, (Jones, 1988).

Low levels of earning in comparison with the private sector is one of the conditions prevalent in the public sector that is unique which necessitates overtime working in order to earn more revenue, (Miller, 1972). The same study conducted in United States also reported a high moonlighting rate, where 14% to 50% of the respondents reported that they earned some income from employment other than their regular jobs as a result of inadequate income derived from the primary job.

Kiggundu, (1989) pointed out that organizations in developing countries were undergoing a motivational crisis. The cause of these motivational problems he attributed to employee lack of professional commitment, preoccupation with lower level needs such as food, shelter, clothing, transport, housing, and working conditions; competing and conflicting demands between individual and family needs on the one hand, and organizational demands and expectations on the other. Kiggundu, (1989) further quotes a Zambian study that gave evidence of negative effects of employee perceptions of unfair treatment by others in the organization. The result of such practices are efforts to look for another job, absenteeism and tardiness, and the restriction of effort and output deliberately.

The very nature of public organizations with their heterogeneous membership, limited resources, diffused goals, weak management systems, inadequate incentives and their high levels of politicization makes them hard to manage or work for, (Kiggundu, 1989). One or more of the above factors could contribute to the problems of low motivation among employees.

The above shows that there is a multitude of motivational factors acting interdependently at any given point in time which manifest themselves in observable social or organizational behaviour. To, therefore, blindly accept and attempt to apply the theories of motivation can be very detrimental, (Johnson, 1975).

2.6 Motivational Programmes at Kenya Railways Corporation

It is important to look at the programmes already in place and those that are in the pipeline so as to compare them with the results of my study.

2.6.1 Programmes already implemented

Although few, KRC has had very good intentions as far as motivating staff is concerned.

Scheme of Service

Chuks (1987/88), cited the Nigerian Government scheme of service as one of the steps taken to improve employee motivation. The Nigerian scheme of service like the Kenyan Government and Kenya Railways schemes ensure permanent security of job. Employees from a certain job group are employed on permanent and pensionable terms. For a long time, railway employees felt secure in their jobs. However, due to the recent call for reduction of staff in the public service under the Structural Adjustment Programmes, (SAPs), staff no longer feel as secure as they did before.

One benefit accruing from the Kenyan and Nigerian civil service scheme is promotion from entry to next higher grade after two years mainly for graduates. This one however, is not the case in Kenya Railways. A discussion held between one principal personnel officer, in charge of Industrial Relations and Welfare, two senior personnel officers and myself revealed the fact that the Corporation is currently preparing a career progression path for every vocation as one way of attracting and retaining qualified personnel.

In the Nigerian Civil Service, the provision for secondment and transfer of service between public organizations is one way of improving employee motivation, (Chuks, 1987/88). This is also one of the benefits that senior officers or those staff employed on permanent and pensionable terms enjoy in Kenya Railways.

Training

The Corporation has embarked on a training program for all its employees right from the most junior. This program has multiple expected benefits among them one of the motivating factors of personnel growth, improved efficiency and increased productivity. Kenya Railways Corporation has its own training institute with a team of qualified instructors to do the job.

In addition to the Railway Training Institute, the Corporation sponsors its employees to other Institutions like the University of Nairobi for Masters Programmes, the Kenya Polytechnic, Kenya Institute of Management, Kenya Institute of Administration, Secretarial colleges among others.

Housing

The Corporation has vast estates in all major rail-served towns for its employees. This is in recognition of the high cost of living that has, over the years, escalated. Although the housing policy when first conceived was meant to attract and retain staff, which in most cases, for the housed, it still does, the housing situation could in itself be a demotivating factor, (Barker, 1990). The physical state of the houses at Muthurwa and Makongeni Railway housing estates for example, built during the colonial times when only single men were allowed to live there, is deplorable. Those days, the wives of employees were expected to stay in the rural areas, while now those same small units house more than four times the numbers they were meant for.

Inadequate house allowance and owner-occupier allowances which when conceived were adequate, could also be a demotivating factor in that they have been overtaken by the escalating costs of living.

2.6.2 Proposed Programmes

During the calendar year 1989, an incentives and motivation study was conducted among the senior managers of KRC. The aim of this study was to get their opinions on the factors affecting morale and motivation in general. The results of the above mentioned study was the "Review of Incentives and Motivation" report. I will briefly discuss the contents of the said report which KRC accepted and proposes to implement in the near future.

The first priority is to be given the demotivating factors that are present in KRC. These are namely; the staff housing situation, the basis of promotion and the duration of acting appointments which was felt to be too long. The second priority was the removal of the following demotivating factors which were felt would take a longer time period to implement:-

- Recognizing people and their contribution; the attitude of superior officers to junior staff was found to be discourteous where superiors were found to discourage ideas from subordinates. This is contrary to findings on employee participation in decision making which have been found to improve employee attitudes towards their jobs and toward the Organization, increased productivity and better employee- management relations, (Thompson, 1967).

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- Caring about basic welfare; the criticisms here were partly that only a few superiors took any interest in the personal problems that their staff might have, and also that many of KRC's "welfare" provisions were no longer effective. In the latter category, housing and housing allowance is no longer enough to rent a private house of a standard up to the expectations of employees, so that there is a greater demand for houses owned by KRC. A need was seen for houses to be made available as soon as staff move from their home stations, particularly shift workers, and supervisors and managers who should not be distracted from their new responsibilities by housing worries.
- Promotion; a strong body of opinion exists that promotions are at present made on the wrong basis, mainly that promotion on seniority must stop and be replaced by promotion on merit.
- Acting appointments; there was widespread feeling that the present acting appointments system is iniquitous. It was said that people acting in senior posts did not put effort into their work, being almost certain that they would be overlooked in favour of someone more senior when the post was filled on a permanent basis. The length of time that posts were allowed to be filled in an acting capacity is seen to be the heart of the problem, with several opinions expressed about the maximum length of time that is acceptable, all considerably less than is commonplace at present.

The implementation of the above factors will lead to the psychological satisfaction of employees, greater delegation of accountability coupled with better monitoring and discipline, recognition of the problems and contribution of junior staff, more participation and encouragement of all staff in problem-solving and raising standards of performance, demonstrable justice in promotion, rewards and punishment, and better communication between senior management and staff.

The other recommendations made to improve motivation among employees are given below in summary, and which recommendations are currently being discussed in order to streamline their implementation and administration.

- Management Executive to decide on a desirable management style for KRC, and give leadership to its implementation including how to superimpose the concept of fairness to group loyalties
- Courses for top managers that include motivation theory and pay strategies to be conducted
- Management Executive was urged to ensure that the principles of delegation and control apply to decision-making as well as financial powers
- The Chief Personnel and Administration Manager was to conduct a staff opinion survey at regular intervals
- A review of the remuneration strategy of long service awards, medical insurance, and holiday facilities.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Population of Study

The population under study consisted of all KRC's employees working within the Nairobi area. Thus all the headquarters staff and the Nairobi district staff working within the city including the Central Workshops and the Makadara maintenance depot were included. These employees are approximately 9,000. The Nairobi based employees were chosen as the population of the study for they are considered to be representative of all the employees in the Corporation, by this I mean that the tasks performed in Nairobi district are similar to those performed in Mombasa, Nakuru and Kisumu districts. Secondly, it was more convenient in terms of time and money.

3.2 Sampling Plan

Stratified sampling was used. The population was divided into four groups based on the type of work done. These groups were :

- (i) Managerial staff - Group "RS0" to "RA"
- (ii) Supervisors - Group RB executives "C" to "A"
- (iii) Graded staff mainly technicians and clerical staff

Group "RB 1" to "RB VI"

(iv) Subordinate staff - Group "RC"

Proportionally, I then used random sampling on each of the four groups. The questionnaire was administered to 90 respondents. However, some of the respondents were found to have been transferred out of Nairobi while some were on leave. For those missing respondents the next person in the list was picked. Out of the 90 questionnaires distributed, only 58 employees responded with 5 of the questionnaires being classified as spoilt. The response rate thus was 64%.

3.3 Data Collection method:

Primary data was collected through the use of questionnaires and interviews. A sample questionnaire is attached at the back as appendix 1. The questionnaire was formulated by myself with a few of the questions having been modified from an attitude questionnaire proposed by Luck (1955). It was based on the Likert scale method with a few open-ended questions that were to assist in clarifying some of the questions in section 1. Interviews were conducted as a follow up to get in-depth ideas which may not be clear from the questionnaire. This was only done for a few people due to time constraint. Secondary data was used for data such as job group levels.

The questionnaire adopted both the inductive and deductive strategies of measuring attitudes. This was with the aim of capturing the advantages of both. The deductive strategy or approach is the most commonly used, where the researcher specifies constructs in advance and then develops standardized instruments to

operationalize the constructs. The inductive or interpretive research strategies on the other hand take the job holder's personal interpretations as the starting point for the investigation. The task for the researcher is to identify the concepts that people use to make sense of their work and to explain the worker's interpretations, (Taber, 1991). The deductive strategy has been felt not to communicate adequately the subjective experiences of people, (Glenn, 1978 and Van Maahen, 1979). On the other hand, proponents of the deductive strategy point out the limited generality of inductive research, its subjectivity and impracticability, (Taber, 1991). In order to capitalize upon the strengths of both the deductive and inductive strategies, an integrative measurement has been proposed, (Jick, 1979). Section 1 of the questionnaire is designed along the lines of the deductive approach, while section 3 has adopted the inductive strategy of measurement.

3.4 Data Analysis

Section 1 of the questionnaire was analyzed by use of Factor Analysis. The computer package, Statgraphics was used for this purpose. Factor analysis is a technique for analyzing interdependence, (Churchill, 1987). The principal purposes of Factor analysis are data reduction and interpretation. The variables or factors in section 1 are 37 in total, with more than one measuring the same factor. Factor analysis thus summarizes the important information in a set of observed variables by a new smaller set of variables expressing that such is common among the original variables. Factor analysis is also useful in the identification of the constructs or dimensions that underlie the observed variables

and has been previously used in behavioural science research, (Kipn'getich, 1991 and Dossajee, 1992).

3.4.1 Overview of factor Analysis

Factor analysis is one of the more popular analysis of interdependence Techniques (Churchill, 1987). In factor analysis :-

- (a) All the variables are taken to be equal in importance and the analysis is concerned with the whole set of relationship that characterize the objects.
- (b) It focuses on the whole set of interrelationships displayed by all the variables and no variable is taken to be predicted by the others, there is no causal relationship.
- (c) Since a factor is a linear combination of variables, the model is based on a linear relationship.

3.4.2 Steps in factor Analysis

The first step is to give a correlation matrix. This matrix gives the intercorrelations between a set of variables. A factor loading matrix is then produced and this is one of the key outputs of a factor-analytic solution. It shows correlations between the variables and the factors. These correlations are called factor loadings. A factor loading of more than 1 shows the important factors that could account for all the variables.

Thereafter, a communalities table of the variables is produced to show how many factors account for what percentage of the variation in a variable. Also calculated is the eigen value, that gives the sum of squares of loadings of each factor. The initial factors table is then produced, which table may not give clearly defined locations for variables as some variables may share a common location that would make it difficult for interpretation. To make the new linear combinations be selected in such a way as to best facilitate interpretation, an axis rotation is necessary. The varimax rotation of the original axes is the most commonly used method. Two common methods that have been proposed are the orthogonal and the oblique rotations. The varimax rotation falls under the orthogonal rotation and attempts to "clean up" the factors in the factor loading table, that is, force the entries in the columns to be near 0 or 1. Empirical evidence has shown that varimax tends to produce loadings that are more interpretable, (Churchill, 1987).

3.5 The chi-square contingency table statistical test

The chi-square contingency table used for investigating independence of variables in cross classifications was used to analyse the information in section 4 of the questionnaire. The major aim of this exercise was to investigate whether there was a relationship between the factors that respondents considered most important and their ages, education levels, length of service in the corporation and their sex. Was motivation affected by such personal attributes. These personal attributes had been obtained through use of section 2 of the questionnaire. The chi-square was used to test the following hypothesis.

1. $H_0 =$ Importance of motivating factors is independent of the age of respondents.
 $H_A =$ Importance of motivating factors is dependent on age of respondents.
2. $H_0 =$ Importance of motivating factors is independent of the sex of respondents.
 $H_A =$ Importance of motivating factors is dependent on the sex of the respondents.
3. $H_0 =$ Importance of motivating factors is independent of the length of service the respondents' have given the corporation.
 $H_A =$ Importance of motivating factors is dependent on the respondents' length of service in the corporation.
4. $H_0 =$ Importance of motivating factors is independent of the respondents' educational level
 $H_A =$ Importance of motivating factors is dependent on the respondents' educational level.
5. $H_0 =$ Importance of motivating factors is independent of the respondents' marital status.
 $H_A =$ Importance of motivating factors is dependent on the respondents' marital status.

The fifth hypothesis was however not calculated as over 90% of the respondents happened to be married with children.

The formula;

$$\chi^2 = \sum_{i=1}^n \sum_{j=1}^n \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Was used to get the chi value. To get the expected value E, the following formula was used.

$$E = nP(A_1B_1) = nP(A_1)P(B_1) = \frac{nA_1nB_1}{n}$$

Where for example:

A_1 = The total score for all employees between the age of 20- 29.

B_1 = The total score for factor 1

n = The total score for all factors and all ages.

O_i = The actual observed scores for each variable or factor.

E_i = Expected scores for each variable or factor.

The degrees of freedom for each of the contingency table were calculated using the formula.

$$v = (r-1)(c-1)$$

where:

v = degrees of freedom

r = number of rows.

c = number of columns

The level of significance was assumed at $\alpha = 0.05$, thus 95% confidence interval.

If the chi value falls within the critical region then the null hypothesis was rejected, but if it fell outside, the null hypothesis would fail to be rejected. That is if the calculated chi value was found to be greater than the tabled critical value and thus falls in the critical region the null hypothesis is to be rejected.

Majority of the workers in Kenya Railways are men. By 31 December, 1992, there were only about 500 women out of a total of around 20,000 employees.

Table 4.3: Respondents' length of service

| Nb. of years | Frequency | Proportion |
|--------------|-----------|------------|
| >1 | 0 | 0% |
| 1-2 | 2 | 7.3% |
| 3-5 | 4 | 7.3% |
| 6-9 | 12 | 32.6% |
| 10-19 | 13 | 29.3% |
| 20+ | 20 | 27.3% |
| Total | 51 | 100% |

For many years, overall job stability in KRC has been very high. Cases of most people employed in their youth, retiring in Corporation's service have been the same rather than exception. That retiring employees had long service

Table 4.2: Sex distribution of respondents

| Sex | Frequency | Proportion |
|--------|-----------|------------|
| Male | 44 | 83% |
| Female | 9 | 17% |
| Total | 53 | 100% |

Majority of the workers in Kenya Railways are men. By 31st December, 1992, there were only about 800 women out of a total of around 20,000 employees.

Table 4.3: Respondents' length of service

| No. of years | Frequency | Proportion |
|--------------|-----------|------------|
| >1 | 0 | 0% |
| 1 - 2 | 4 | 7.5% |
| 3 - 5 | 4 | 7.5% |
| 6 - 9 | 12 | 22.6% |
| 10 - 19 | 13 | 24.5% |
| 20< | 20 | 37.8% |
| Total | 53 | 100% |

For many years, overall job mobility in KRC has been very low. Cases of most people employed in their youth, retiring in the Corporation's service have been the norm rather than the exception. Most retiring employees had their offsprings

employed in the Corporation. It is only in the recent years that job mobility and only among the management staff has been high. The provision of houses has been one of the factors that contributed to the low job mobility. Thus majority of KRC workers have worked for the Corporation for over 5 years with most of them having given over 20 years of service.

Table 4.4: Educational level distribution

| Level | Frequency | Proportion |
|-------------------|-----------|------------|
| Secondary school | 31 | 58.5% |
| High school | 6 | 11.3% |
| Prof. Certificate | 9 | 17.0% |
| Diploma | 2 | 3.8% |
| Basic Degree | 5 | 9.4% |
| Post Graduate | 0 | 0% |
| Total | 53 | 100% |

Most of KRC employees fall in the non- managerial level. In my sample, due to the large numbers of the low graded staff, only less than 10% had a University degree.

Table 4.5: Marital Status of Respondents

| Status | Frequency | Proportion |
|----------------------|-----------|------------|
| Married with Kids | 46 | 87.0% |
| Married without kids | 0 | 0.0% |
| Single | 7 | 13.0% |
| Total | 53 | 100% |

Most KRC employees are married and with the responsibility of raising, feeding, housing and educating their children. Among the single, are single mothers who also have the same responsibilities.

4.2 Factor Analysis

This section discusses the factor analysis done on section 1 of the questionnaire. There were a total of 37 questions or variables, which were due to the unavailability of the SPSS/PC+ package, analyzed using the Statgraphics computer package. The statgraphics package was however, unable to rotate the initial factors to obtain the Varimax solution in a legible manner. As a result, therefore, the 37 variables were using standard deviation of each, reduced to 18. The first 18 variables with the lowest standard deviations were used, as they had a more consistent response and hence more relevant for the study. The selected 18 variables are as shown in Table 4.6.

Table 4.6: Selected statement from the questionnaire

| | Standard Deviation | Variable Number |
|--|--------------------|-----------------|
| 1. Challenging job | | |
| 2. Fully occupying job | | |
| 3. Friendly work environment | | |
| 4. Cooperative fellow workers. | | |
| 5. Concern about training | | |
| 6. High advancement opportunities | | |
| 7. Job security | | |
| 8. My current job is secure | | |
| 9. Cordial supervisor-subordinate relationship | | |
| 10. Knowledgeable supervisor | | |
| 11. High employee participation in goal setting | | |
| 12. A supervisor who explains new things to co-workers | | |
| 13. Good pay is an important factor in a job | | |
| 14. My wages/salary is higher than that paid in other companies | | |
| 15. Equitable pay in relation to job | | |
| 16. Level of pay is good enough considering state of economy | | |
| 17. Pay level justified in comparison to other employees in same Corporation | | |
| 18. For work to be successfully accomplished, the departmental head must plan for it | | |

4.2.1 Responses by employees

The table below gives the summary statistics of all responses to all the 37 questions contained in the questionnaires. The statistics include the mean and the standard deviations.

Table 4.7: Summary statistics of employee responses

| Question | Mean | Standard Deviation | Variable Number |
|----------|---------|--------------------|-----------------|
| 1 | 1.49057 | 0.973152 | 1 |
| 2 | 2.39623 | 1.43231 | |
| 3 | 1.66038 | 0.875816 | 2 |
| 4 | 2.28302 | 1.33557 | |
| 5 | 2.64151 | 1.5076 | |
| 6 | 3.81132 | 1.38754 | |
| 7 | 2.64151 | 1.55779 | |
| 8 | 2.32075 | 1.28263 | |
| 9 | 2.45283 | 1.39458 | |
| 10 | 1.20755 | 0.494527 | 3 |
| 11 | 1.81132 | 0.78225851 | 4 |
| 12 | 1.2755 | 0.409432 | 5 |
| 13 | 2.77358 | 1.29558 | |
| 14 | 1.26415 | 0.654891 | 6 |
| 15 | 3.33962 | 1.30005 | |
| 16 | 2.96226 | 1.40003 | |
| 17 | 1.24528 | 0.617241 | 7 |
| 18 | 1.92453 | 1.08927 | 8 |
| 19 | 1.94324 | 1.21553 | |
| 20 | 2.22642 | 1.39562 | |
| 21 | 1.30189 | 0.617166 | 9 |
| 22 | 2.18868 | 1.16118 | |
| 23 | 1.33962 | 0.677762 | 10 |
| 24 | 2.56604 | 1.35177 | |
| 25 | 1.58491 | 1.15082 | 11 |
| 26 | 1.4717 | 0.723341 | 12 |
| 27 | 2.41509 | 1.43358 | |
| 28 | 2.49057 | 1.26526 | |
| 29 | 1.32075 | 0.613113 | 13 |
| 31 | 1.35849 | 0.682031 | 14 |
| 32 | 4.56604 | 0.843742 | 15 |
| 33 | 4.11321 | 1.12079 | 16 |
| 34 | 3.81132 | 1.28687 | |
| 35 | 4.01887 | 1.06501 | 17 |
| 36 | 3.77358 | 1.1375 | |
| 37 | 3.50943 | 1.24996 | 18 |

From the above means, the following can be deduced:-

a) The employees tended to strongly agree or just agree with q1, q3, q4, q8, q9, q10, q11, a12, q14, q17, 18, q19, q20, q21, q22, q23, q25, q26, q27, q29 and q31.

This implies that:-

- (i) That they liked challenging jobs but only half found their jobs challenging

- (ii) Most liked being busy and actually found their jobs demanding
- (iii) Most worked as a team and liked it
- (iv) They liked the friendly working environment
- (v) They preferred an employer who trained his staff
- (vi) They liked a job where opportunities for advancement are high
- (vii) They liked the job security offered by KRC
- (viii) There is cordial employee-supervisor relationship
- (ix) They value employee-participation

The employees strongly or just disagreed with the statements q6, q32, q33, q34, q35 and q36. They felt that their jobs required all their expertise thus concurring with the above when they said that they found their jobs demanding. The employees strongly felt that their pay levels were below what was paid in other Organizations and also low in terms of the employer utilization of their efforts. In short, they felt they were underpaid.

The employees neither agreed nor disagreed with q15, q13, q16 and q24. This means that there was a group that felt for, while another group felt against. There were half feelings about the the employer's training concerns, employee utilization, opportunities for advancement in KRC and personal growth prospects. The knowledge of some supervisors about their jobs was also in doubt.

e 4.8: Correlation Matrix for employees responses

| Variable | q1 | q3 | q10 | q11 | q12 | q14 | q17 | q18 | q21 | q23 | q25 | q26 | q29 | q31 | q32 | q33 | q35 | q37 | |
|----------|----|-----|-----|------|-----|-----|-----|------|------|------|------|-----|-----|-----|------|------|------|------|----|
| 1 | 1 | .42 | .22 | .023 | .32 | .37 | .20 | .071 | .07 | .03 | -.02 | .02 | .09 | .28 | -.11 | .07 | -.05 | -.13 | |
| | | 1 | .34 | .43 | .46 | .26 | .09 | .03 | .45 | .49 | .33 | .20 | .35 | .27 | -.10 | -.18 | -.24 | .04 | |
| | | | 1 | .30 | .64 | .24 | .14 | -.11 | .43 | .30 | .29 | .42 | .41 | .29 | -.06 | -.18 | -.37 | -.05 | |
| | | | | 1 | .24 | .17 | .2 | -.02 | .36 | .27 | .09 | .29 | .13 | .20 | -.68 | -.19 | -.20 | .10 | |
| | | | | | 1 | .22 | .02 | -.14 | .36 | .43 | .23 | .38 | .34 | .28 | -.18 | -.22 | -.45 | -.10 | |
| | | | | | | 1 | .07 | .00 | .28 | .18 | .20 | .30 | .22 | .47 | -.42 | -.20 | -.28 | -.17 | |
| | | | | | | | 1 | .06 | .26 | .26 | .12 | .08 | .40 | .43 | -.12 | -.37 | -.15 | .08 | |
| | | | | | | | | 1 | -.20 | -.15 | -.12 | -.5 | .04 | .01 | .21 | .18 | .25 | .31 | |
| | | | | | | | | | 1 | .82 | .53 | .19 | .56 | .27 | -.5 | -.28 | -.34 | -.18 | |
| | | | | | | | | | | 1 | .43 | .26 | .52 | .52 | -.38 | -.23 | -.28 | -.21 | |
| | | | | | | | | | | | 1 | .22 | .33 | .32 | -.23 | -.25 | -.43 | -.08 | |
| | | | | | | | | | | | | 1 | .43 | .16 | -.01 | .03 | -.14 | .05 | |
| | | | | | | | | | | | | | 1 | .02 | -.21 | .12 | -.15 | -.02 | |
| | | | | | | | | | | | | | | 1 | .59 | .21 | -.27 | .11 | |
| | | | | | | | | | | | | | | | 1 | .44 | .44 | .38 | |
| | | | | | | | | | | | | | | | | 1 | .58 | .48 | |
| | | | | | | | | | | | | | | | | | 1 | .34 | |
| | | | | | | | | | | | | | | | | | | 1 | .1 |

The above matrix is for the 18 selected variables. This is the starting point of factor analysis as it shows the correlation among variables. A look at the matrix reveals that variables 21 and 23 and variables 10 and 12 are strongly correlated. Variables 31 and 32, variables 25 and 35 and variables 35 and 12 are moderately correlated but negatively. Variables 3 and 11, 1 and 3 and 10 and 12 are only moderately positively correlated. The implications of the above are that working in a friendly environment and an employer who trains his staff constantly yields largely the same satisfaction as does a cordial supervisor-subordinate relationship and a supervisor who knows all that goes on in the department. The negative correlation between variables 31 and 32 is an indication that although the employees consider pay to be an important factor the corporation does not pay well in comparison to other companies for similar type of work.

Table 4.9: Factor Analysis Output of Variables and Communalities

| Variable | Eigen Value | Variable | Communality |
|----------|-------------|----------|-------------|
| 1 | 3.47 | 10.4 | .477 |
| 2 | 1.83 | 12.3 | .623 |
| 3 | 1.58 | 13.2 | .609 |
| 4 | 1.39 | 14.1 | .468 |
| 5 | 1.39 | 15.0 | .668 |
| 6 | 1.07 | 16.9 | .467 |
| 7 | 0.75 | 17.8 | .528 |
| 8 | 0.29 | 18.7 | .218 |
| 9 | 2.73 | 19.6 | .816 |
| 10 | 0.58 | 20.5 | .791 |
| 11 | 0.44 | 21.4 | .519 |
| 12 | 0.42 | 22.3 | .631 |
| 13 | 0.34 | 23.2 | .698 |
| 14 | 0.30 | 24.1 | .664 |
| 15 | 0.24 | 25.0 | .569 |
| 16 | 0.19 | 25.9 | .581 |
| 17 | 0.13 | 26.8 | .364 |
| 18 | 0.09 | 27.7 | .439 |

The above table gives the percentages or proportion of each variable's variation to the total variation that is involved in the factors. A quick glimpse shows that variable 9 and 10 account for about 80% of the variation in the factors. Also it can be deduced that variables 8 and 17 rank very low in terms of their contribution to the factors. The implications of the above is that the supervisor-subordinate relationship is very important as a motivating factor. Job security and the state of the economy in relationship to the pay levels is almost inconsequential as far as affecting the factors is concerned.

Table 4.10: Eigen Values

| Factor | Eigen Value | % Variable | Cumulative % |
|--------|-------------|------------|--------------|
| 1 | 5.47 | 30.4 | 30.4 |
| 2 | 1.83 | 10.1 | 40.6 |
| 3 | 1.58 | 8.8 | 49.3 |
| 4 | 1.39 | 7.7 | 57.1 |
| 5 | 1.19 | 6.6 | 63.7 |
| 6 | 1.07 | 6.0 | 69.6 |
| 7 | 0.95 | 5.3 | 74.9 |
| 8 | 0.89 | 5.0 | 79.9 |
| 9 | 0.79 | 4.4 | 84.3 |
| 10 | 0.65 | 3.6 | 87.9 |
| 11 | 0.44 | 2.5 | 90.4 |
| 12 | 0.42 | 2.3 | 92.7 |
| 13 | 0.34 | 1.9 | 94.6 |
| 14 | 0.30 | 1.7 | 96.3 |
| 15 | 0.24 | 1.4 | 97.6 |
| 16 | 0.19 | 1.1 | 98.7 |
| 17 | 0.14 | 0.8 | 99.5 |
| 18 | 0.09 | 0.5 | 100.0 |

The above values show how well each of the identified factors fit the data from all the respondents on all statements. It is the sum of squares of loadings of each factor. From the above table it is evident that factor 30.4 of the total variation is a very important factor, in fact the most important. The table also gives an estimate of how many factors that can be extracted in order to account for the total variation. In the above case, 6 factors that account for 69.6% of the total variation and with an eigen value of more than 1 each will be used.

Table 4.11: Initial Factor Matrix

| | | | | | | |
|----|-------|--------------------|-------|-------|-------------------|-------------------|
| 1 | 0.25 | -0.5 | 0.24 | 0.59 | -0.18 | -0.14 |
| 2 | 0.60 | -0.42 | -0.05 | 0.04 | -0.10 | -0.40 |
| 3 | 0.62 | -0.30 | -0.40 | 0.04 | -0.03 | 0.21 |
| 4 | 0.46 | -0.15 | -0.24 | -0.24 | -0.34 | -0.14 |
| 5 | 0.64 | -0.29 | -0.4 | 0.23 | 0.04 | 0.03 |
| 6 | 0.50 | -0.15 | 0.31 | 0.45 | -0.03 | 0.26 |
| 7 | 0.39 | 0.19 | 0.29 | -0.41 | -0.49 | 0.24 |
| 8 | -0.18 | -0.35 | 0.28 | -0.16 | 0.57 | 6.5 ⁻⁴ |
| 9 | 0.80 | 0.07 | 0.14 | -0.23 | 0.21 | -0.29 |
| 10 | 0.74 | -2.2 ⁻³ | 0.13 | -0.32 | 0.26 | -0.33 |
| 11 | 0.42 | -0.44 | -0.19 | -0.23 | 0.20 | 0.52 |
| 12 | 0.68 | -0.10 | 0.19 | -0.33 | 0.09 | 0.27 |
| 13 | 0.69 | 0.07 | 0.45 | 0.07 | -0.13 | -0.05 |
| 14 | -0.56 | -0.45 | -0.39 | -0.31 | -0.18 | -0.01 |
| 15 | -0.48 | -0.56 | 0.09 | -0.11 | 0.25 | -0.19 |
| 16 | -0.62 | -0.36 | 0.27 | -0.26 | 7.1 ⁻³ | -0.22 |
| 17 | -0.18 | -0.34 | 0.51 | -0.13 | 0.41 | 0.21 |
| 18 | 0.57 | 0.18 | -0.23 | -0.11 | 0.0 | -0.20 |

From the above table variables 9, 10, 13, 12 and 5 correlate highly with or load heavily on the first factor. Variable 15 loads heavily on the second factor, variable 17 on the third factor, while variable 1 loads heavily on the fourth factor. Variables 8 and 9 load heavily on the fifth factor while variable 11 has a high loading on factor 6. The variables do not cluster. They are dispersed and thus a need to rotate the axis so as to form a linear combination of factors.

Table 4.12: Final Varimax Rotated Factor Matrix

| | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 |
|----|-------------------|-------------------|-------------|-------------|-------------|-------------|
| 1 | 7.6 ⁻³ | -0.04 | 0.05 | 0.88 | 0.04 | 0.01 |
| 2 | 0.57 | 0.13 | 0.22 | 0.52 | -0.22 | 0.05 |
| 3 | 0.21 | -0.08 | 0.70 | 0.21 | -0.30 | -0.01 |
| 4 | 0.35 | 0.11 | 0.27 | 0.09 | -0.42 | 0.30 |
| 5 | 0.27 | -0.11 | 0.58 | 0.36 | -0.34 | -0.19 |
| 6 | 0.05 | -0.51 | 0.25 | 0.55 | 0.14 | 0.07 |
| 7 | 0.19 | -0.30 | 0.10 | -0.16 | -0.08 | 0.76 |
| 8 | -0.16 | 0.31 | -0.11 | 0.24 | 0.06 | 0.62 |
| 9 | 0.86 | -0.27 | 0.15 | 0.05 | -0.04 | 0.02 |
| 10 | 0.89 | -0.15 | 0.16 | 0.02 | 0.01 | 0.01 |
| 11 | 0.12 | 8.6 ⁻³ | 0.85 | -0.01 | 0.18 | 0.06 |
| 12 | 0.49 | -0.29 | 0.50 | -0.03 | 0.18 | 0.30 |
| 13 | 0.50 | -0.51 | 0.03 | 0.33 | 0.04 | 0.32 |
| 14 | -0.35 | 0.79 | 0.12 | -0.15 | -0.08 | 0.08 |
| 15 | -0.08 | 0.66 | -0.64 | 0.12 | 0.43 | -0.15 |
| 16 | -0.14 | 0.62 | -0.33 | -0.02 | 0.41 | 0.13 |
| 17 | 0.02 | 0.10 | 0.07 | 0.04 | 0.79 | 0.01 |
| 18 | 0.50 | -0.20 | 0.18 | -0.05 | -0.36 | -0.07 |

So as to produce loadings that are close to either 0 or 1, which loadings show much more clearly what things go together, thus making them more interpretable, there is need to rotate the factors. There are two major methods of rotation, orthogonal and oblique rotations. The orthogonal rotations are angle-preserving in that they preserve the right angles that exist among the factor axes. By so doing, the case of factors themselves being correlated does not arise as is the case in oblique rotations. The above matrix represents the final or terminal solution of the factors.

By beginning with the first variable and the first factor and moving horizontally from left to right, the highest loading for

each variable on any of the factors is chosen and circled. For samples of less than 100, the loading would have to be greater than 0.30 to be considered significantly significant, thus the factor accounts for at least 9% or more of the variation in the variable.

The results of the final varimax rotated matrix show that variable 2 (q3), var9 (q21), var10 (q23) and var18 (q37) load heavily on factor 1. From the table it is clear that some variables like variables 4, 8, 12, 13 and 16 have significant loadings of more than 0.30 on more than one factor. This complicates the naming task and could be candidates for elimination depending on the purpose of the study and on whether the mixed pattern of loadings makes sense or not. In the above case, some of the variables explain well some of the factors and will not be discarded. These are variables 16 which has a heavy loading on factor 5, and 2 which has a heavy loading on factor 4.

Variable 14 (q31), var 15 (q32) and var 16 (q33) have a heavy loading on factor 2. Variable 3 (q10), var 5 (q12), var 11 (q25) and var 12 (q26) have heavy loadings on factor 3. Variable 1 (q1) and var 6 (q14) have a heavy loading on factor 4 in addition to variable 2 earlier mentioned to have a significant loading on the same factor. On factor 5, only variable 17 (q35) seems to have a high loading, but since variables 16 and 15 also have significant loadings and they are all on the same issue, they could be said to explain the factor. Variables 17 and 18 have heavy loadings on factor 6.

The implications of the final matrix are as shown below:-

The following will make up factor 1:-

- I like being busy the whole day
- My fellow workers at my work place are cooperative
- I believe that supervisor-subordinate relationship should be cordial
- It is important for a supervisor to know all about what goes on in his department
- A good supervisor is that one who explains new things to co-workers
- I am satisfied with the benefits that are derived from my job

Factor 2 is as a result of the following:-

- I consider good pay as an important factor in a job
- For similar type of work, my wages/salary is higher than that paid in other companies
- My salary is equitable to the amount of effort I put in my job

Factor 3 arises out of the following statements

- I like working in a friendly environment
- I like an employer who trains his staff constantly
- For work to be successfully accomplished, the departmental head must plan for it
- For work to be successfully accomplished, all employees should be involved in the setting of achievable goals

Factor 4 arises out of the following statements

- I like challenging work
- I like a job where opportunities for advancement are high
- I like being busy the whole day

Factor 5 is as a result of the following statements:-

- The levels of pay in the Corporation are good enough considering the state of the economy
- For similar type of work, my wages/salary is good enough
- For the amount of effort I put in my job, my salary is good enough

Factor 6 is as a result of the statements;

- I value job security in a job
- I feel that my current job is secure

4.3 Test of Independence

In order to verify the actual sentiments on importance of motivation factors deduced from section 1 of the questionnaire, section 4 of the same provided a list of 10 factors that have been found to contribute to motivation in the literature. The respondents here knew the actual factors that the researcher was interested in and were thus more clear on their choices. To some extent, the results of section 4 were found to contradict the results of section 1 but this will be clarified in the next chapter using the results of the open ended questions appearing in section 3 of the questionnaire.

The respondents were required to give a score of 1 to 10 in order of importance. This section examines whether there is a dependent relationship between personal variables such as age, education levels, length of service and sex of respondents on the one hand and motivation on the other hand. Do the different personal attributes affect the employees perception of the most important factor?

Table 4.13 below gives the total scores. The factor with the least total score is the most important, the one with the second least total score the second most important and so on upto the one with the highest score which is the least important. The levels of importance is shown for all employees regardless of the personal attributes.

Table 4.13: Factors Total Scores

| RESPONDENTS | FACTOR 1 | FACTOR 2 | FACTOR 3 | FACTOR 4 | FACTOR 5 | FACTOR 6 | FACTOR 7 | FACTOR 8 | FACTOR 9 | FACTOR 10 |
|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 1 | 10 | 5 | 8 | 7 | 2 | 1 | 6 | 3 | 9 | 4 |
| 2 | 3 | 5 | 6 | 4 | 1 | 10 | 9 | 8 | 2 | 7 |
| 3 | 1 | 2 | 10 | 9 | 5 | 8 | 7 | 3 | 4 | 6 |
| 4 | 1 | 2 | 10 | 9 | 3 | 8 | 6 | 4 | 5 | 7 |
| 5 | 1 | 4 | 7 | 6 | 2 | 3 | 5 | 8 | 9 | 10 |
| 6 | 3 | 4 | 7 | 5 | 9 | 6 | 8 | 1 | 10 | 2 |
| 7 | 2 | 6 | 4 | 5 | 1 | 3 | 7 | 8 | 9 | 10 |
| 8 | 1 | 4 | 6 | 8 | 3 | 9 | 7 | 5 | 2 | 1 |
| 9 | 3 | 2 | 8 | 1 | 7 | 9 | 6 | 4 | 5 | 1 |
| 10 | 1 | 7 | 8 | 9 | 3 | 10 | 6 | 2 | 3 | 5 |
| 11 | 1 | 4 | 6 | 1 | 3 | 8 | 9 | 5 | 2 | 7 |
| 12 | 1 | 8 | 6 | 7 | 4 | 9 | 5 | 3 | 2 | 10 |
| 13 | 2 | 1 | 8 | 3 | 9 | 7 | 1 | 4 | 5 | 6 |
| 14 | 3 | 7 | 6 | 10 | 8 | 9 | 5 | 1 | 2 | 4 |
| 15 | 1 | 3 | 7 | 8 | 4 | 10 | 6 | 5 | 2 | 9 |
| 16 | 1 | 2 | 3 | 4 | 5 | 10 | 8 | 6 | 7 | 9 |
| 17 | 1 | 2 | 3 | 4 | 9 | 10 | 5 | 6 | 7 | 8 |
| 18 | 2 | 7 | 3 | 9 | 4 | 8 | 6 | 1 | 5 | 10 |
| 19 | 1 | 2 | 6 | 10 | 7 | 8 | 5 | 3 | 9 | 4 |
| 20 | 6 | 3 | 4 | 5 | 2 | 7 | 10 | 8 | 1 | 9 |
| 21 | 1 | 3 | 2 | 5 | 4 | 10 | 6 | 7 | 8 | 9 |
| 22 | 1 | 6 | 7 | 10 | 2 | 5 | 3 | 4 | 9 | 8 |
| 23 | 1 | 3 | 4 | 5 | 7 | 9 | 10 | 6 | 2 | 8 |
| 24 | 1 | 2 | 6 | 10 | 5 | 7 | 9 | 4 | 3 | 8 |
| 25 | 1 | 4 | 7 | 8 | 5 | 10 | 9 | 6 | 3 | 2 |
| 26 | 2 | 3 | 4 | 9 | 5 | 10 | 8 | 6 | 1 | 7 |
| 27 | 4 | 1 | 6 | 7 | 3 | 10 | 9 | 5 | 2 | 8 |
| 28 | 4 | 8 | 9 | 6 | 3 | 7 | 5 | 2 | 1 | 10 |
| 29 | 1 | 7 | 6 | 4 | 8 | 10 | 9 | 2 | 3 | 5 |
| 30 | 1 | 5 | 6 | 9 | 2 | 8 | 10 | 7 | 3 | 4 |
| 31 | 1 | 2 | 3 | 10 | 4 | 7 | 5 | 8 | 6 | 9 |
| 32 | 1 | 5 | 8 | 1 | 7 | 9 | 4 | 3 | 2 | 6 |
| 33 | 1 | 2 | 8 | 1 | 5 | 9 | 7 | 3 | 4 | 6 |
| 34 | 1 | 6 | 9 | 10 | 5 | 8 | 4 | 3 | 2 | 7 |
| 35 | 4 | 2 | 1 | 9 | 5 | 6 | 10 | 7 | 8 | 3 |
| 36 | 4 | 3 | 1 | 9 | 5 | 10 | 7 | 8 | 2 | 6 |
| 37 | 2 | 6 | 7 | 9 | 8 | 10 | 5 | 3 | 1 | 4 |
| 38 | 1 | 5 | 7 | 6 | 3 | 9 | 8 | 10 | 2 | 4 |
| 39 | 1 | 4 | 6 | 10 | 3 | 8 | 9 | 5 | 2 | 7 |
| 40 | 1 | 5 | 9 | 8 | 4 | 10 | 7 | 2 | 3 | 6 |
| 41 | 1 | 7 | 4 | 9 | 2 | 10 | 5 | 3 | 6 | 8 |
| 42 | 2 | 3 | 9 | 8 | 5 | 10 | 6 | 7 | 1 | 4 |
| 43 | 1 | 4 | 5 | 9 | 6 | 10 | 8 | 3 | 2 | 7 |
| 44 | 1 | 2 | 5 | 6 | 7 | 8 | 3 | 9 | 4 | 10 |
| 45 | 3 | 7 | 6 | 10 | 5 | 9 | 8 | 2 | 1 | 4 |
| 46 | 9 | 1 | 6 | 10 | 4 | 8 | 7 | 3 | 5 | 2 |
| 47 | 7 | 9 | 1 | 6 | 8 | 5 | 4 | 2 | 3 | 1 |
| 48 | 1 | 5 | 3 | 10 | 6 | 8 | 9 | 7 | 2 | 4 |
| 49 | 1 | 2 | 6 | 10 | 1 | 8 | 7 | 9 | 3 | 5 |
| 50 | 1 | 2 | 4 | 10 | 3 | 7 | 8 | 9 | 5 | 6 |
| 51 | 1 | 4 | 5 | 10 | 7 | 9 | 8 | 2 | 3 | 6 |
| 52 | 2 | 8 | 7 | 4 | 9 | 5 | 10 | 6 | 3 | 1 |
| 53 | 5 | 3 | 1 | 6 | 7 | 9 | 10 | 8 | 2 | 4 |
| TOTAL | 114 | 219 | 304 | 378 | 254 | 431 | 364 | 259 | 207 | 318 |

TABLE 4.14 (a) MOTIVATING FACTORS VERSUS AGES OF RESPONDENTS

OBSERVED VALUES

| AGE | FACTORS | | | | | | | | | | TOTAL |
|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 20 - 29 | 20 | 33 | 62 | 89 | 48 | 87 | 69 | 46 | 38 | 58 | 550 |
| 30 - 39 | 48 | 78 | 98 | 111 | 89 | 138 | 119 | 94 | 78 | 98 | 951 |
| 40 - 49 | 33 | 82 | 118 | 127 | 77 | 140 | 125 | 78 | 66 | 116 | 962 |
| 50 < | 13 | 26 | 26 | 51 | 40 | 66 | 51 | 41 | 25 | 46 | 385 |
| TOTAL | 114 | 219 | 304 | 378 | 254 | 431 | 364 | 259 | 207 | 318 | 2848 |

Table 4.14 (b) Expected Values

| AGE | FACTORS | | | | | | | | | | TOTAL |
|---------|---------|-------|--------|--------|-------|--------|--------|-------|-------|--------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 20 - 29 | 22.02 | 42.29 | 58.71 | 73.00 | 49.05 | 83.23 | 70.29 | 50.02 | 39.98 | 61.41 | 550 |
| 30 - 39 | 38.07 | 73.13 | 101.51 | 126.22 | 84.82 | 143.92 | 121.55 | 86.48 | 69.12 | 106.19 | 951 |
| 40 - 49 | 38.51 | 73.97 | 102.69 | 127.68 | 85.80 | 145.58 | 122.95 | 87.49 | 69.92 | 107.41 | 962 |
| 50 < | 15.41 | 29.60 | 41.10 | 51.10 | 34.34 | 58.26 | 49.21 | 35.01 | 27.98 | 42.99 | 385 |

Table 4.14 (c) Chi-Square Figures

| AGE | FACTORS | | | | | | | | | | TOTAL |
|---------|---------|------|------|------|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 20 - 29 | 0.18 | 2.04 | 0.18 | 3.51 | 0.02 | 0.17 | 0.02 | 0.32 | 0.10 | 0.19 | 6.75 |
| 30 - 39 | 2.59 | 0.32 | 0.12 | 1.84 | 0.21 | 0.24 | 0.05 | 0.65 | 1.14 | 0.63 | 7.80 |
| 40 - 49 | 0.79 | 0.87 | 2.28 | 0.00 | 0.90 | 0.21 | 0.03 | 1.03 | 0.22 | 0.69 | 7.03 |
| 50 < | 0.38 | 0.44 | 5.54 | 0.00 | 0.93 | 1.03 | 0.07 | 1.02 | 0.32 | 0.21 | 9.94 |
| TOTAL | 3.94 | 3.68 | 8.14 | 5.35 | 2.07 | 1.66 | 0.18 | 3.03 | 1.78 | 1.72 | 31.52 |

TABLE 4.15 (a) Motivating factors versus the sex of respondents

OBSERVED VALUES

| SEX | FACTORS | | | | | | | | | | TOTAL |
|--------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| MALE | 101 | 177 | 250 | 314 | 218 | 359 | 306 | 219 | 169 | 249 | 2362 |
| FEMALE | 13 | 42 | 54 | 64 | 36 | 72 | 58 | 40 | 38 | 69 | 486 |
| TOTAL | 114 | 219 | 304 | 378 | 254 | 431 | 364 | 259 | 207 | 318 | 2848 |

Table 4.15 (b) Expected values

| SEX | FACTORS | | | | | | | | | | TOTAL |
|--------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| MALE | 94.55 | 181.63 | 252.12 | 313.50 | 210.66 | 357.45 | 301.88 | 214.80 | 171.68 | 263.73 | 2362 |
| FEMALE | 19.45 | 37.37 | 51.88 | 64.50 | 43.34 | 73.55 | 62.12 | 44.20 | 35.32 | 54.27 | 486 |
| TOTAL | 114 | 219 | 304 | 378 | 254 | 431 | 364 | 259 | 207 | 318 | 2848 |

Table 4.15 (c) Chi-Square Figures

| SEX | FACTORS | | | | | | | | | | TOTAL |
|--------|---------|------|------|------|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| MALE | 0.44 | 0.12 | 0.02 | 0.00 | 0.26 | 0.01 | 0.06 | 0.08 | 0.04 | 0.82 | 1.84 |
| FEMALE | 2.14 | 0.57 | 0.09 | 0.00 | 1.24 | 0.03 | 0.27 | 0.40 | 0.20 | 4.00 | 8.96 |
| TOTAL | 2.58 | 0.69 | 0.10 | 0.00 | 1.50 | 0.04 | 0.33 | 0.48 | 0.24 | 4.82 | 10.80 |

The tables 4.15 (a) and 4.15 (b) show the observed and expected total scores of the motivating factors by the sex of the respondents. Table 4.15(c) gives the calculation of the chi value. The calculated chi value is 10.80 which does not lie in the critical region as the tabled critical value at 10 degrees of freedom assuming $\alpha = 0.05$, is 18.307. Once again the null hypothesis fails to be rejected.

Tables 4.16 (a) and 4.16 (b) on the next page give the observed total scores for the factors by respondents' length of service. Table 4.16 (c) shows the calculation of the chi value which is 44.47. Thus once again does not fall in the critical region as the critical value is 50.998 at 36 degrees of freedom assuming $\alpha = 0.05$. Once again, I fail to reject the null hypothesis

Tables 17 (a) and 17 (b) give the observed and expected total scores for each of the factors on the basis of the respondents' education level. Table 17 (c) gives the calculation of the chi value which at 50.14 does not lie in the critical region. The tabled critical value at 36 degrees of freedom is 50.998.

TABLE 4.16 (a) Motivating Factors versus the respondents length of service

OBSERVED VALUES

| SERVICE | FACTORS | | | | | | | | | | TOTAL |
|---------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 1 - 2 | 4 | 10 | 25 | 39 | 22 | 32 | 28 | 17 | 21 | 22 | 220 |
| 3 - 5 | 16 | 12 | 21 | 30 | 18 | 36 | 31 | 26 | 11 | 19 | 220 |
| 6 - 9 | 19 | 54 | 72 | 79 | 63 | 104 | 83 | 53 | 41 | 71 | 639 |
| 10 - 19 | 38 | 66 | 76 | 78 | 54 | 95 | 82 | 60 | 56 | 83 | 688 |
| 20 < | 37 | 77 | 110 | 152 | 97 | 164 | 140 | 103 | 78 | 123 | 1081 |
| TOTAL | 114 | 219 | 304 | 378 | 254 | 431 | 364 | 259 | 207 | 318 | 2848 |

Table 4.16 (b) Expected Values

| SERVICE | FACTORS | | | | | | | | | | TOTAL |
|---------|---------|-------|--------|--------|-------|--------|--------|-------|-------|--------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 1 - 2 | 8.81 | 16.92 | 23.48 | 29.20 | 19.62 | 33.29 | 28.12 | 20.01 | 15.99 | 24.56 | 220 |
| 3 - 5 | 8.81 | 16.92 | 23.48 | 29.20 | 19.62 | 33.29 | 28.12 | 20.01 | 15.99 | 24.56 | 220 |
| 6 - 9 | 25.58 | 49.14 | 68.21 | 84.81 | 56.99 | 96.70 | 81.67 | 58.11 | 46.44 | 71.35 | 639 |
| 10 - 19 | 27.54 | 52.90 | 73.44 | 91.31 | 61.36 | 104.12 | 87.93 | 62.57 | 50.01 | 76.82 | 688 |
| 20 < | 43.27 | 83.12 | 115.39 | 143.48 | 96.41 | 163.59 | 138.16 | 98.31 | 78.57 | 120.70 | 1081 |
| TOTAL | 114 | 219 | 304 | 378 | 254 | 431 | 364 | 259 | 207 | 318 | 2848 |

Table 4.16 (c) Chi - Square Figures

| SERVICE | FACTORS | | | | | | | | | | TOTAL |
|---------|---------|------|------|------|------|------|------|------|------|------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 1 - 2 | 2.62 | 2.83 | 0.10 | 3.29 | 0.29 | 0.05 | 0.00 | 0.45 | 1.57 | 0.27 | 11.47 |
| 3 - 5 | 5.88 | 1.43 | 0.26 | 0.02 | 0.13 | 0.22 | 0.30 | 1.80 | 1.56 | 1.26 | 12.85 |
| 6 - 9 | 1.69 | 0.48 | 0.21 | 0.40 | 0.63 | 0.55 | 0.02 | 0.45 | 0.64 | 0.00 | 5.08 |
| 10 - 19 | 3.97 | 3.24 | 0.09 | 1.94 | 0.88 | 0.80 | 0.40 | 0.11 | 0.72 | 0.50 | 12.65 |
| 20 < | 0.91 | 0.45 | 0.25 | 0.51 | 0.00 | 0.00 | 0.02 | 0.22 | 0.00 | 0.04 | 2.42 |
| TOTAL | 15.07 | 8.43 | 0.91 | 6.16 | 1.94 | 1.62 | 0.74 | 3.03 | 4.49 | 2.07 | 44.47 |

TABLE 4.17 (a) Motivating Factors versus the respondents educational levels

OBSERVED VALUES

| EDUCATIO | FACTORS | | | | | | | | | | TOTAL |
|-----------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Secondary | 63 | 124 | 186 | 207 | 139 | 246 | 210 | 145 | 141 | 207 | 1668 |
| High sch. | 13 | 24 | 34 | 39 | 35 | 52 | 37 | 27 | 19 | 32 | 312 |
| Cert. | 20 | 38 | 57 | 76 | 39 | 82 | 61 | 44 | 26 | 52 | 495 |
| Diploma | 8 | 14 | 4 | 16 | 14 | 13 | 13 | 9 | 5 | 5 | 101 |
| Degree | 10 | 19 | 23 | 40 | 27 | 38 | 43 | 34 | 16 | 22 | 272 |
| TOTAL | 114 | 219 | 304 | 378 | 254 | 431 | 364 | 259 | 207 | 318 | 2848 |

Table 4.17 (b) Expected values

| EDUCATIO | FACTORS | | | | | | | | | | TOTAL |
|-----------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Secondary | 66.77 | 128.26 | 178.04 | 221.38 | 148.76 | 252.43 | 213.19 | 151.69 | 121.23 | 186.24 | 1668 |
| High sch. | 12.49 | 23.99 | 33.30 | 41.41 | 27.83 | 47.22 | 39.88 | 28.37 | 22.68 | 34.84 | 312 |
| Cert. | 19.81 | 38.06 | 52.84 | 65.70 | 44.15 | 74.91 | 63.27 | 45.02 | 35.98 | 55.27 | 495 |
| Diploma | 4.04 | 7.77 | 10.78 | 13.41 | 9.01 | 15.28 | 12.91 | 9.19 | 7.34 | 11.28 | 101 |
| Degree | 10.89 | 20.92 | 29.03 | 36.10 | 24.26 | 41.16 | 34.76 | 24.74 | 19.77 | 30.37 | 272 |
| TOTAL | 114 | 219 | 304 | 378 | 254 | 431 | 364 | 259 | 207 | 318 | 2848 |

Table 4.17 (c) Chi - Square Figures

| | | | | | | | | | | | |
|-----------|------|------|------|------|------|------|------|------|------|------|-------|
| Secondary | 0.21 | 0.14 | 0.36 | 0.93 | 0.64 | 0.16 | 0.05 | 0.30 | 3.22 | 2.31 | 8.33 |
| High sch. | 0.02 | 0.00 | 0.01 | 0.14 | 1.85 | 0.48 | 0.21 | 0.07 | 0.60 | 0.23 | 3.61 |
| Cert. | 0.00 | 0.00 | 0.33 | 1.62 | 0.60 | 0.67 | 0.08 | 0.02 | 2.77 | 0.19 | 6.28 |
| Diploma | 3.87 | 5.00 | 4.27 | 0.50 | 2.77 | 0.34 | 0.00 | 0.00 | 0.75 | 3.49 | 21.00 |
| Degree | 0.07 | 0.18 | 1.25 | 0.42 | 0.31 | 0.24 | 1.95 | 3.47 | 0.72 | 2.31 | 10.92 |
| TOTAL | 4.18 | 5.32 | 6.22 | 3.61 | 6.17 | 1.90 | 2.29 | 3.86 | 8.05 | 8.54 | 50.14 |

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

The findings in chapter four indicate a contradiction as a result of analyzing sections 1 and 4 of the questionnaire separately. These contradictions will however, be explained and hopefully erased. This will be done with the use of section 3 of the questionnaire and the in-depth interviews conducted on a few of the respondents.

5.1 Summary on the results of the factor analysis

The results of the analysis show that Factor 1 is the most important. The statements composing factor 1 could be classified as affective interaction. This is as a result of interactions between employees in the Organization. As Chung (1977), points out, interactions with other members of an Organization satisfy socialization needs for affiliation, belonging and emotional support. Factor 1 could also be summarized to imply the work environment. The work environment is not only influenced by colleagues but by the superiors, in this case the supervisors.

The second most important factor could be classified on the basis of the statements composing it, as the financial part of motivation. Pay can be an effective tool of motivation if

achievement-oriented leadership sets challenging goals, plans for his work and expects subordinates to also adopt them. A combination of the above leadership styles make up the third factor.

The fourth factor is the job itself. How challenging is the work?; Are opportunities for advancement high?. This takes the fourth slot in importance. Once the rewards of pay are achieved, work can provide intrinsic motivation in the form of achievement, recognition and growth. When work is not interesting, employees will only work up to the point where their biological needs are met. Challenging jobs are gaining more importance as workers become more educated.

The fifth factor, whose statements are mostly almost similar to the ones that compose factor 2 could be interpreted as the equity concept earlier mentioned in Chapter 1 of this study. This is what the employee gets from the Organization. However, it goes further than that, in that it compares the benefits received with what the Organization can afford, and with the amount of work put in. It also looks at what other workers doing similar jobs get in other Companies. This goes along the lines of the equity theory which holds that; if a person's input-output ratio is perceived to be equitable to the relevant other's input - output ratio, a feeling of perceived pay equity exists, (Chung, 1977).

The sixth and final factor is job security. Job security

although has been placed as the sixth in importance, however, has been by the same respondents been placed first when they were given a list of 10 factors to rank. The job security here implies one's job being safe, one being sure of staying employed for a duration of time into the future.

As a result of section 4 of the questionnaire, however, as earlier stated, job security came in first. Job security is as a result of many of the other higher ranked factors from the factor analysis. Good working environment and acceptable leadership styles do signify or promise job security. Thus although lowly ranked from section 1 of the questionnaire, by implication it is highly ranked.

The results of the ranking from the total scores table, although may at first glance seem to contradict the results of the factor analysis, are infact almost similar to the factor analysis results. It is just that the factor analysis results combines many small sub-factors together. All the factors appearing in section 4 of the table are represented in the factor analysis results. Singularly, the factors may not mean much, but collectively, that is in combination with other factors, they may take precedence.

As an example, friendly co-workers as a single motivating factor may not seem important to employees so long as they get their rewards from the employer. But when it is part of a cordial work environment, it then gains more importance.

5.2 Results of the Chi - Square Contingency tables Statistical test

The test sought to establish whether there was a dependent relationship between what motivates employees and their status. From the results however, the importance of motivating factors is independent of the employees' personal attributes. For Kenya Railways workers, regardless of age, education, sex or length of service, job security and salary levels seem to take the most important slot.

This could be explained by the high unemployment levels facing Kenya and the low incomes per capita. Kenyans just want to be ensured that they have a job that will cater for their hygienic needs. The majority of Kenyans, even University graduates are still striving to satisfy the low order needs like food and security. The importance of a good working environment is just that it ensures an employee's job security, gives the employees hope for tomorrow and a sense of belonging.

5.3 Conclusions and Recommendations

The results of this study confirms the results of other previous studies not only in Kenya Railways but Africa in general. The most important factors affecting motivation are outlined down below.

A good working environment will include such factors as good supervisor-subordinate relationship and good interactions with

other members of the Organization. The caring of the basic welfare of the subordinates' current and future needs also applies under this factor. This factor tends towards the much acclaimed Japanese styles of management, or the theory Z style of management. This is where employees in an Organization feel part of a huge family, and by so doing, management gets the full commitment of the employees. It is not uncommon even today to find a husband/wife team working for the Corporation, where sometimes this even goes on to their children. This is a tradition that KRC should not discard.

The housing of railway workers with the inclusion of welfare facilities like clubs and sporting halls should be encouraged but the facilities should be in a good physical state. This also ensures security of job tenure which most Kenyans especially the academically disadvantaged are seeking. Some of the vocations at KRC are unique to the Corporation and as such employees even by gaining experience still feel the need to be assured of their job security in the Corporation.

The salary levels are a very important factor. How the Organization manages its compensation schemes will affect workers commitment to the Organization. The salary levels need to be good enough to satisfy the lower order needs of food and shelter as per Maslow's hierarchy of needs. The employees felt that they were underpaid and thus the Corporation needs to introduce a pay system that matches the employees needs, that reflects the differences in performance

and that offers incentives that are challenging but achievable. Some employees in fact called for the reduction of employee numbers if this would mean them getting an adequate pay for work done.

The importance of security is further emphasized as employees of Kenya Railways are motivated or demotivated by leadership styles in the Corporation. Good leadership styles - where work is planned for, there is employee participation, and one that gives direction towards the hoped for future, signifies security of job into the future. Employees are motivated to perform when they see that their leaders are in command of the situation. This will take care of such issues as unfair promotion and rewarding methods.

5.4 Limitations of the study

The study was conducted only for employees working in Nairobi.

The generalisability of the results may not be possible as working conditions, the standards of living and accessibility to Management differs between Nairobi and the other rail served towns like Mombasa, Nakuru and Kisumu. The working conditions in Nairobi are definitely not the same as those experienced by gangmen in remote areas like those on the Nairobi - Mombasa line.

Secondly, due to the high number of employees in the Corporation, the number of managers or senior level employees constituting the sample was too small, to make an impact on

the research findings. As such, the results may be only the sentiments of the lower level employees only.

Due to time constraints, the sample size was too small as compared to the population of over 9,000 employees. And thus may not be representative of the whole population.

Finally due to the scarce empirical literature on the public sector in Kenya, the study mostly used literature on the same in the developed countries, studies in the private sector and theoretical evidence.

5.5 Suggestions For Further Research

Two studies, this one inclusive have how been conducted on motivation in Kenya Railways Corporation. Both studies concentrated on Nairobi based employees. There is a need to conduct a country-wide study of the whole KRC system using a larger sample and thus a bigger time period.

Secondly, there is a need to compare the motivational factors affecting employees both in the private and public sectors. As such, a comparison study needs to be undertaken in order to test whether there is a difference in the factors that motivate employees in the two sectors. This will assist the often regarded lowly motivated public sector employees perform better. This study will also look into the finances and other resources available to the two sectors.

Finally, since this study showed no dependent relationship between employees' personal attributes and what motivates them, a study needs to be conducted to ascertain this. To confirm this, a sample with equal numbers of each group, i.e., sex, age, educational levels and length of service needs to be undertaken. One of the groups, especially males of secondary school education and who have worked for a very long time could have overshadowed the results.

Dear respondent,

I, the above named, am an M.B.A student at the University of Nairobi, and in fulfillment of the requirement of the Master of Business Administration degree I am undertaking a research into the various factors that motivate employees at work. This project has no connection with the Kenya Railways Management as the work is for academic purposes only. I wish to ensure you that all answers to the attached questionnaire and any comments made to the undersigned will be treated with utmost confidentiality.

Thanking you in advance for your assistance and cooperation, I remain,

Yours faithfully,

JAMES N. MUMUKI

APPENDIX 1 (a)

Jayne N. Musomba,
University of Nairobi,
Faculty of Commerce,
Nairobi.

27th April, 1993

Dear respondent,

I, the above named, am an M.B.A student at the University of Nairobi, and in fulfillment of the requirement of the Master of Business Administration course, I am undertaking a research into the various factors that motivate employees at work. This project has no connection with the Kenya Railways Management as the work is for academic purposes only. I wish to ensure you that all answers to the attached questionnaire and any comments made to the undersigned will be treated with utmost confidentiality.

Thanking you in advance for your assistance and cooperation, I remain,

Yours faithfully,

Jayne N. Musomba

APPENDIX 1 (b)

ATTITUDE QUESTIONNAIRE

SECTION 1

Circle the response that is most appropriate

| | Strongly Agree | | | Strongly Disagree | |
|---|-------------------|---|---|----------------------|---|
| 1. I like challenging work | 1 | 2 | 3 | 4 | 5 |
| 2. My current job is challenging | 1 | 2 | 3 | 4 | 5 |
| 3. I like being busy the whole day | 1 | 2 | 3 | 4 | 5 |
| 4. My current job is demanding and keeps me busy throughout | 1 | 2 | 3 | 4 | 5 |
| 5. My job uses most of my experience and abilities | 1 | 2 | 3 | 4 | 5 |
| 6. My job could be handled by a person having less experience or training | 1 | 2 | 3 | 4 | 5 |
| 7. I require more technical know how or skill than I currently possess to do my job better | 1 | 2 | 3 | 4 | 5 |
| 8. I like working as part of a group | 1 | 2 | 3 | 4 | 5 |
| 9. In my job team-work is the norm | 1 | 2 | 3 | 4 | 5 |
| 10. I like working in a friendly environment | 1 | 2 | 3 | 4 | 5 |
| 11. My fellow workers at my work place are cooperative | 1 | 2 | 3 | 4 | 5 |
| 12. I like an employer who trains his staff constantly | 1 | 2 | 3 | 4 | 5 |
| 13. My employer is very concerned about training | 1 | 2 | 3 | 4 | 5 |

| | Strongly Agree | | | Strongly Disagree | |
|---|----------------|---|---|-------------------|---|
| | 1 | 2 | 3 | 4 | 5 |
| 14. I like a job where opportunities for advancement are high | 1 | 2 | 3 | 4 | 5 |
| 15. In my job, opportunities for advancement are high | 1 | 2 | 3 | 4 | 5 |
| 16. There are opportunities for personal growth in KRC | 1 | 2 | 3 | 4 | 5 |
| 17. I value job security in a job | 1 | 2 | 3 | 4 | 5 |
| 18. I feel that my current job is secure | 1 | 2 | 3 | 4 | 5 |
| 19. I like sticking in one Organization for as long as possible | 1 | 2 | 3 | 4 | 5 |
| 20. 5 years from now, I hope I will still be working for this Organization | 1 | 2 | 3 | 4 | 5 |
| 21. I believe that supervisor-subordinate relationship should be cordial | 1 | 2 | 3 | 4 | 5 |
| 22. In my job, the supervisor listens to complaints and accepts them in good spirits | 1 | 2 | 3 | 4 | 5 |
| 23. It is important for a supervisor to know all all that goes on in the department | 1 | 2 | 3 | 4 | 5 |
| 24. My supervisor knows all about what goes on in the department | 1 | 2 | 3 | 4 | 5 |
| 25. For work to be successfully accomplished, the departmental head must plan for it | 1 | 2 | 3 | 4 | 5 |
| 26. For work to be successfully accomplished, all employees should be involved in the setting of achievable goals | 1 | 2 | 3 | 4 | 5 |

SECTION

Strongly Agree Strongly Disagree

| | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 27. In my job, the departmental head plans for the work | 1 | 2 | 3 | 4 | 5 |
| 28. In my job we are individually or collectively involved in the setting of goals | 1 | 2 | 3 | 4 | 5 |
| 29. A good supervisor is that one who explains new things to co-workers | 1 | 2 | 3 | 4 | 5 |
| 30. My supervisor most of the time gives clear instructions | 1 | 2 | 3 | 4 | 5 |
| 31. I consider good pay as an important factor in a job | 1 | 2 | 3 | 4 | 5 |
| 32. For similar type of work, my wages/salary is higher than that paid in other Companies | 1 | 2 | 3 | 4 | 5 |
| 33. For the amount of effort that I put into my job, my salary is good enough | 1 | 2 | 3 | 4 | 5 |
| 34. In comparison to other employees of the Corporation, my salary level considering the type of work I do is justified | 1 | 2 | 3 | 4 | 5 |
| 35. The levels of pay in the Corporation are good enough considering the state of the economy | 1 | 2 | 3 | 4 | 5 |
| 36. I consider benefits such as medical allowance and housing more important than pay | 1 | 2 | 3 | 4 | 5 |
| 37. I am satisfied with the benefits that are derived from my job | 1 | 2 | 3 | 4 | 5 |

SECTION 2

Personal Details

Please mark against the following groups that apply to you. This information is merely to aid in the tabulation and presentation of total data from this questionnaire.

1. Age

- () Under 20
- () 20 - 29
- () 30 - 39
- () 40 - 49
- () 50 or more

2. Sex

- () Male
- () Female

3. Service with the Corporation

- () Less than 1 year
- () 1 - 2 years inclusive
- () 3 - 5 years inclusive
- () 6 - 9 years inclusive
- () 10 - 19 years inclusive
- () 20 years or above

4. Level of Education

- () Secondary school and below
- () High School
- () Professional Certificate
- () Diploma
- () Undergraduate degree
- () Postgraduate degree and above

5. Marital Status

- () Married with children
- () Married without children
- () Single

SECTION 3

1. Why did you join the Corporation?
2. Has the Corporation satisfied those needs or desires which made you join?
3. What are the qualities of work at Kenya Railways that you find admirable and which qualities you would recommend other organizations to follow?
4. What are the qualities of work at Kenya Railways that you dislike most?
5. What in your opinion has been the relationship between Management and the employees over the last few years?
6. What suggestion would you recommend to KRC management to improve the working conditions?

SECTION 4

Vote on the importance of various factors affecting your job

Below are 10 items bearing on your job. Please rate them in order of their importance to you. In other words, pick out the item that means most to your happiness in your work. Mark a (1) in the column opposite it, a (2) for the second most important, a (3) for the third one and so on through the items till you mark (10) against the item that is of least importance to you.

- () Job security
- () My opportunities for advancement
- () Personal growth prospects
- () Recognition and status
- () Fringe benefits (Insurance, Medical aid, housing, education allowance, etc.)
- () Opportunity to make suggestions
- () Friendly coworkers
- () Working conditions
- () Salary level
- () Challenging work

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