WORK MOTIVATION – A MULTIVARIATE ANALYSIS AMONG TEACHERS OF THE KERALA AGRICULTURAL UNIVERSITY

By

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THESIS

Submitted in partial fulfillment of the
requirement for the degree of

Doctor of Philosophy in Agriculture

(Agricultural Extension)
Faculty of Agriculture
KERALA AGRICULTURAL UNIVERSITY

Department of Agricultural Extension
COLLEGE OF HORTICULTURE
VELLANIKKARA - THRISSUR
KERALA, INDIA
1996

DECLARATION

I hereby declare that this thesis entitled "**WORK MOTIVATION - A MULTIVARIATE ANALYSIS AMONG TEACHERS OF THE KERALA AGRICULTURAL UNIVERSITY**" is a bonafide record of research work done by me during the course of research and that this thesis has not previously formed the basis for the award to me of any degree, diploma, associateship, fellowship or any other similar title of any other University or Society.

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28/12/96

ACKNOWLEDGEMENT

I am a grateful man. I have reason to be: I have numerous people surrounding me with encouragement, affirmation, honest feedback and an abundant supply of fresh hope to stay at tough tracks.

Among them is Dr. C. Bhaskaran, Associate Professor and Head, Department of Agricultural Extension, College of Horticulture, Vellanikkara. He was a model par excellent in fulfilling his role as the Chairman of my advisory committee. His discerning eye, sensitive spirit, wise counsel, accuracy mixed with flexibility, penetrating questions that made me to think, and a kind of convincing criticism that forced me to re-evaluate and (ugh!) rewrite - have gone a long way to make this thesis. To him I express my unreserved gratefulness.

I am also most grateful for the guidance and encouragement of the members of the advisory committee Dr. C.C. Abraham, formerly the Associate Dean, College of Horticulture, Vellanikkara, Dr. R. Vikraman Nair, Professor, Cadbury-KAU Co-operative Cocoa Research Project, College of Horticulture, Vellanikkara, Dr. R.M. Prasad, Associate Professor on deputation as Training Specialist, Kerala Horticulture Development Programme and Dr. Joy Mathew, Associate Professor and Head, Central Training Institute, Mannuthy. I cannot forget to mention that it was Dr. Joy Mathew who first suggested the subject of work motivation.

I would like to specially thank Dr. K.P. Mani, Assistant Professor, College of Co-operation and Banking, Mannuthy for his relentless support in resolving the statistical intricacies of my data.

At one point or other all the staff of the Department of Agricultural Extension, College of Horticulture, Vellanikkara were involved in this endeavour. To them all, I say "thank you".

My profound thanks to Mr. O.K. Ravi and his assistant Ms. K.K. Geetha both long-time friends of mine whose diligence knows no bounds. With tireless determination they typed the manuscript, incorporated modifications, corrected my spelling, adapted their personal calendar to meet the demands of my deadlines, put the final copy into perfect form and all without one word of exasperation or complaint.

Pascal said: "Certain authors, when they speak of their work, say: `my book, my commentary, my history ...' They would do better to say `our book, our commentary, our history', since their writings generally contain more of other people's good things than of their own". In that same spirit, to everyone whose books and articles I have read and quoted, to everyone with whom I have had discussions and to all the teachers who happened to be my respondents I express my gratitude. This report is our work.

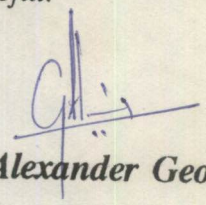
To my parents I dedicate this thesis for without their constant encouragement I would never have gone on for higher studies.

My brothers and in-laws provided me the much needed shoulders to fall back on in times of need and were sustained sources of affection and encouragement all through. The home at Chathanoor, the home at Puthupady, the Scientists Home at the National Academy of Agricultural Research Management, Hyderabad and my cosy office at the Central Training Institute, Mannuthy provided me fine places away from the maddening crowd to sit tight on my research work.

Lawrance and Sigi helped me more than they will ever know by their refreshing visits during this period of mental strain.

I especially want to thank my wife, Soly, for all she has done to help me in the midst of my often frenetic, out-of-control activity. My children, Serene and Merene were very kind and patient in allowing their daddy to cut short games and stories more than once. Paradoxically, writing this report while they did their homework beside often provided the background noise necessary to prevent me from tangential distractions in thought.

Finally I must acknowledge that I am one who believes in the Bible. The lens through which I filter my perceptions and my convictions is, therefore, the Bible. I have no doubt that even in this study its philosophical world-view has had its influence. To the God of the Bible I therefore am eternally grateful.



Alexander George

Dedicated to my beloved parents

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Introduction

1. INTRODUCTION

The results of a 20-year-study are in.

The answer to the question "What really motivates people?" is:

"Go ask your people."

- Flowers and Hughes (1981)

Motivation is without doubt one of the most pervasive concerns of human endeavour. It is a buzzword of industry, a prevailing term in management, and a conspicuous goal of education. We must assume that human beings have been concerned with motivating other human beings throughout the history of mankind, yet the topic of work motivation in management literature dates back to the work of Frederick Taylor on the principles of scientific management published in 1911. From then on the study of motivation has been likened to an unfolding story with plots and characters, theory and counter theory, success and failure as the field evolved in all its excitement. The bulk of research on motivation has taken place during the last fifty years and more than 50,000 books and articles have been written about work motivation and its closely related topic, job satisfaction (Du Brin, 1988). The perspective one gains is that while there is an overwhelming amount of recent research, the total body of that research is incapable of succinctly answering the basic

question: How to systematically motivate human beings to accomplish more? The progress of thought, however, is evident when the theories of various eras are examined in the context of the dominant metaphor or paradigm propounded.

The need theories of Maslow (1943), McClelland (1961) and Alderfer (1969) while not entirely ignoring job-related and work environment variables, are primarily individual theories of motivation. Strong emphasis is placed on the characteristics of the individual, and these models represent highly developed statements concerning the role played by personal need strengths in the determination of work behaviour. The Murray-McClelland-Atkinson model (Atkinson, 1964) for individuals with a high need for achievement argues for creating an achievement oriented work environment. Although a good deal of speculation is possible concerning how such job and environmental variables might affect personal need satisfaction and performance, it should be recognized that such considerations are dealt with relatively lightly in these models.

Equity theory delineated by Adams (1975) centers around the relationship between individual characteristics - attitudes toward inputs and outcomes, tolerance for feelings of inequity, and the like - and work environment characteristics (especially systemwide reward practices).

Of all the approaches, behaviour modification based on reinforcement theory (Skinner, 1953, 1971) is the one that places by far the heaviest emphasis on the work environment cluster of variables. For those who advocate this approach, the response of the organizational environment - including its various elements such as the work group, the supervisor, reward practices - is the controlling factor in affecting employee behaviour (assuming a given level of ability). The notion of individual differences, and particularly the notion of individual needs and attitudes, is virtually ignored by this approach.

The expectancy/valence theory propounded by Vroom (1964) can be examined in terms of how it deals with the three major sets of variables - individual, job, and organizational environment. The theory is specific in dealing with the role of individual differences. It recognizes individual variations in need strengths by acknowledging that not everyone values the same rewards equally; people attach different valences to potential outcomes. People also differ in their perceptions of how equitable a given level of reward is (in relation to the individual's own standard of comparison). Moreover, the model particularly emphasizes that individuals have differing beliefs, or expectancies, that certain actions on their part will ultimately lead to desired rewards. Expectancy/valence theory also encompasses

job-related variables by pointing to how these factors can affect future expectancies, and by arguing that job attributes can at times serve as sources of intrinsically valued rewards. The more sophisticated versions of the model have also included the notion of role clarity; that is, performance can often be improved by specifying more carefully the direction of behavior. Finally, expectancy/valence theory focusses fairly explicitly on several organizational environment influences on performance, particularly those relating to reward structures. Throughout, this model stresses the necessity of analysing relationships among variables as a prerequisite to an understanding of the motivational process. It does, however, place heavy emphasis on individuals' cognitions about how their own behavior will or will not lead to particular outcomes potentially available in the work situation. Whether individuals actually engage in the kinds of thought processes implied by the theory is the major issue to be raised.

Klein (1990) proposed the Feasibility theory: a resource-munificence model of work motivation and behaviour, that presents a curvilinear relationship between the feasibility of a task and motivation to perform it. Feasibility is defined as resources available to perform the task, which are positively related to motivation when scarce and negatively related to motivation when abundant.

It is evident that the level of understanding concerning work motivation has increased considerably in the past several decades. Each of the theories has had something to offer in the attempt to understand motivation in the work situation. Yet it must be acknowledged that motivation is a complex problem in organizations because the needs, wants, and desires of each worker differ. They differ because each worker is unique in his biological and psychological make up and in his learning experiences. Definitive answers in many areas remain to be found. Without question, the search will continue.

The search becomes even more complex in the context of developing countries. As Kanungo and Mendonca (1994) observe the potential of work motivation techniques has not been fully realized in developing countries even though the know-how and technologies developed by the West have been transferred to them. The relevance and the limitations of Western theories and techniques when applied to developing countries must be evaluated and if necessary a complementary model for a comprehensive understanding of work motivation in the specific context of developing countries must be developed.

Keeping the foregoing in view, the present investigation was undertaken with the over-riding objective of studying work motivation among teachers in the Kerala Agricultural University (KAU).

The Kerala Agricultural University was established under the KAU Act 33 of 1971. The main objectives of the University as per the Act are:

1. Making provision for imparting education in different branches of study, particularly agriculture, horticulture, animal husbandry, including veterinary and dairy science, co-operation, fisheries, forestry, agricultural engineering, home science and other allied branches of learning and scholarship

2. Furthering the advancement of learning and prosecution of research, particularly in agriculture and other allied sciences.

3. Undertaking an extension education programme.

4. Such other purposes as the University may from time to time determine.

The success or failure of an organization is to a very great extent determined by the persons who make up that organization. Plans, programmes, strategies, offices, equipment and all other facilities, though important, will remain unproductive until and unless they are backed by efficient human effort and direction. Thus, of all the tasks of management, managing the human component is the central and most important task because all others depend upon how well

this is done. More specifically, organizations have three behavioural requirements in this regard: (1) people must be attracted not only to join the organization but also to remain in it; (2) people must perform the tasks for which they are hired, and must do so in a dependable manner; and (3) people must go beyond this dependable role performance and engage in some form of creative, spontaneous, and innovative behaviour at work. By this reasoning, for an organization to be effective, it must come to grips with the motivational problems and process of its employees.

A declining work ethic, decreased employee loyalty, lesser supervisory power, shorter time perspectives, lesser resources, more competition and the need to become more productive makes work motivation a matter of concern for all organizations today. In the light of the ever-tightening financial and man-power constraints placed on the Kerala Agricultural University, the management must look for new mechanisms to increase - and in some cases just to maintain - its level of organizational effectiveness and efficiency. The management must ensure that it is deriving full potential benefit from those resources - including human resources - that it does have at its disposal. Thus, the organizational effectiveness of the Kerala Agricultural University, becomes to some degree a question of management's ability to motivate

its employees especially the teachers to direct at least a reasonable effort towards its goals.

Hitherto the Kerala Agricultural University has viewed its financial and physical resources from a long-term perspective. The time has come to apply this same perspective to its human resources. The University must pay increasing attention to developing its scientific community as future resources (a "talent bank") upon which it can draw. More concern has to be directed to ensuring a continual reservoir of well-trained and highly motivated teachers and avoiding brain drain.

Towards these ends, the present study was designed to obtain a more comprehensive and empirically based knowledge of work motivation among teachers of the Kerala Agricultural University (KAU). The specific objectives of the study were:

1. To study the distribution of teachers of KAU with respect to work motivation, individual, job and organizational characteristics.

2. To study the relationships between individual, job, and organizational characteristics with work motivation.

3. To identify the determinants of work motivation among teachers of KAU.

4. To compare Assistant Professors, Associate Professors and Professors of KAU with respect to work motivation, individual, job and organizational characteristics.

5. To compare teachers of KAU in teaching, research and extension institutions with respect to work motivation, individual, job and organizational characteristics.

6. To suggest ways and means of enhancing the work motivation of teachers of KAU on the basis of the findings of this study.

Scope of the study

The topic of work motivation is an old one in management literature. The last eight decades have witnessed significant developments in both the theory and techniques of work motivation that have enriched our understanding of the phenomenon. The utilization of these theories and techniques has yielded rich dividends for the industrialized world by way of creating effective organizations and by improving employee performance. However, the benefit has not been fully realized in the developing countries and especially so in the agriculture technology development and transfer systems, despite the transfer of motivational know-how and technologies that have been developed in the West.

Why is it that developing countries do not fully benefit from the accumulated knowledge in the area and what can be done in the context of these countries to improve organizational effectiveness and employee performance? Do western theories and techniques have relevance for the developing countries and, if so, are there any limitations that need to be taken into account? Do motivational models found effective in organizations of the industrial sector have applicability in organizations of the educational and service sectors? Answers to these questions form the scope of the present investigation. The study would ultimately provide a better appreciation of dynamics and design of human resource management practices for increased work motivation of around 30,000 scientists working in 28 agricultural universities, 50 ICAR institutions and 30 ICAR national centres in the country.

Limitations of the study

Man's experience with knowledge proves again and again that the more he knows, the more he finds he has yet to learn. As one becomes familiar with a subject, one also becomes conscious of its limitations.

As early as in 1957, Edwards had highlighted an underling limitation of psychological studies of the present type. "The reluctance of many individuals to give public expression to their feelings or attitudes on controversial issues is, of

course, a disadvantage of the method of direct questioning ... It is also true that sometimes our feelings about a psychological object are so mixed and confused that it is difficult for us to evaluate how we feel by introspective methods. ... According to the findings of clinical psychologists and psychiatrists, some individuals may not be aware of their feelings toward a given psychological object." (Edwards, 1957).

Since the present study was undertaken as a part of the requirements for the doctoral degree programme of the researcher, the concepts could not be explored in greater depth and in a more comprehensive manner due to constraints of time and resources. The *ex post facto* research design itself has its own lacunae, though it is the only suitable design for this type of study. The mailed questionnaire used for data collection shut out the possibility for meaningful interaction with most of the respondents; notwithstanding, there were not many alternatives considering the widly dispersed population of respondents.

The teachers' work motivation rating by students, superiors, supporting staff, etc. were not incorporated in the study essentially because work motivation was conceptually differentiated from job performance in that work motivation

was an inner urge that need not have an exact linear relationship with job performance.

In selecting the sample, the researcher strictly followed the principle of proportionate sampling hence the sample of respondents from extension centers forcefully came down to mere seven. This low sample size is definitely a limitation in making any valid conclusions with respect to teachers involved in extension. However the researcher and the advisory committee were of opinion that any change in the sample size of teachers involved in extension would distort the results and despice the sanctity of the sampling procedure adopted.

The researcher also admittedly feels that since the investigation was completely based on the expressed opinions of subjects holding formal positions in the organization, these opinions may not be free from personal bias and prejudice, though every care was taken to avoid this and make the study as objective as possible.

Presentation of the study

The report of the study has been spread out under five chapters as given below:

The first chapter deals with the introduction, wherein the statement of the problem, objectives, the scope and limitations of the study are discussed. The second chapter covers the review of studies related to the present investigation. The third chapter relates to the details of the methodology used in the process of investigation. In the fourth chapter, the results and discussions are clubbed and in the fifth chapter the summary, implications and conclusion of the study are given. Finally the references and appendices are furnished.

Review of Literature

Chapter 2

REVIEW OF LITERATURE

Any systematic scientific inquiry has its foundation built upon studies conducted in the past. The main objective of this chapter is to review the theoretical and empirical information available from similar or atleast related studies. Such a recapitulation could serve as a basis for delineating an ideal conceptual framework for the present project and relating its empirical findings with those of earlier investigations.

The literature is reviewed under the following broad headings.

2.1 Definitions of work motivation

Pinder (1984) defined work motivation as a set of energetic forces that originate both within as well as beyond an individual's being, to initiate work related behaviour, and to determine its form, direction, intensity and duration. This definition encompasses most aspects of motivation examined by other researchers. The several key points of this definition emphasize the underpinning concepts of work motivation.

Eyre (1984) clarified that intrinsically, motivation and incentive are not the same. Motivation springs from within - it is essentially an attitude of mind that may be encouraged by external factors but is fundamentally self-generated.

Incentive, on the other hand, belongs to those forces that are applied from the outside and is a positive external influence to encourage improved performance.

Redding (1987) emphasised that motivation is not what one person does to another - that is manipulation. Motivation is what we allow people to do themselves. We allow them to engage their situation, to discover their effectiveness areas, to agree their objectives, to have the resources they need to perform, to obtain feedback on their results, and to be rewarded if they succeed.

Du Brin (1988) defined work motivation as effort expended towards organizational objects.

Beck (1990) defined job motivation in terms of those motivational variables that influence worker productivity.

Katzell and Thompson (1990) defined work motivation as the conditions and processes that account for the arousal, direction, magnitude, and maintenance of effort in a person's job.

Robbins (1993) defined motivation in the organization context as the willingness to exert high levels of effort towards organizational goals conditioned by the effort's ability to satisfy some individual need.

For the present study work motivation was defined as the inner urge that energises, directs and sustains work.

2.2 Evolution of Work Motivation Theories

One of the first theories of motivation which is still popular today is that of Maslow (1943). This **Need Hierarchy Theory** distinguishes physiological, safety, belongingness, self-esteem, and self-actualization needs. The latter become more dominant when the former have been satisfied.

Before 1955, little research had been carried out on work motivation (with the notable exception of Viteles, 1953, and Maier, 1955), and the research that did exist was largely fragmentary. Frederick Herzberg and his associates began their initial work on the factors affecting work motivation in the mid-1950s. Their first effort entailed a thorough review of existing research to that date on the subject (Herzberg *et al.*, 1957). Herzberg's now famous **Two-Factor theory** of motivation was first published in 1959 (Herzberg *et al.*, 1959) and was subsequently amplified and developed in a later book (Herzberg, 1966). In summarizing the major findings of the original Herzberg study, it is the hygiene factors that affect job dissatisfaction and the motivators that affect job satisfaction. Hygiene factors help man avoid unpleasantness,

whereas the motivator factors make people happy with their jobs by serving man's needs for psychological growth.

McGregor (1960) distinguished two broadly different approaches to worker motivation. **Theory X**, representing traditional views, assumes that workers dislike work and have to be coerced to do it. **Theory Y**, a more modern view, emphasizes that workers want self-satisfaction from work, which includes responsibility and autonomy.

McClelland (1961) suggested that much human behaviour on the job can be explained by people's strong motives to achieve important things, acquire power, and affiliate with others. The **achievement need** is the desire to set and accomplish goals for their own sake. Entrepreneurs have strong achievement needs. The **need for power** is the desire to control other people and resources. Power motives can be directed to personal gain or to social good. The **need for affiliation** is a desire to seek close relationships with others and to be a loyal employee or friend.

Atkinson (1964) refined McClelland's achievement theory. According to him the tendency to engage in achievement-oriented behaviours (tendency to success, or Ts) is a multiplicative function of (1) the **motivation** for success (Ms), which is the same as McClelland's achievement need (2)

the **probability** of success (Ps); and (3) the **incentive value** of success (Is).

The work of Vroom (1964) has led to a group of motivational theories now known as **Expectancy Theory (ET)**. This theory assumes that people are decision makers who choose among alternatives by selecting the one that appears to have the biggest personal pay off at the time. ET has three major components: **expectancy** about the ability to perform, **instrumentality** (the hunch that performance will lead to a reward), and **valence** (the value attached to the reward). Motivation is calculated by multiplying the numerical values for all three.

The **Goal setting theory** emphasizes setting high (but reasonable) and specific goals, and giving feedback about whether these goals are being achieved. This theory was proposed by Locke (1968). In 1969, Alderfer proposed a **modified need hierarchy theory** that essentially collapses Maslow's five hierarchical levels into three: existence, relatedness and growth needs.

The **Reinforcement theory (behaviour modification)** propounded by a group of psychologists called Behaviorists has its roots in the work of Skinner (1953, 1971). The basic premise of this theory is that by rewarding desired behaviour

and punishing or ignoring undesirable behaviour, an individual or group can influence others in a desired direction.

Korman (1974) proposed a theory the basic proposal of which is that **environmental events** lead to belief systems, which in turn dictate the types of outcomes people seek as being consistent with their beliefs.

The **Equity theory** (Adams, 1975) emphasizes workers' desires to get an equitable return for work done. What is considered equitable may be based on some internal standard or on some external reference, such as what another worker gets for doing similar work.

Weiner (1985) has presented the most detailed **Attributional theory of achievement motivation**. Attributions are explanations people give for events. In Weiner's attributional theory there are three dimensions of attributions: (1) internal versus external locus of control, (2) stable versus unstable factors, and (3) controllable versus uncontrollable factors. It is assumed that each specific causal attribution for success or failure has particular emotional consequences which in turn influence future achievement-oriented behaviours.

Klein (1990) proposed the **feasibility theory**: a resource-munificence model of work motivation and behaviour,

that presents a curvilinear relationship between the feasibility of a task and motivation to perform it. Feasibility is defined as resources available to perform the task, which are positively related to motivation when scarce and negatively related to motivation when abundant. This is because resource scarcity potentiates lower-order needs satisfied by resources, whereas resource abundance permits the indulgence of higher-order needs, including arousal, achievement, power, and affiliation, the satisfaction of which is maximized by task difficulty, which in turn is reduced by resources.

In the context of the evolution of motivational theories, Beck (1990) states that "it is difficult to maintain a completely logical and consistent conceptualization of motivation without sacrificing a large amount of material which many people consider important to the topic.... Motivation theorists and researchers are still fragmented in their efforts to understand motivation".

A central purpose of any thery is to organize in a meaningful fashion the major sets of variables associated with the topic under study. In fact, one test of the usefulness of a theory or model is the degree to which it can account for a wide diversity of variables while simultaneously integrating them into a cohesive - and succint - unifying framework. Based on the review of theories of work motivation, the

present study classified the various variables associated with the topic under three major heads viz. individual characteristics, job characteristics and organizational charactgeristics. However, prior to reviewing the literature with respect to the above characteristics, a brief review is made with regard to three personal variables with were included during the course of the study as their relevance became evident.

2.3 Personal variables

In the present study the term personal variables has reference to variables such as age, service and UGC/ICAR scheme induction. These are delt with separately, and not mingled with the term individual characteristics: psychological dimensions of the individual such as locus of control, achievement motive, equity-sensitivity etc. These however variables do not form part of the conceptual framework.

2.3.1 Age

Satapathy and Choudhury (1990) found age to be positively and signifiantly correlated with scientific productivity of farm scientists.

Veerasamy *et al.* (1992) observed that age had no significant influence on the information input, processing and output behaviour of farm scientists.

Singh and Singh (1992) observed that age had no significant contribution to the scientific productivity of women scientists in the ICAR.

2.3.2 Service

Jhansirani (1985) reported no significant association between service and productivity of agricultural scientists.

Satapathy and Choudhury (1990) found academic career to be positively and significantly correlated with the scientific productivity of farm scientists.

Singh and Singh (1992) observed that the total years of service had no significant contribution to the scientific productivity of women scientists in the ICAR.

Veerasamy *et al.* (1992) observed that experience had no significant contribution to the information input, processing and output behaviour of farm scientists.

2.3.3 U.G.C./I.C.A.R. scheme induction

A serious problem which faced a major section of the teachers in the Kerala Agricultural University at the time of this study was the anomalies which arose in the implementation of the UGC/ICAR scheme of pay scales and service conditions to teachers. In view of these anomalies most of the Associate Professors (Non Cadre) and some of the Assistant Professors were yet to be inducted into the UGC/ICAR package. While the UGC/ICAR package was to take effect from 1.1.1986 onwards, ten long years had now passed and the anomalies remained unresolved and a major section of the teachers were yet to be inducted into the scheme. This had led to a tendency of 'non-cooperation' among some sections of the teachers. This being the situation, it was decided to include this factor i.e. UGC/ICAR scheme induction in the present study and determine its influence if any on the work motivation of teachers. No previous studies are available with reference to this variable.

2.4 Individual characteristics

The ends or goals of any man's actions and the actions themselves are not randomly determined. There is a consistency in them. The frame work which provides this consistency is what is known as his value orientation or very loosely, his philosophy of life (Beal *et al.*, 1962). The

importance of individual characteristics was highlighted by Robbins (1993) when he observed that analysis of job satisfaction data for a sample of individuals over a fifty-year period showed that individual results were consistently stable over time, even when these people changed the employer for whom they worked and their occupation. It may well be that many of the work-related variables that we think cause work motivation and job satisfaction aren't that important. Rather, most individuals' disposition toward life - positive or negative - is established by adolescence, holds over time, and carries over into their disposition towards work.

2.4.1 Locus of control

Locus of control is the degree to which people believe they are masters of their own fate. Those with an internal locus of control believe they control their own destiny. Those with an external locus of control believe their lives are controlled by outside forces.

A large amount of research comparing internals with externals has consistently shown that individuals who rate high in externality are less satisfied with their jobs, have higher absenteeism rates, are more alienated from the work setting, and are less involved on their jobs than are internals (Spector, 1982; Blau, 1987).

Steers and Porter (1987) observed that when behaviour is intrinsically motivated, an individual's perceived locus of causality is thought to be internal; that is, individuals feel that task accomplishment is under their own control. Under such circumstances, they will engage in activities for intrinsic rewards. On the other hand, when individuals receive extrinsic rewards for task behaviour, they will perceive their locus of causality to be external and will engage in those activities only when they believe that extrinsic rewards will be forthcoming.

According to Robbins (1993), evidence indicates that internals perceive their jobs to be less stressful than do externals. When internals and externals confront a similar stressful situation, the internals are likely to believe that they can have a significant effect on the results. They, therefore, act to take control of events. Externals are more likely to be passive and defensive. Rather than do something to reduce the stress, they acquiesce. However, he also states that there need not be any clear relationship between locus of control and turnover as these are opposing forces at work.

Kanungo and Mendonca (1994) opined that employees in developing countries are more inclined to believe in an external locus of control (outcomes in life are beyond one's own control).

2.4.2 Achievement Motive

The two most prominent contemporary investigators in the need for achievement (abbreviated *"n Ach")* research are McClelland and Atkinson. They view the achievement motive as a relatively stable predisposition to strive for success. More specifically, *n Ach* is defined as "behaviour toward competition with a standard of excellence" (McClelland *et al.*, 1953). The basis or reward for such a motive is posited to be the positive effect associated with successful performance.

Relying on an extensive amount of research, some reasonably well-supported predictions can be made based on the relationship between achievement motive and job performance. Although less research has been done on power and affiliation motives, there are consistent findings here too. The findings are summarized below.

People with strong motives for achievement are self-motivated; they persist in their efforts without prodding and prompting from others. Money, status, and power are secondary considerations to these individuals. People with a strong achievement need show three consistent behaviours and attitudes:

* Personal responsibility for solving problems.

* A preference for establishing and reaching moderate or realistic goals, but not taking foolish risks.

* A preference for situations that provide frequent feedback on results (Mc Clelland, 1961)

While several studies support such a conclusion, Cofer and Appley (1964) caution that "the theory Mc Clelland and his co-workers have developed is neither compelled by nor directly derived from their data, but is presumably consistent with the data."

An Indian study on the scientific productivity of agricultural scientists by Jhansirani (1985) also recorded that achievement motivation was not related with job performance and extension productivity of agricultural scientists.

People with a high achievement motive have an intense desire for success and an equally intense fear of failure. They want to be challenged, and they set moderately difficult (but not impossible) goals for themselves. They take a realistic approach to risk; they are not likely to be gamblers but, rather, prefer to analyze and assess problems, assume personal responsibility for getting a job done, and like specific and prompt feedback on how they are doing. They tend

to be restless, like to work long hours, do not worry unduly about failure if it occurs, and tend to like to run their own shows (Koontz and Weihrich, 1990).

Misra and Kanungo (1994) reported that the achievement motivation training programme conducted in India to foster entrepreneurship was not sustainable and the little effect that it may have had was ephemeral, perhaps owing to the lack of social support for personal achievement orientation in the cultural setting.

2.4.3 Power Motive

The need for power *(n Pow)* is the desire to have impact, to be influential, and to control others. Individuals high in *n Pow* enjoy being "in charge," strive for influence over others, prefer to be placed into competitive and status-oriented situations, and tend to be more concerned with prestige and gaining influence over others than with effective performance.

The need for power can drive us to serve our self-interest or the welfare of others. McClelland (1965) distinguished between personalized and socialized power. A person with a personalized power motive wants to control and manipulate others mostly for personal gain. A person with

socialized power motive desires power in order to serve the good of the organization or society.

People who climb to the top of organizations often have a strong desire for both achievement and power. The two needs compliment each other: Achievement motivation directs people to accomplish worthwhile things; power motivation directs people to take control and draw attention to their own effect on the world (Stahl, 1986).

People with a high power motive have a great concern for exercising influence and control. Such individuals generally are seeking positions of leadership, they are frequently good conversationalists, though often argumentative; they are forceful, out spoken, hard-headed, and demanding; and they enjoy teaching and public speaking (Koontz and Weihrich, 1990).

Sinha (1994) observed that power dynamics is one of the most crucial factors of organizational behaviour. Indian managers are believed to have a strong need for power. They maintain high power distance. Interpersonal power is expressed in a highly personalized way. For those who are loyal and dependent, a powerful superior would be generous, nurturant, and self-sacrificing. He would provide patronage and would help the subordinates succeed in their jobs and career. The same superior could be quite exploitative and

discriminative to those subordinates who are not personally loyal to him. In this case the subordinates often resort to ingratiation and manipulation to cope with their more powerful superiors failing which they would have to yield and surrender.

2.4.4 Affiliation Motive

People with a high affiliation motive usually derive pleasure from being loved and tend to avoid the pain of being rejected by a social group. As individuals, they are likely to be concerned with maintaining pleasant social relationships, to enjoy a sense of intimacy and understanding, to be ready to console and help others in trouble, and to enjoy friendly interaction with others.

DuBrin (1988) states that a person with a strong affiliation motive finds compatible working relationships more important than high-level accomplishment and exercising power. Robbins (1993) observes that the best managers are high in their need for power and low in their need for affiliation. Robbins (1993) also notes that affiliation motive has received the least attention from researchers. Individuals with a high affiliation motive strive for friendship, prefer co-operative situations rather than competitive ones, and desire relationships involving a high degree of mutual understanding.

Misra and Kanungo (1994) observed that the unique influences of socialization in India manifests itself in an organizational ethic of personalized relationships. The organizational ethic of Indian workers is shaped by a strong sense of insecurity and dependence on others. Their work relationships are personalized rather than contractual. They work for their superiors, friends and relatives, rather than for accomplishing the task of organizational goals under contractual obligations. Personal loyalty takes precedence over organizational efficiency. Within the organization, seeking and maintaining personal status becomes the primary objective for which organizational interests may be sacrificed. Most superiors provide personal rather than institutional leadership. Their leadership behaviour is directed toward maintaining their status or saving their skin by pleasing everyone, avoiding conflicts or confrontation, and by not taking any risk that might rock the boat even if such actions are necessary for safe-guarding organizational interests. Thus in the Indian context affiliation motive seems to have much significance.

2.4.5 Organizational Culture

Organizational culture by definition is elusive, intangible, implicit and taken for granted. But every organization develops a core set of assumptions,

understandings, and implicit rules that govern day-to-day behaviour in the work place.

The relationship between organizational culture and performance is less clear, although a number of studies find the two related (Hellriegel and Slocum, 1974; Meglino *et al.*, 1989).

Lorsch and Morse (1974) stated that the relationship between organizational culture and performance is moderated by the organization's technology. Performance will be higher when the culture suits the technology. If the culture is informal, creative, and supports risk taking and conflict, performance will be higher if the technology is non-routine. The more formally structured organizations that are risk aversive, that seek to eliminate conflict, and that are prone to more task-oriented leadership will achieve higher performance when routine technology is utilized.

Kanungo and Jaeger (1990) propounded that the internal work culture of an organization can be described in terms of two sets of assumptions: descriptive assumptions about what people are like, and normative or prescriptive assumptions about how people should behave. With respect to the descriptive assumptions, employees in developing countries are more inclined to believe in (a) an external locus of control (outcomes in life are beyond one's own control); (b) fixed

human capabilities and limited creative potential; (c) dealing with the past and present rather than the anticipated future; and (d) short term goals for action. With regard to the prescriptive assumptions these employees consider it more desirable to behave in passive (rather than proactive), moralistic (rather than pragmatic), authoritarian (rather than participative) and context dependent (rather than principle dependent) fashion.

Robbins (1993) observed that organizational culture enhances organizational commitment and increases the consistency of employee behaviour. These are clearly benefits to an organization. From an employee's stand point, culture is valuable because it reduces ambiguity. It tells employees how things are done and what is important. But we should not ignore the potentially dysfunctional aspects of culture, especially a strong one, on an organization's effectiveness. Organizational culture is a liability where the shared values are not in agreement with those that will further the organization's effectiveness.

Kanungo and Mendonca (1994) emphazized that organizations should consider the critical features of their internal work culture that are likely to facilitate or hinder the effective adoption of these practices and techniques and, based on these considerations, design organizational interventions or strategies that are necessary to ensure their 'cultural fit'.

2.4.6 Equity-sensitivity

The Equity theory recognizes that individuals are concerned not only with the absolute amount of rewards they receive for their efforts, but also with the relationship of this amount to what others receive. They make judgements as to the relationship between their inputs and outcomes and the inputs and outcomes of others. Based on one's inputs, such as effort, experience, education, and competence, one compares outcomes such as salary levels, pay raises, recognition, and other factors. When people perceive an imbalance in their outcome-input ratio relative to others, tension is created. This tension provides the basis for motivation, as people strive for what they perceive as equity and fairness. In conclusion, equity theory demonstrates that, for most employees, motivation is influenced significantly by relative rewards as well as by absolute rewards.

Researchers have identified three equity-sensitivity groups. They are labeled and defined as follows:

Benevolents : Individuals who prefer that their outcome/input ratios be less than the comparison others.

Equity Sensitives: Individuals who prefer outcome/input ratios to be equal

Entitleds : Individuals who prefer that their outcome/input ratios exceed those of the comparison others

Robbins (1993) also makes the following observations: First, not all individuals are equity-sensitive. Second, equity theory predictions are most accurate with individuals in the Equity-Sensitive group. And third, Benevolents actually prefer lower outcome/input ratios and tend to provide higher levels of inputs than either Equity-Sensitives or Entitleds.

Misra and Kanungo (1994) noted that it is needed to provide employees with job outcomes or rewards and compensations that the employees consider relevant for satisfaction of their needs. It must be kept in mind that not each and every reward is effective in inducing greater work motivation among employees. Rewards valued highly by employees are more effective than less valued rewards. So also, if an employee perceives a reward to be inequitable on comparing himself with his co-workers, his work motivation will be lowered. Thus, perceived equity of a reward is an important source of increased work motivation.

2.4.7 Growth, Relatedness and Existence Need

Alderfer (1969) reworked Maslow's need hierarchy to align it more closely with empirical research. His revised need

hierarchy is labeled ERG theory. Alderfer argued that there are three groups of core needs - existence, relatedness and growth.

Haire *et al.* (1963) points out that the ERG theory is more consistent with our knowledge of individual differences among people. Variables such as education, family background, and cultural environment can alter the importance or driving force that a group of needs holds for a particular individual. The evidence demonstrating that people in other cultures rank the need categories differently - for instance, natives of Spain and Japan place social needs before their physiological requirements - would be consistent with the ERG theory.

Several studies have supported the ERG theory (Schneider and Alderfer, 1973), but there is also evidence that it does not work in some organizations (Wanous and Zwany, 1977). Overall, however, ERG theory represents a more valid version of the need hierarchy.

Besides substituting three needs for five, Alderfer's ERG theory differs from Maslow's need hierarchy by demonstrating that (1) more than one need may be operative at the same time, and (2) if the gratification of a higher-level need is stifled, the desire to satisfy a lower-level need increases (Robbins, 1993).

2.5 Job Characteristics

According to the Job Characteristics Model (JCM) propounded by Hackman and Oldham (1976) any job can be described in terms of five core job dimensions: skill variety, task identity, task significance, autonomy and feedback. Hackman (1977) insists that the first three dimensions - skill variety, task identity, and task significance - combine to create meaningful work. That is, if these three characteristics exist in a job, we can predict that the incumbent will view the job as being important, valuable, and worthwhile. Jobs that possess autonomy give the job incumbent a feeling of personal responsibility for the results and if a job provides feedback the employee will know how effectively he or she is performing. From a motivational stand point, the model says that internal rewards are obtained by an individual when he **learns** (knowledge of results) that he **personally** (experienced responsibility) has performed well on a task that he **cares** about (experienced meaningfulness). The more that these three psychological states are present, the greater will be the employee's motivation, performance, and satisfaction, and the lower his or her absenteeism and likelihood of leaving the organization.

Weed *et al.* (1976) reported that greater task difficulty and ambiguity caused greater stress. In two well-designed studies

by Harigopal and Ravikumar (1978, 1979) it was observed that role ambiguity is negatively related to job involvement and intrinsic motivation. Smith *et al.* (1983) found a positive relationship between job autonomy and organizational commitment and job performance in the Ohio Co-operative Extension Service. Prasannakumar (1985) reported positive and significant relationship between task identity and organizational commitment of Assistant Agricultural Officers working under the T&V system in Karnataka.

Jhansirani (1985) found no significant association between perception of work load and extension productivity of agricultural scientists.

Steers and Porter (1987) however observed that restructuring the work and creating work involvement opportunities may ignite a small flame in some people, but they question the extent to which the nature of the work is a determinant of a person's drive? The simple truth is that there are no data which show that restructuring and enriching jobs will raise the will to work.

Satapathy and Choudhury (1990) in their study at the Orissa University of Agriculture and Technology, observed that factors like recognition of work, status and position, participation in professional seminars, challenging nature of problem, co-operation among colleagues and from superiors,

climate of help and guidance in organization, opportunity for self growth, freedom to work, scope to prove merit and job security were closely related with output of the scientists. However, the variables like participation in decision making process and freedom to take decisions failed to reveal significant influence on achievements of the scientists.

Sabarathnam (1992) observed that the number of research projects a scientist had at a time showed negative correlation with scientific man power efficiency in the ICAR research system. However, he also observed that provision of additional technical and secretarial assistance, fund and other facilities to scientists, reduction of reporting work, timely filling up of sanctioned posts and clear-cut division of responsibility of work among scientists would result in better utilization of scientific manpower in the ICAR research system.

Menon (1994) critizized the job characteristics model developed by Hackman and Oldham on grounds that it assumed that the various task attributes are equally salient to all individuals. This need not always be true. For example, autonomy on the job may not be a salient factor for individuals who prefer or are socialized to adhere to prescribed job roles. A related point has to do with the critical psychological states. According to the model, work will be experienced as meaningful only if the job is high on

skill variety, task identity, and task significance. This again need not be true for all individuals, as for example, for those individuals who derive the meaning of their work from considerations and cues beyond the work context. Similarly, the critical psychological state of knowledge of results from feedback directly from the job, may not be equally critical for all individuals.

Another criticism Menon (1994) offers for the job characteristics model is the question of how one is to ensure that the increased autonomy and discretion will not be misused to promote individual interests to the detriment of organizational goals? The risk of such dysfunctional behaviour is minimized if there is little divergence between individual and organizational goals. Thus, effective implementation of this model's recommendations would either require conscientious employees or employees who strongly identify with the interests of the organization.

2.6 Organizational Characteristics

2.6.1 Work Climate

Likert (1967) propounded that an organizational climate governed by supportive relationships in the work place would contribute greatly towards enhanced work motivation.

Supportive relationship according to him was exemplified by such factors as:

1. the degree to which the superior exhibited confidence and trust,

2. interest in the subordinate's future,

3. understanding of and desire to overcome problems,

4. training and helping the subordinate to find better ways of doing the work,

5. giving help in solving problems, as opposed to always giving the answer,

6. giving support by making available the required physical resources,

7. communication of the information that the subordinates must know to do their jobs as well as those things they would like to know, to be able to identify more closely with the operation,

8. the degree to which the superior sought out and attempted to use the subordinate's ideas and opinions,

9. approachableness, and

10. the extent to which credit and recognition for accomplishments were given.

According to Sharma and Prasad (1972), the productive efficiency of any organization depends mainly on the conduciveness of its working environment which can and should be reflected in the extent of satisfaction of the personnel.

Siddaramaiah and Rajeev (1993) in their study on the perception of organisational climate and job satisfaction of scientists in Kerala Agricultural University reported that a higher proportion of researchers (40.91%) and teachers (38.33%) perceived organisational climate as "facilitating" while about one-third of the respondents viewed organisational climate as "most facilitating".

Jhansirani (1985) however found no significant relationship between organizational climate and extension productivity of agricultural scientists.

According to Ashforth (1985), organizational culture refers to shared assumptions, while organizational climate refers to shared perceptions.

According to Prakasam (1986), organizational climate refers to the shared perception of the employees who work and

live together in the organization. It is the sum total of individual's perceptions regarding organisational procedures, practices and represents the psychological environment prevailing in the organization.

Jagirdhar (1987) observed significant association between organizational climate and job satisfaction but no significant association between organizational climate and job involvement and also organizational commitment. Du Brin (1988) brought out a subtle difference when he conceptualized organizational culture as a system of shared values and beliefs that actively influence the behaviour of organizational members whereas organizational climate referred to the organization's personality as seen by its members.

Veerasamy *et al.* (1992) found that information input behaviour of farm scientists had significant and positive correlation with the overall motivational climate.

2.6.2 Communication Pattern

The communication process represents an exchange of messages, but the outcome is meanings that may or may not approximate those that the sender intended. Whatever the sender's expectations, the decoded message in the mind of the receiver represents his or her reality. And it is this "reality" that will determine performance, along with the

individual's level of motivation and his or her degree of satisfaction. The question reviewed here is how communication is central in determining an individual's degree of motivation.

Duft (1979) is of opinion that "no single function is more important to the management of the human element than effective communications."

Scanlan and Keys (1979) reported that there is direct relationship between communication and productivity. According to them, "employees work more effectively and with greater satisfaction when they understand not only their own job objectives, but also those of their work group and the total organization. To the extent that communications are lacking, the effectiveness of the organization will be undermined. Management should realize that the employees want to be well informed about the affairs of the organization and since they do have a stake in the success of the organization, they also want to be well informed about matters which affect them on their jobs. This imposes some specific responsibilities on management to communicate on subjects affecting the organization and job security of employees. Information of this nature is being constantly generated and if properly communicated, enables the employees to feel that they are integral parts of the organization: that is, they are working with it, not just for it."

Koontz *et al.* (1980) stated that "communication is essential for the internal functioning of enterprises because it integrates the managerial functions. In an effective enterprise, communication flows in various directions: downward, upward and cross-wise. Traditionally, downward communication was emphasized, but there is ample evidence that if this is the only direction of communication, problems will develop."

Robbins (1993) from the expectancy theory perspective observed that the degree of effort an individual exerts depends on his or her perception of the effect - performance, performance - reward, and reward - goal satisfaction linkages. If individuals are not given the data necessary to make the perceived probability of the linkages high, motivation will suffer. If rewards are not made clear, if the criteria for determining and measuring performance are ambiguous, or if individuals are not relatively certain that their effort will lead to satisfactory performance, then effort will be reduced. So communication plays a significant role in determining the level of work motivation.

2.6.3 Management Style

Steers and Porter (1987) summarized the evolution of managerial approaches to work motivation as follows:

Traditional Approach: (1) The manager's basic task is to closely supervise and control subordinates. (2) He or she must break tasks down into simple, repetitive, easily learned operations (3) He or she must establish detailed work routines and procedures, and enforce these firmly but fairly.

Human Relations Approach: (1) The manager's basic task is to make each worker feel useful and important. (2) He or she should keep subordinates informed and listen to their objections to his plans, (3) The manager should allow subordinates to exercise some self-direction and self-control on routine matters.

Human Resources Approach (1) The manager's basic task is to make use of "untapped" human resources. (2) He or she must create an environment in which all members may contribute to the limits of their ability. (3) He or she must encourage full participation on important matters, continually broadening subordinate self-direction and control.

Contingency Approach: In recent years, the notion of a multiple strategy - using all three approaches at one time or other depending upon the nature of the organization, its technology, its people, and its goals and priorities has come into being. In effect, a contingency perspective allows one to dispense with the unlikely assumption that a single approach will be equally effective under any and all

circumstances, and rather substitutes an emphasis on diagnosis of the situation to determine which approach will be most useful and appropriate under the particular circumstances.

Kanungo and Mendonca (1994) observed that the practice of participative management at all levels of the organization creates conditions which foster in employees the desire and willingness to think and behave in creative ways as they perform their jobs. It builds into the organization's social system the capacity to adapt and respond to change which is indispensable to the organization's survival and success in today's turbulent global environment. In addition to contributing to organizational effectiveness, participative management also satisfies the employees' basic human work needs for control over their work behaviour, for meaningful work, and for interpersonal relations that are relevant to the task.

2.6.4 Morale

Leavitt (1978) observed that when one group sees the comparable work of other groups, the initial reaction is apt to be a slight let down, followed by a quick recovery and continued increase in group morale. It is very easy to set up situations in which groups compete with one another. In such settings the solidity and morale of members within groups is apt to climb steadily as the competition progresses. But the

feeling between groups is apt to degenerate into bickering and hostility.

Leavitt (1978) also brought out the intricate relationship of morale with the communication network and decision making patterns in organizational settings and how these ultimately affect work motivation. He pointed out that the type of communication network within which a group works is important, both to the effectiveness with which a group performs its task, and to the morale, attitudes, and even creativity of its members. When the work group is making the decisions usually made by management, the outcome is a wiggly, uneven productivity curve, but with averages a good deal higher than under the previous engineered design and with lowered turnover and higher morale as free riders.

Chruden and Sherman (1984) defined morale as the condition of well-being among members of a group. According to them, cohesiveness is the most important factor in morale. Other factors determining morale are: the existence of goals which members of the group strive to achieve, observable progress toward reaching the goals, and a sense of participation among the individuals of the group in working toward the goals.

Quick (1985) noted that morale is frequently referred to in the same context as motivation. But research has

established no clear relationship between morale and motivation. It is probably true that over a prolonged period, high productivity and motivation require high morale. But that is an assumption that has not been established by hard evidence. Vestiges of this presumption are seen in what has become known as the human relations school of management: if you make employees happy, they produce more. Actually, all known of happy employees is that they are happy. Employees who are unhappy or suffer from low morale paradoxically produce greatly under some conditions. Employees who are content sometimes produce poorly.

Misra and Kanungo (1994) in their essay on "Work Motivation in Developing Societies" observed that workers at all levels of organizations in India seem to manifest a personal sense of low morale and helplessness. In their day-to-day work and non-work spheres of life, they manifest a passive attitude towards their environment. They have inculcated an external orientation - a belief that the external environment controls them and they can do nothing (in a direct manner) to bring about any change in their environment. Thus they become insecure and demonstrate a strong need for dependence on others to alleviate their feelings of insecurity. As individuals, they feel that they are insignificant, powerless particles of humanity and, therefore, believe in the futility of their actions. These

beliefs lead to an attitude of fatalism and they become indifferent to work and work organizations. As individuals therefore, they do not strive for challenge and excellence but rather remain content with *status quo* and mediocrity. They become the victims of "what can I do" and *Chalta hai* syndrome (a commonly used Hindi phrase to express a mixture of feelings - ready acceptance of the *status quo,* mediocrity and even resignation).

From the above reviews, the following inferences were drawn:

1. Broadly work motivation pertains to the conditions and processes that account for the arousal, direction, magnitude, and maintenance of effort in person's job.

2. Several theories of work motivation have been formulated to identify factors that influence work behaviours and factors that contribute to the maintenance and termination of these behaviours.

3. Traditionally, work motivation theories have been categorized as the content and process theories.

4. Content theories explain work behaviour as the employee's attempt to satisfy some needs. Content theories can be said to answer the 'what' of the motivation process,

i.e., what needs and in what order do these needs vary in their strength to initiate, energize, and sustain employee work behaviour.

5. Process theories, on the other hand, explain work behaviour in terms of the cognitive process which the employee goes through before and during the behaviour. They seek to identify the process, i.e., how does an employee start, direct, and stop a behaviour.

6. Taken together, content and process theories suggest a generalized model of work motivation.

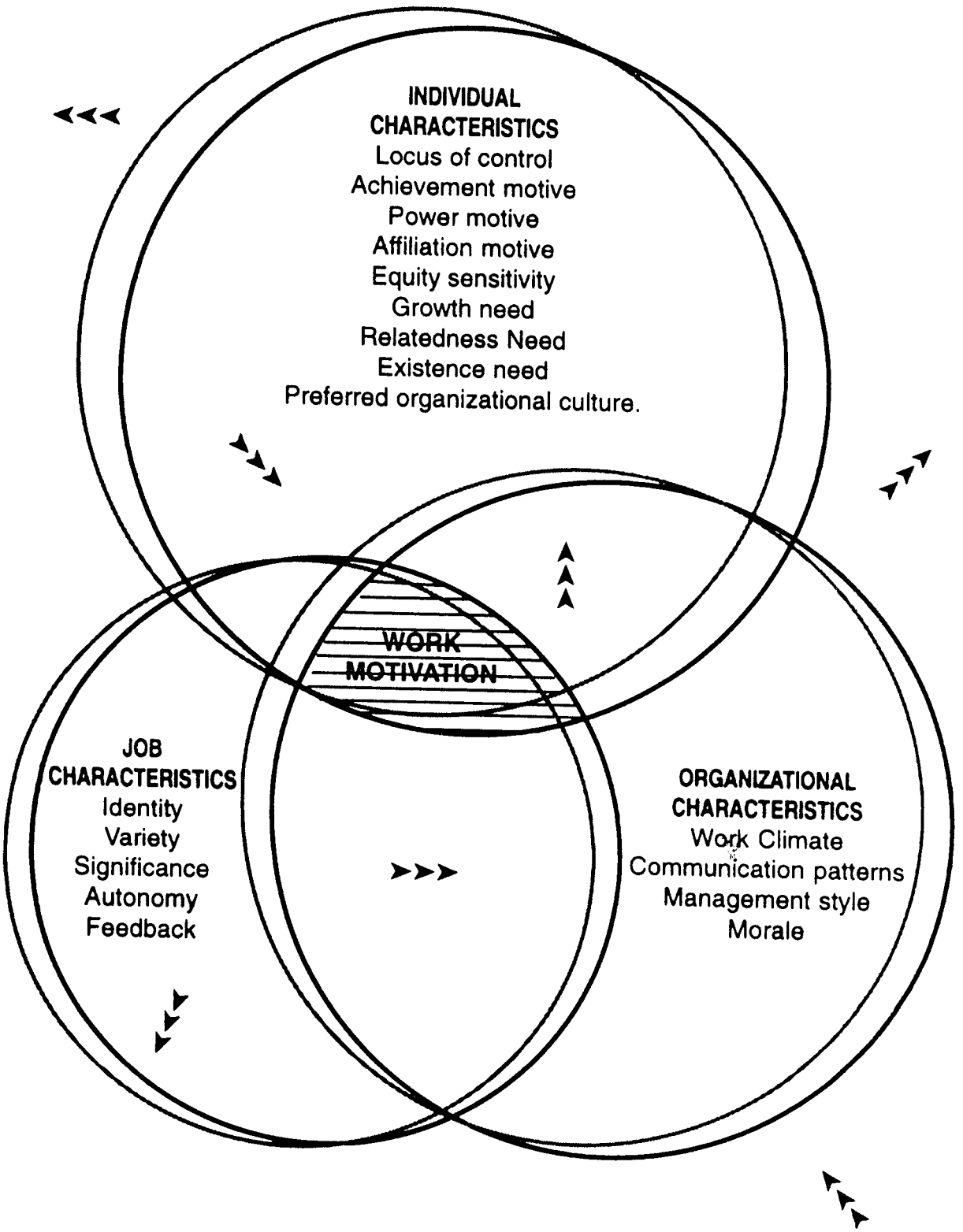
The theoretical framework and the methodology for the present study were designed keeping in view the foregoing inferences from the review of literature.

2.7 Conceptual Model of the Study

The conceptual framework of the study is presented in Figure.1.

A central purpose of any model is to organize in a meaningful fashion the major sets of variables associated with the topic under study. In fact, one test of the usefulness of a model is the degree to which it can account for a wide diversity of variables while simultaneously integrating them into a cohesive - and succint - unifying

FIG.1 CONCEPTUAL FRAMEWORK OF THE STUDY



framework. Unfortunately, such a totally unifying model on work motivation had not existed in the past. What had existed are a set of different theories that addressed themselves to one or more of the variables involved but none of which were completely and thoroughly comprehensive. The conceptual model proposed here draws heavily on the research and writings of Porter and Miles (1974) and Steers and Porter (1987). The Conceptual Model proposed here is represented in Figure 1 and its highlights are described below.

1. The model assumes that work motivation is a complex phenomenon that can best be understood only within a multivariate framework: that is several important - and often quite distinct - factors must be taken into account when explaining motivational processes. However, these several factors can be broadly classified into three mega variables: individual characteristics, job characteristics, and organizational characteristics (represented by the three circles in Fig.1). Each mega-variable consists of a number of variables as detailed in Fig.1. These lists are not intended to be exhaustive, they are meant to indicate some of the more important variables influencing work motivation as infered from the literature reviewed.

2. Instead of viewing these mega-variables as static lists of items, the present model argues that these

motivationally relevant factors must be viewed with a systems framework. The mega-variables have interactive effects as represented by the overlapping nature of the circles in Fig.1.

3. In each situation the mega-variables are of different strengths as depicted by the different diameters of the three circles.

4. Not only are the mega-variables of different strengths, they are also to be conceived as being potentially capable of changing strength over time in response to circumstances. For instance, we may think of a teacher who could initially be motivated only by a relatively autocratic management (a work environment characteristic) but later on as this worker begins to enjoy the fruit of his own labour, the job in itself begins to motivate him and the role of the management is reduced.

5. These three circles are not only of different and varying strengths, but are also to be perceived as constantly in motion as indicated by the arrows in various directions. Thus the individual is seen as potentially being in a constant state of flux vis-a-vis his or her motivational level, based on the nature, strength, and interactive effects of the mega-variables.

6. As mentioned, the proposed model conceives work motivation as a function of three mega-variables viz. individual characteristics, job characteristics, organizational characteristics. A person's level of work motivation is potentially in a constant state of flux and is determined by the degree to which his individual, job and work environmental characteristics are in alignment with each other. Thus the area overlapped by all three circles is a representation of the level of work motivation.

Methodology

Chapter 3

METHODOLOGY

The present investigation was undertaken with the main objective of analysing work motivation and its associated parameters among teachers of the Kerala Agricultural University. A general description of the methods and procedures followed in conducting this research is furnished in this chapter under the following subheadings:

3.1 Research Design

There is a discernible psychological undertone to this study. Hence, after a careful analysis of the available literature and keeping in view, the objectives, more of qualitative and behavioural attributes were selected for inclusion. Most of these attributes are *ex post facto* in nature and offer little scope to be controlled by the researcher. Therefore, *ex post facto* research design was decided to be used for the present study. According to Kerlinger (1973) *ex post facto* research is 'systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable.

3.2 Locale of the Study: Kerala Agricultural University

The main campus of the Kerala Agricultural University at Vellanikkara is 13 km east of Thrissur town on the Thrissur-Palakkad highway (NH-47). The College of Horticulture and College of Forestry are located in the main campus. The University has six other teaching campuses, viz., College of Veterinary and Animal Sciences, Mannuthy; College of Co-operation and Banking, Mannuthy; College of Fisheries, Panangad; College of Agriculture, Vellayani; Kelappaji College

of Agricultural Engineering and Technology, Tavanur and the recently started College of Agriculture, Nileshwar. This college was not functional at the time of data collection. In addition to this, the University has 24 research stations and four KVKs distributed throughout the state and the Directorate of Extension at Mannuthy.

The Officers of the University are the Chancellor of the University (Governor of Kerala), the Pro-Chancellor (Minister of Agriculture) and the Vice-Chancellor who is the Chief Executive Officer of the University.

The Vice-Chancellor is also the ex-officio Chairman of the Executive Committee and Academic Council. The Vice-Chancellor is a full time officer of the University and has the immediate overall control of the University. The other officers of the University are the Registrar, the Comptroller, the Director of Physical Plant, the Librarian, the Deans of Faculties, the Director of Students Welfare, the Director of Research, the Director of Extension and such other persons in the service of the University as may be declared by the statutes to be officers of the University.

The general administrative control is vested with the Registrar, while the Comptroller is responsible for budgeting, finance, statements of accounts and audit. The co-ordination,

direction and administration of research activities in the University are vested with the Director of Research. The Director of Extension is responsible for extension education and public relations. The Deans and Associate Deans of the various Colleges are in charge of resident teaching and instruction in the respective colleges. The Director of Physical Plant is in charge of the construction and maintenance of buildings, roads, vehicles and machinery.

The Librarian is responsible for the purchase, cataloguing, maintenance, issue and receipt of books and journals and for all other matters concerning the library. The Director of Students Welfare is responsible for housing extra-curricular activities, counselling and other general needs of the students.

The statutory authorities of the University are the General Council, the Executive Committee and the Academic Council. The General Council is the supreme authority of the University. Ordinarily, the Council meets once in four months. The Executive Committee is the chief executive authority of the University. The Academic Council is primarily responsible for the maintenance of standards of instruction, education and examinations in different faculties of the University.

The KAU Act 33 of 1971 defines a "teacher" as a person appointed or recognised by the University for the purpose of imparting instructions or conducting and guiding research or extension education programmes, and includes any other persons who may be declared by the statutes to be a teacher. Teachers in the Kerala Agricultural University are designated as Assistant Professors, Associate Professors and Professors either by appointment or by promotion. In the present study, the term "Assistant Professors" includes the erstwhile Junior Assistant Professors who were subsequently inducted into the UGC/ICAR scheme and redesignated as Assistant Professors as well as those who were directly recruited as Assistant Professors. The term "Associate Professors" in the present investigation includes both cadre and non-cadre Associate Professors.

3.3 Selection of the Sample

To ensure proper representation, the population of teachers of the Kerala Agricultural University was divided into 13 strata consisting of the seven educational institutions, the five NARP zones and one strata consisting of those engaged primarily in extension work. The list of the 13 strata is given in Appendix I. The total sample size to be covered was fixed as 150 and the sample size for each strata was allocated in proportion to the strata size. Selection

within each stratum was done by simple random sampling such that the number of Professors, Associate Professors and Assistant Professors selected was proportionate to their number in the total population. Thus the selected sample consisted of 35 Professors, 52 Associate Professors and 63 Assistant Professors. Of these 150 teachers, 91 worked in teaching institutions, 52 in research stations and seven in extension centres. It may be noted here that the total population of teachers on the rolls at the time of undertaking this study was 694. The sample of 150, therefore, constituted 21.6 per cent of the total population - a sizable sample to make valid inferences.

3.4 Selection of variables for the study

The very objective of the study necessitated the selection of the dependent variable: work motivation.

With regard to the independent variables, a list of 25 variables seemingly related to work motivation was prepared based on the review of literature. The list of variables was sent to 50 judges, comprising mostly of extension scientists working in various Agricultural Universities in India. They were asked to examine the variables critically and to rate the relevancy of each variable on a five-point continuum ranging from most relevant, more relevant, relevant, less relevant and

least relevant with weightages of 5, 4, 3, 2 and 1 respectively. Out of the 50 judges, only 36 responded.

The final variables were selected based on the mean relevancy score, which was obtained by summing up the weightages obtained by a variable and dividing it by the number of judges who responded. The variables with their mean relevancy scores are presented in Appendix II. The variables having mean relevancy scores above the average mean relevancy score were selected for the study. Accordingly, eighteen variables viz., locus of control, achievement motive, power motive, affiliation motive, preferred organizational culture, equity-sensitivity, growth need, relatedness need, existence need, identity of job, variety of job, significance of job, autonomy of job, feedback through job, work climate, communication patterns, management style and morale were selected for the study.

3.5 Operationalisation and measurement of the dependent variable: work motivation

Keeping in view the review of literature and the specific objectives of the present investigation, work motivation, the dependent variable was operationally defined as the expressed inner urge that energises, directs and sustains one's work in the Kerala Agricultural University.

Work motivation has been measured variously in the past. Metha (1978) in his study of work motivation in Indian Public Sector used a Thematic Apperception Test consisting of six pictures to measure personal achievement, social achievement and influence motivation. Thomas (1987) developed an Industrial Workers Motivation Scale consisting of 32 items each with two self descriptive statements arranged in a forced-choice format. Agarwal (1988) developed a work motivation scale that consisted of 26 questions each with five alternative choices. The scale was specifically designed for managerial or white collar as well as blue collar employees to assess their work motivation, both intrinsic and extrinsic.

For the present study, work motivation was measured using a scale specifically developed and standardized for the purpose.

3.5.1 Selection of the dimensions to measure work motivation

Delving into the vast volume of available literature on work motivation and after extensive discussions with resource persons in the field of specialization, a comprehensive and exhaustive list of dimensions associated with measuring work motivation of teachers was prepared. This list was then subjected to a thorough sifting and sieving based on discussions with experts. The list, consisting of 15 items/ dimensions was sent to judges comprising of experts in the

field of Psychology, Management and Extension in various parts of India. They were asked to examine the dimensions critically and also to include additional items if found necessary. The judges were requested to rate the relevancy of each dimension on a five-point continuum ranging from most relevant, more relevant, relevant, less relevant and least relevant with weightage of 5, 4, 3, 2 and 1 respectively. Out of the 50 judges, only 36 responded. The selection of the final dimensions to measure work motivation of teachers in the Kerala Agricultural University was based on the mean relevancy score which was obtained by summing up the weightages obtained by a dimension and dividing it by the number of judges who responded. The attributes with their mean relevancy scores are presented in Appendix III. The dimensions having mean relevancy score above the average mean relevancy score were selected for the scale to measure work motivation. They were

1. Urge to use the very best of one's ability
2. Willingness to come early and/or stay late for work
3. Urge to improve one's work
4. Relative value attributed to hard work
5. Enthusiasm and commitment towards work
6. Voluntary undertaking of work assignments
7. Updating of one's work related information base
8. Urge to improve ones competence and capability

9. Change in the urge to work when compared to the past
10. Urge to overcome obstacles and hindrances in work

3.5.2 Item analysis

Item analysis is a general term for procedures designed to asses the usefulness of a test item. In the present study, the Item Discrimination Index was ascertained, to measure how effectively each item in the work motivation scale was able to discriminate between high and low work motivated teachers.

The ten items selected for the work motivation scale were administered to 100 non-sample respondents. The scores obtained for each item were arranged in ascending order. The twenty five scores at the lower end and the twenty five scores at the upper end formed the criterion groups, eliminating the middle fifty respondents. The Item Discrimination Index was then obtained using the formula:

$$t = \frac{\bar{x}_H - \bar{x}_L}{\sqrt{\frac{(x_H - \bar{x}_H)^2 + (x_L - \bar{x}_L)^2}{n(n-1)}}}$$

where,

x_H = score of the individual in the higher group

x_L = score of the individual in the lower group

$\bar{x}_H$ = mean score on a given item for the higher group

$\bar{x}_L$ = mean score on a given item for the lower group

n = umber of individuals in each of the criterion groups, which in this case is 25

The t values are furnished in Appendix IV. The t value obtained was significant in the case of all the ten items, thereby proving that each of the items constituting the work motivation scale was able to effectively discriminate between high and low work motivated teachers.

3.5.3 Reliability

According to Kerlinger (1973), reliability can be defined as the relative absence of errors of measurement in a measuring instrument i.e. the extent to which repeated measurement produces the same results. Of various methods of estimating reliability, the split-half technique was employed in the present study. All the ten items of the work motivation scale were divided into two equal halves, one half consisting of all the even numbered items and the other half consisting of all the odd numbered items. Both the halves were simultaneously administered to 30 non-sample respondents and the scores obtained for the two halves were then correlated. The Pearson's product moment correlation thus obtained (r=0.76) was corrected for the total length of the scale by using the Spearman-Brown Prophecy formula and found to be

highly significant (r_{tt} = 0.86) indicating excellent reliability for the work motivation scale.

3.5.4 Validity

Validity helps to ascertain whether a scale measures what it claims to measure. In the present study, the validity of the work motivation scale was ascertained as follows.

3.5.4.1 Content validity

According to Thakur (1993), content validity is the representativeness of the items in the scale with reference to the universe of items of the property being measured. Content validity of the index was established by two means. The items selected for inclusion in the scale were based on extensive literature review and discussion with experts in the subject. This was one means of establishing content validity. The items thus obtained were then subjected to the opinion of a panel of judges to find out whether the items were relevant/ important for inclusion in the scale or not. This was the second means of establishing content validity. In this process the items were subjected to rigorous editing. Many items got eliminated and many were modified and refined prior to subjecting them to judges rating.

3.5.4.2 Known Group Validity

Known group validity is a method of assessing test validity by administering the test to a group already known to belong to a particular category. For the present study, senior officers in the cadre of Deans and Associate Deans were requested to identify (on assurance that the information would be kept strictly confidential) teachers who in their opinion were high and low in their work motivation. Thus two groups of teachers (15 teachers in each group), one known to be high in work motivation and the other known to be poor in work motivation were formed. The work motivation test was then administered to these two groups and the work motivation scores were worked out. The scores of the two groups were compared using 't' test, which yielded a significant 't' value thereby validating the work motivation scale.

3.5.5 Classification

The final scale thus consisted of 10 items that were to be rated on a 5-point continuum ranging from 1 to 5. Weights were so assigned that the higher numerical is always given to the response category that indicates more of work motivation. Interchanging the order of alternatives given and random use of positive and negative statements was ensured to prevent response set. The maximum possible score was 50 and the minimum score was 10. Delinious-Hodges Cumulative $\sqrt{f}$ method

as suggested by Delinious and Gurney (1951) was used to classify the respondents. Thus those who received a total score below 28.22 were classified as low in work motivation. Those whose total work motivation score was between 28.22 and 36.35 were classified as medium in work motivation and those with total work motivation score above 36.35 were classified as high in work motivation.

3.6 Operationalisation and measurement of the independent variables

3.6.1 Age

Age was operationalized as the number of years completed by the respondent at the time of enquiry.

3.6.2 Service

Service of the respondent was operationalised as the total number of years completed in the Kerala Agricultural University at the time of enquiry.

3.6.3 U.G.C./I.C.A.R. scheme induction

This referred to whether or not a teacher had been inducted into the U.G.C./I.C.A.R. scheme at the time of enquiry. Those who had been inducted into the U.G.C./I.C.A.R. scheme were given a score of two and others a score of one.

3.6.4 Locus of control

Locus of control was operationalized as the degree to which people believe they are masters of their own fate. It was measured using the scale developed by Rotter (1971). The scale consisted of 10 items each with two choices: A and B. The respondents were asked to indicate whether they agreed more with choice A or choice B. A score of 1 was given for each of the following selections: 1B, 2A, 3A, 4B, 5B, 6A, 7A, 8A, 9B and 10A. The total score obtained was interpreted as follows based on the classification that accompanies the scale.

8-10 = High internal locus of control

6-7 = Moderate internal locus of control

5 = Mixed

3-4 = Moderate external locus of control

1-2 = High external locus of control

3.6.5 Achievement, power and affiliation motives

Achievement motive refers to the drive to excel, to achieve and to succeed in relation to a set of standards. Power motive refers to the desire to make others behave in a way that they would not otherwise have behaved. Affiliation motive refers to the desire for friendly and close interpersonal relationships.

These three characteristics were measured using the scale developed by Steers and Braunstein (1976). The scale consists of 15 items each rated on a 5-point continuum ranging from strongly disagree to strongly agree weighted 1, 2, 3, 4 and 5, respectively. Items 1, 4, 7, 10 and 13 reflected the achievement motive, items 2, 5, 8, 11 and 14 the power motive and items 3, 6, 9, 12 and 15 the affiliation motive. The total score obtained for each of the above set of items represented the particular motive. The range of possible scores for each motive was 5 to 25.

3.6.6 Preferred organizational culture

Organizational culture refers to the common perception held by the organization's members; a system of shared meaning. Preferred organizational culture emphasized individual preference and hence this was treated as an individual characteristic rather than an organizational characteristic.

Preferred organizational culture was measured using the scale developed by Robbins (1993). The scale consists of 10 items that are to be rated on a 5-point continuum ranging from strongly agree to strongly disagree, weighted +2, +1, 0, -1 and -2 for items 5, 6, 7, 8 and 9 and -2, -1, 0 +1 and +2 for items 1, 2, 3, 4 and 10. the total score possible would range between +20 and -20. The higher the score (positive) obtained

by an individual indicates that the individual prefers a formal, mechanistic, rule-oriented, and structured culture. This is synonymous with large corporations and government agencies. Negative scores indicate a preference for informal, humanistic, flexible, and innovative cultures, which are more likely to be found in research units, advertising firms, high-tech companies, and small businesses.

3.6.7 Equity-sensitivity

Equity-sensitivity was operationalized as the degree to which individuals compare their job inputs and outcomes with those of others and then respond so as to eliminate any inequities.

Equity-sensitivity was measured using the scale developed by Miles and Huseman (1993). The scale consists of 5 items with two answers each: A and B. The respondents were to divide ten points between the two answers (A and B) by giving the most points to the answer that best described themselves and the fewest points to the answer that least described themselves. The sum total of the points allocated to items 1B, 2A, 3B, 4A and 5B would give the final equity sensitivity score. The possible range of scores was 0 to 50.

Based on data from more than 3500 respondents, the researchers found that scores less than twenty-nine represent

Entitleds, those between twenty-nine and thirty two are Equity-sensitives and those with scores above thirty two are Benevolents. Accordingly, the same classification was used for the present study.

Benevolents are individuals who prefer that their outcome/input ratios be less than the comparison others. Equity-sensitives are individuals who prefer outcome/input ratios to be equal. Entitleds are individuals who prefer that their outcome/input ratios exceed those of the comparison others.

3.6.8 Growth, relatedness and existence need

Growth need refers to the intrinsic desire for personal development. It includes the intrinsic component from Maslow's esteem category and the characteristics included under self-actualization.

Relatedness need refers to the desire for maintaining important interpersonal relationships. It aligns with Maslow's social need and the external component of Maslow's esteem classification.

Existence need refers to the desire to provide ones basic material existence requirements. They include the items that Maslow considered physiological and safety needs.

These three needs were measured using the scale developed by Alderfer (1972). The scale consists of 12 items rated on a 5-point continuum ranging from 'not important' to 'extremely important' weighted 1, 2, 3, 4 and 5 respectively. Items 2, 5, 8 and 11 represented growth need, items 1, 4, 7 and 10 represented relatedness need and items 3, 6, 9 and 12 represented existence needs. By adding the scores for each need set the total need score was obtained for growth, relatedness and existence need separately. The range of possible scores on this scale was 5-20 for each need.

However, it must be noted that a low score may either imply that a need is unimportant or that it is substantially satisfied.

The scores of all the independent variables representing individual characteristics were added to give a total score representing the **Individual Characteristics Index (ICI)**.

3.6.9 Job characteristics

The five job characteristics studied in the present research were operationalised as follows:

3.6.9.1 Variety in job

The degree to which the job requires a variety of different activities so that the employee can use a number of different skills and talent.

3.6.9.2 Identity of job

The degree to which the job requires completion of a whole and identifiable piece of work.

3.6.9.3 Significance of job

The degree to which the job has a substantial impact on the lives or work of other people.

3.6.9.4 Autonomy in job

The degree to which the job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining the procedures to be used in carrying it out.

3.6.9.5 Feedback through job

The degree to which carrying out the work activities required by the job results in the individual obtaining direct and clear information about the effectiveness of his or her performance.

These five job characteristics were measured using the scale developed by Hackman and Oldham (1980). The five job characteristics were also combined into a single predictive index as suggested by Hackman and Oldham (1980) and labelled as the **Motivating Potential Score (MPS)**. The Motivating Potential Score was defined as a predictive index suggesting the motivation potential in a job. It was computed as follows:

$$MPS = \left(\frac{\text{Variety + Identity + Significance}}{3} \right) \times \text{Autonomy} \times \text{Feedback}$$

The range of possible scores was 1 to 27.

3.6.10 Organizational characteristics

3.6.10.1 Work climate was operationalized as the extent to which the general atmosphere at the work place provides for needs satisfaction and development of employees.

3.6.10.2 Communication pattern was operationalized as the degree to which an organization permits or promotes a free and open exchange of ideas and information among its members.

3.6.10.3 Management style was operationalized as the typical pattern of behaviour engaged by superiors in working with and through people to accomplish organizational goals.

3.6.10.4 Morale was operationalized as a mixture of feelings, attitudes, and sentiments that contribute to a general feeling of satisfaction.

These four organizational characteristics were measured using the Organizational Climate Index (OCI) developed by Nave (1986). The scale was suitably modified for use in the present study by changing the scoring system. A 3-point continuum with alternatives 'agree', 'somewhat agree' and 'disagree' weighted 3, 2 and 1 respectively was used. Thus a score for each of the organizational characteristics and a total score representing the **Organizational Climate Index (OCI)** was obtained. The possible range of scores were: work climate 7-21; communication pattern 6-18; management style 8-24; morale 8-24 and Organizational Climate Index 29-87.

3.7 Data collection procedure

The detailed mailed questionnaire prepared for the study was pretested during a pilot study conducted on thirty non-sample respondents. Based on the experience gained during pretesting, necessary corrections and modifications were done especially to ensure that the instructions and questions were clear and unambiguous. The final questionnaire is given in Appendix V. The questionnaire was mailed to the selected sample of teachers during November 1994. Reminders, personal calls and messengers were used to expedite and ensure that all

respondents returned the completed questionnaire. By the first week of March 1995 all questionnaires had been received back.

3.8 Statistical tools employed for analysis of data

Data collected from the teachers were decoded, compiled and analysed using statistical techniques. Assuming that the data was at least at ordinal level of measurement and distributed with considerable degree of homogeneity of variance, more of parametric tests were used. The data were analysed at the computer centre of the College of Horticulture, Vellanikkara.

3.8.1 Delinious-Hodges cumulative method of classification

Delinious-Hodges cumulative method as explained by Delinious and Gurney (1951) was used to classify the respondents. Having arranged data into ascending or descending order several arbitrary classes were formed depending on the number of classes to be finally obtained. The upper limit of each class was obtained using the formula

$$U = l + \left(\frac{Nk - m}{f} \right) c$$

where

U = upper limit of the new class

k = quartile number

N = $\Sigma\sqrt{f}$

l = lower limit of the quartile class

m = Cum $\sqrt{f}$ below the quartile class

f = frequency of the quartile class

c = class interval of the arbitary classes

3.8.2 Percentages

After the respondents were categorised into different groups based on appropriate criteria, the percentage distribution of respondents under each group was computed.

3.8.3 Pearson's product moment correlation

This measure was used to assess the nature and degree of relationship between the independent variables and the dependent variable, and for working out the intercorrelations among the various independent variables. The computed values of 'r' were tested for their significance using table values at n-2 degrees of freedom.

3.8.4 ANOVA

Analysis of variance (ANOVA), a powerful test of significance when comparisons across more than two categories are involved was utilized for the present investigation to make comparisons between Assistant Professors, Associate Professors and Professors and also to make comparisons between

teachers in teaching, research and extension institutions. The data was subjected to $\sqrt{x+1}$ transformation prior to analysis of variance.

3.8.5 Bunch - Map Analysis

Since the independent variables chosen for the present investigation were highly interdependent the problem of multicollinearity was confronted using Bunch-Map analysis (Koutsoyiannis, 1977) in essence a revised version of Frisch's 'Confluence Analysis' (Frisch, 1934). The procedure was to regress the dependent variable on each one of the independent variables separately. All the elementary regressions thus obtained were examined on the basis of **a priori** and statistical criteria. The elementary regression which appeared to give the most plausible result was choosen. Then, gradually additional variables were inserted and their effects on the individual coefficients, on their standard errors, and on the overall R^2 were examined and thereby the relative importance of independent variables determined.

3.9 Hypotheses for the study

Keeping in view the objectives, review of literature and conceptual orientation of the study, the following null hypotheses were framed for the present investigation.

1. There will be no significant relationship between individual, job, and organizational characteristics with work motivation.

2. There will be no significant independent variable that determines the work motivation of teachers in KAU.

3. There will be no significant difference between Assistant Professors, Associate Professors and Professors of KAU with respect to work motivation, individual, job and organizational characteristics.

4. There will be no significant difference between teachers of KAU in teaching, research and extension institutions with respect to work motivation, individual, job and organizational characteristics.

Results and Discussion

Chapter 4

RESULTS AND DISCUSSION

Keeping the objectives of the study in view, the results are presented under the following heads.

4.1 Distribution of respondents with respect to work motivation, personal variables, individual, job and organizational characteristics and relationship of individual, job and organizational characteristics with work motivation.

4.2 Identification of the determinants of work motivation among teachers in KAU

4.3 Comparison of Assistant Professors, Associate Professors and Professors with respect to work motivation, individual, job and organizational characteristics.

4.4 Comparison of teachers in teaching, research and extension institutions with respect to work motivation individual, job and organizational characteristics.

4.1 Distribution of respondents with respect to work motivation, personal variables individual, job and organizational characteristics and relationship of personal variables, individual, job and organizational characteristics with work motivation

For convenience of conceptualization and for enriching the discussion the results of the first two specific objectives of the present study are presented and discussed simultaneously in the following order.

4.1.1 Work motivation

4.1.2 Personal variables

4.1.2.1 Age

4.1.2.2 Service

4.1.2.3 UCG/ICAR induction

4.1.3 Individual characteristics

4.1.3.1 Locus of control

4.1.3.2 Achievement motive, power motive and affiliation motive

4.1.3.3 Organizational culture

4.1.3.4 Equity-sensitivity

4.1.3.5 Growth need, relatedness need and existence need

4.1.4 Job characteristics: identity, variety, significance, autonomy, feedback

4.1.5 Organizational characteristics

4.1.5.1 Work climate

4.1.5.2 Communication patterns

4.1.4.3 Management style

4.1.5.4 Morale

4.1.6 Relationship of individual, job and organizational with each other and with work motivation

4.1.1 Work motivation

The results of the study relating to the distribution of the respondents in the different categories of work motivation are given in Table 1. While it is encouraging to note from the results in Table 1 that almost half of the respondents (48%) had a high level of work motivation, the fact that the remaining 52 per cent were either medium or low in their work

Table 1. Distribution of respondents with respect to work motivation

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Low	Below 28.22	34	22.67
2.	Medium	28.22 to 36.35	44	29.33
3.	High	Above 36.35	72	48.00
	Total		150	100.00

Range : 16 to 45; $\bar{x}$ = 33.41

motivation causes concern. This concern however is pacified when the range and mean score are noted. While the possible range in the scale was from 5 to 50, the obtained range was from 16 to 45 and the mean score obtained (33.41) was 66.8 per cent of the maximum possible score. This definitely indicates that the overall work motivation was towards the 'high' side.

An item-wise analysis of the distribution of respondents with respect to the work motivation scale is given in Table 2. Based on the response option which received most support the following observations can be made.

Table 2. Distribution of respondents with respect to the various dimensions of the Work Motivation Scale

Item 1 The urge I have to use the very best of my abilities for my work in KAU is:

Options	Very low	Low	Average	High	Very high
Frequency	45	8	8	8	81
Percentage	30.00	5.33	5.33	5.33	54

Item 2 I am prepared to come early and/or stay late for my work in KAU:

Options	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Frequency	40	23	2	1	84
Percentage	26.67	15.33	1.33	0.67	56.00

Item 3 The urge I have to improve my work in KAU is:

Options	Very low	Low	Average	High	Very high
Frequency	2	5	22	40	81
Percentage	0.33	3.33	14.67	26.67	54

Item 4 It is not worth putting a great deal of effort for my work in KAU:

Options	Strongly disagree	Disagree	Uncertain	Agree	Strongly agree
Frequency	8	21	40	81	0
Percentage	5.33	14.00	26.67	54.00	0

Item 5 The enthusiasm and commitment I have for my work in KAU is:

Options	Very low	Low	Average	High	Very high
Frequency	49	14	24	54	9
Percentage	32.67	9.33	16.00	36.00	6.00

Item 6 I avoid voluntarily taking up assignments related to my work in KAU

Options	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
Frequency	17	3	45	41	44
Percentage	11.33	2.00	30.00	27.33	29.33

Item 7 The urge I have to keep myself equipped with upto-date information for my work in KAU is:

Options	Very low	Low	Average	High	Very high
Frequency	8	21	36	36	49
Percentage	5.33	14.00	24.00	24.00	32.67

Item 8 The urge I have to improve my capabilities and competence for my work in KAU is:

Options	Very low	Low	Average	High	Very high
Frequency	1	5	23	40	81
Percentage	0.67	3.33	15.33	26.67	54.00

Item 9 When compared to the past the urge I have to do my work in KAU in the most befitting manner is:

	Much lower now	Slightly lower now	The same as it was before	Slightly higher now	Much higher now
Frequency	8	72	49	21	0
Percentage	5.33	48.00	32.67	14.00	0

Item 10 The urge I have to overcome obstacles and hindrances in my work for KAU is:

Options	Very low	Low	Average	High	Very high
Frequency	66	20	52	12	0
Percentage	44.00	13.33	34.67	8	0

More than half of the respondents (54-56%)

- were prepared to come early and/or stay late for work;
- had a very high urge to use the very best of their abilities for their work in KAU;

- had a very high urge to improve their work in KAU; - had a very high urge to improve their competence and capability;

- had a very high or at least high urge to keep themselves equipped with up-to-date information for their work in KAU.

- and agreed with the statement that it is not worth putting a great deal of effort for their work in KAU.

All this being so, it must also be carefully noted that 48 per cent of the respondents expressed that their urge to work in KAU was slightly lower now than when compared to the past and 44 per cent had a very low urge to overcome obstacles and hindrances in their work for KAU.

Thirty six per cent of the respondents expressed high enthusiasm and commitment while 32.67 per cent expressed very low enthusiasm and commitment. 29.33 per cent avoid voluntarily taking up assignments related to work in KAU while almost an equal number (30 per cent) were uncertain as to their willingness to voluntarily take up work assignments.

Thus, the results of the present investigation indicate that the Kerala Agricultural University is blessed with a teachers work force, more than half of which is well

motivated. However there seems an ebb in the level of work motivation when compared to the past and a passive or reactive stance to task performance which reflects the low masculinity and low individualism characteristics of the socio-cultural environment. A passive or reactive stance implies that ".... individuals are encouraged to change themselves to meet environmental pressures (or task demands) rather than to bring about changes in the environment (or the task) to meet their own needs (Kanungo and Jaeger, 1990).

4.1.2 Personal variables: Age, Experience and UGC/ICAR scheme induction

The distribution of respondents with respect to age, service and U.G.C./I.C.A.R. scheme induction are given in Tables 3, 4 and 5 respectively. The results of correlation analysis of personal variables with work motivation is given in Table 6.

Table 3. Distribution of respondents with respect to age

(n = 150)

Sl. No.	Description	Class interval	f	Percentage
1.	Young	33-41	67	44.67
2.	Middle aged	42-50	48	32.00
3.	Old	51-59	35	23.33
			100	100

Range 33-59 $\bar{x}$ = 44

Table 4. Distribution of respondents with respect to service

(n = 150)

Sl. No.	Description	Class interval	f	Percentage
1.	Low	9-16	57	38
2.	Medium	17-24	63	42
3.	High	25-32	30	20

Range 9-32 $\bar{x}$ = 19

Table 5. Distribution of respondents with respect to induction into the U.G.C./I.C.A.R. scales

Sl. No.	Description	f	Percentage
1.	Inducted into the U.G.C./I.C.A.R. scheme	65	43.33
2.	Not inducted into the U.G.C./I.C.A.R. scheme	85	56.67
		150	100

Table 6. Results of correlation analysis of personal variables with work motivation

(n =150)

Sl.No.	Variable	Correlation coefficient
1.	Age	0.132 NS
2.	Service	0.107 NS
3.	U.G.C./I.C.A.R. Induction	0.188 *

NS - Non significant

* - Significant at 0.05 per cent level

Table 7. Results of ANOVA comparing teachers inducted into UGC/ICAR scheme with those not inducted with respect to work motivation

Standard mean score		F ratio	Critical difference
Group I Inducted (n=65)	Group 2 Not inducted (n=85)		
5.598 (32.5)	5.030 (29.2)	4.98 **	0.251

Figures in parenthesis are the actual mean scores

It is seen from Table 6 that age and service did not have any significant association with work motivation, U.G.C./ I.C.A.R. Induction was found to be positively related at 0.05 per cent level. Analysis of variance was done to compare the U.G.C./I.C.A.R. scheme inducted category of teachers with the those who were not yet inducted. The results of the analysis are given in Table 7. The table reveals that the teachers who had been inducted into the U.G.C./I.C.A.R. scheme had evidently higher levels of Work motivation and the difference between the groups was significant at the 1 per cent level.

In discussing the results of the personal variables with respect to their association with work motivation it must be pointed out that the results seem to be consistent. As the U.G.C./I.C.A.R. scheme induction was positively and significantly related to work motivation, it is only reasonable that age and service had no significant association with work motivation because it was the middle aged group and the medium service category of teachers who had not been inducted into the U.G.C./I.C.A.R. scheme. The findings definitely implies that the concerted effort of the University with the valuable support of the Government to rectify the anomalies in the introduction of the U.G.C./I.C.A.R. package and bring maximum possible benefit to the teachers would go a

long way in enhancing the over all level of work motivation of the teachers in the Kerala Agricultural University.

4.1.3 Individual characteristics

4.1.3.1 Locus of control

It is evident from Table 8 that more than 80 per cent of the respondents had either a high or at least moderate internal locus of control. In other words, 80 per cent of the respondents felt that task accomplishment was under their own control. The mean score of 7.27 also falls in the 'High Internal' class interval and was 72.7 per cent of the maximum

Table 8. Distribution of respondents with respect to locus of control

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Higher internal	8-10	86	57.34
2.	Moderate internal	6-7	35	23.33
3.	Mixed	5	12	8.00
4.	Moderate external	3-4	15	10.00
5.	High external	1-2	2	1.33
	Total		150	100.00

Range: 2 to 10: $\bar{x}$ = 7.27

possible score confirming that most respondents had a high internal locus of control. Steers and Porter (1987) state that under such circumstances, individuals will engage in activities for intrinsic rewards. Table 9 reveals that Locus of Control had a highly significant and positive correlation with work motivation. These findings are in full agreement with the observations of Robbins (1993). "The overall evidence indicates that internals generally perform better on their

Table 9. Correlation of Individual Characteristics with Work Motivation

Sl.No.	Variable	Correlation coefficient (r)
1.	Locus of control	0.983**
2.	Achievement motive	0.998**
3.	Power motive	0.495**
4.	Affiliation motive	-0.998**
5.	Preferred organizational culture	-0.996**
6.	Equity-sensitivity	-0.996**
7.	Growth need	0.994**
8.	Relatedness need	0.563**
9.	Existence need	0.994**

** Significant at 0.01 per cent level

jobs, but that conclusion should be moderated to reflect differences in jobs. Internals search more actively for information before making a decision, are more motivated to achieve, and make a greater attempt to control their environment. Externals, however, are more compliant and willing to follow directions. Therefore, internals do well on sophisticated tasks - which include most managerial and professional jobs - that require complex information processing and learning. Additionally, internals are more suited to jobs that require initiative and independence of action. In contrast, externals should do well on jobs that are well structured and routine and where success depends heavily on complying with the direction of others."

4.1.3.2 Achievement motive, power motive and affiliation motive

From the findings recorded in Tables 10, 11 and 12, it could be seen that almost half of the respondents (48%) had high achievement motive, 43.33 per cent had high power motive and with respect to affiliation motive the distribution was almost equal in the medium and high categories. The mean score obtained in achievement motive (17.45) was 68.56 per cent of the maximum possible score. In power motive and affiliation motive the mean scores of 16.5, and 16.55 respectively were 66 per cent of the maximum possible score.

Table 10. Distribution of respondents with respect to achievement motive

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Low	Below 14.15	34	22.67
2.	Medium	14.15 to 18.10	44	29.33
3.	High	Above 18.10	72	48.00
	Total		150	100.00

Range : 9 to 23; $\bar{x}$ = 17.45

Table 11. Distribution of respondents with respect to power motive

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Low	Below 13.23	41	27.33
2.	Medium	13.23 to 17.36	44	29.33
3.	High	Above 17.36	65	43.33
	Total		150	100.00

Range : 9 to 25; $\bar{x}$ = 16.51

Table 12. Distribution of respondents with respect to affiliation motive

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Low	Below 13.25	36	24.00
2.	Medium	13.25 to 17.40	60	40.00
3.	High	Above 17.40	54	36.00
	Total		150	100.00

Range : 11 to 25; $\bar{x}$ = 16.55

Yet in the classification all the three mean scores fell under the 'medium' class. From Table 9 it is evident that Achievement motive and power motive had a significant and positive relationship with the work motivation of teachers in KAU, whereas affiliation motive was significantly but negatively correlated with work motivation.

These findings do not agree with the earlier observations of Jhansirani (1985) that achievement motivation was not related with job performance and productivity of agricultural scientists.

While it is often thought that only achievement motive contributes to work motivation it must be pointed out that

McClelland and his associates delineated "teaching" as one of the occupations pursued by those who have a high need for power because the profession allows them to exert significant influence over others (Robbins, 1993).

To what extent this reasoning holds good for KAU teachers is a question that needs further investigation.

How and why high affiliation motive resulted in poor work motivation is a thought provoking question. However, any answer to that question would be mere speculation. An even more thought provoking question arises as an implication of the present finding: Should KAU develop strategies to reduce the degree of affiliation among teachers to enhance work motivation. Or is that already a strategy in vogue.

Contrary to the findings of the present investigation, as Siddaramaiah and Rajeev (1993) observed: "It was encouraging to note that the scientists of the Kerala Agricultural University have rightly perceived the importance of the dimensions like problem solving, decision making, communication, team spirit, etc. However, the poor perception of the dimension under interpersonal relationship points out the need for strengthening the network of informal groups like cultural forums, recreation clubs and other associations in the university campus to strengthen the interpersonal relations among scientists."

The fact that achievement motive is associated towards work motivation has been the major tenet of McClelland's theory. McClelland (1965) propounded that it is possible to alter need states and to train people to increase need strengths. While a detailed examination of his propositions is beyond the scope of the present discussion, the major points are summarized below. First, it is believed that the motive acquisition process is facilitated by an individual's beliefs concerning the desirability to acquire the motive. That is, the more an individual believes he or she **should** and **can** acquire a high need for achievement, for example, the greater will be his or her willingness to work to develop the motive. Second, the acquisition of the achievement motive is facilitated to the extent that the individual thoroughly understands the nature and underlying processes relating to the motive, as well as how this motive relates to other actions and behaviours. Moreover, motive acquisition is also facilitated when individuals see the new motive as a way to enhance their self-image, when the feedback on progress toward acquiring the motive is provided, and when the learning environment for the new motive is a warm and non-threatening one.

To the extent that such conditions are present, one would expect the individual to be receptive to influences to change his or her motive strength. In this way, McClelland argues

it is possible to train individuals to have higher needs for achievement, to strive more for success, and ultimately, to improve their level of performance on the job.

4.1.3.3 Preferred organizational culture

From Table 13 it can be seen that 32.67 per cent of the respondents preferred a formal, mechanistic, rule-oriented and structured organizational culture. Twenty four per cent

Table 13. Distribution of respondents with respect to preferred organizational culture

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Formal, mechanistic, rule-oriented and structured culture	Above 0.7	34	22.67
2.	Mid-way	-9.66 to 0.7	65	43.33
3.	Informal, humanistic, flexible and innovative culture	Below -9.66	36	24.00
	Total		150	100.00

Range : -15 to 14; $\bar{x}$ = 3.4

preferred an informal, humanistic, flexible and innovative culture while 43.33 per cent preferred a culture that was mid-way between the two extremes. The mean score of 3.4 being 58.5 per cent of the maximum possible score also supports the distribution pattern. Table 9 shows that there was strong negative correlation between preferred organizational culture and work motivation i.e. those who preferred a formal, mechanistic, rule-oriented and structured culture had poor work motivation. The implications of these results are that to enhance the work motivation of teachers, KAU must shift to an informal, humanistic, flexible and innovative culture. But the management is faced with the problem that only 24 per cent of its teachers prefer such a culture.

Organizational culture by definition is a common perception held by the organization's members; a system of shared meaning. The findings of the present study reveal that the organizational culture in KAU at present is a liability rather than an asset. Organizational culture becomes a liability when the shared values are not in agreement with those that will further the organization's effectiveness. Robbins (1993) states that this is likely to occur when the organization's environment is dynamic. When the environment is undergoing rapid change, the organization's entrenched culture may no longer be appropriate. So consistency of behaviour is an asset to an organization when it faces a

stable environment. It may, however, burden the organization and make it difficult to respond to changes in the environment.

The above comments by Robbins (1993) take significance if we assume that at the time of the present study the Kerala Agricultural University was undergoing a shift from a formal, mechanistic, rule-oriented and structured organizational culture to an informal, humanistic, flexible and innovative culture, while its employees were in no mood for such a change. In that context the findings of the present study find meaning.

4.1.3.4 Equity-sensitivity

Table 14 reveals that majority (77.34%) of the respondents were Entitleds i.e. individuals who prefer outcome/input ratios exceed those of the comparison others. However it must be noted that the mean score obtained (25.67) fell in the Equity-sensitives category and this mean score was 51.34 per cent of the maximum possible score. From Table 9 it is seen that Equity-sensitivity was significantly but negatively correlated with work motivation i.e. to the extent a teacher tended to be an Entitled, to that extent his/her work motivation increased.

Table 14. Distribution of respondents with respect to equity-sensitivity

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Benevolents	Above 32	11	7.33
2.	Equity-sensitives	29-32	23	15.33
3.	Entitleds	Less than 29	116	77.34
	Total		150	100.00

Range : 20 to 37; $\bar{x}$ = 25.67

The findings provide some very pertinent questions. First, it is necessary at this point to ask: Why is it that the majority of KAU teachers are Entitleds? Has this consciousness of preferring their outcome/input ratios exceed those of the comparison others been brought about by the irregularities in the implementation of the UGC scales in comparison to the implementation of the same in other universities?

The second question that comes up is that if majority (77.34%) of the teachers in KAU are Entitleds, who prefer outcome/input ratios exceed those of the comparison others, how are these Entitleds being satisfied?

Since being an Entitled is positively correlated with work motivation, it must be assumed that the 77.34 per cent who are Entitleds are those who constituted the 77.33 per cent of the high and medium category of work motivated force. This leads to the third question: How are these Entitleds who prefer their outcome/input ratios exceed those of the comparison others, being motivated even while a sector of the teachers are being deprived of their dues because of the delay in implementation of the UGC scales.

Deci (1972) stated that in relation to theories of work motivation the effects of intrinsic motivation and extrinsic motivation are not additive. While extrinsic rewards such as money can certainly motivate behaviour, they appear to be doing so at the expense of intrinsic motivation; as a result, contingent pay systems do not appear to be compatible with participative management systems.

Vijayaragavan and Singh (1992) observed that though there is theoretical controversy as to the specific role of money in work motivation, a common theme persists, motivation and performance should be greater when pay is contingent upon performance. The pay satisfaction was positively and significantly associated with personal equity and external equity. (Personal equity being the degree to which the respondents perceive that pay is contingent on his/her level

of performance and external equity being the degree to which the respondents pay is equitable in comparison to the pay of comparable people in other related organisations.)

Jaques and Clement (1994) suggested that everyone will put their best effort into doing whatever they value .... And if there is one thing that most people value intensely, it is the opportunity to have work, at a level consistent with their full potential capability, that is of interest to them ... Such opportunities for valued work at full capability and interest is enormously stimulating .... people are spontaneously energetic with respect to things that interest them. The issue is not to encourage output by incentives but to provide conditions in which the work itself has its inherent value and allows the individual to release and direct his or her energy and imagination into the work.

In discussing the results of the findings of this study, the following observations by Robbins (1993) are also significant. "First, inequities created by overpayment do not seem to have a very significant impact on behaviour in most work situations. Apparently, people have a great deal more tolerance of overpayment inequities than of underpayment inequities, or are better able to rationalize them. Second, not all people are equity sensitive. For example, there is a small part of the working population who actually prefer that

their outcome-input ratio be less than the referent comparison. Predictions from equity theory are not likely to be very accurate with these "benevolent types." It is also important to note that while most research on equity theory has focused on pay, employees seem to look for equity in the distribution of other organizational rewards. For instance, it has been shown that the use of high-status job titles as well as large and lavishly furnished offices may function as outcomes for some employees in their equity equation.

4.1.3.5 Growth need, relatedness need and existence need

Summarizing the results reported in Tables 15, 16 and 17 based on the category that received the highest number of responses leads to the following observations.

Forty two per cent of the respondents felt that growth was an extremely important need. Thirty four per cent opined that relatedness was a moderately important need. 33.33 per cent of the respondents felt that existence was a very important need. This distribution is supported by the mean scores obtained in each case. The mean score with respect to growth need (16.46) was 82.3 per cent of the maximum possible score. The mean score with respect to relatedness need (13.65) was 68.25 per cent of the maximum possible score and the mean score with respect to existence need (14.46) was 72.3 per cent of the maximum possible score. From Table 9, it is

Table 15. Distribution of respondents with respect to growth need

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Not important	Below 11.92	5	3.33
2.	Slightly important	11.92 to 14.62	29	19.33
3.	Moderately important	14.63 to 16.19	30	20.00
4.	Very important	16.20 to 17.61	23	15.33
5.	Extremely important	Above 17.61	63	42.00
	Total		150	100.00

Range : 11 to 20; $\bar{x}$ = 16.46

Table 16. Distribution of respondents with respect to relatedness need

(n = 150)

Sl. No.	Description	Class interval	f	Percentage
1.	Not important	Below 10.16	24	16.00
2.	Slightly important	10.16 to 11.70	13	8.67
3.	Moderately important	11.71 to 14.51	51	34.00
4.	Very important	14.52 to 16.03	40	26.67
5.	Extremely important	Above 16.03	22	14.67
	Total		150	100.00

Range : 9 to 18; $\bar{x}$ = 13.65

Table 17. Distribution of respondents with respect to existence need

(n = 150)

Sl. No.	Description	Class interval	f	Percentage
1.	Not important	Below 10.41	14	9.33
2.	Slightly important	10.41 to 13.06	35	23.33
3.	Moderately important	13.07 to 14.59	15	10.00
4.	Very important	14.60 to 16.11	50	33.33
5.	Extremely important	Above 16.11	36	24.00
	Total		150	100.00

Range : 9 to 18; $\bar{x}$ = 14.46

evident that all these three needs had significant and positive correlation with work motivation. The findings of this study therefore validate the ERG Theory which implies that motivation would be high to the degree that the rewards an individual received for his or her high performance satisfied the dominant needs consistent with his or her individual goals. The finding that existence need had significant and positive relationship with work motivation goes against the thinking in Maslow's need hierarchy. However, this is consistent with the ERG theory. ERG theory does not assume that there exists a rigid hierarchy where a lower need must be substantially gratified before one can move

on. A person can, for instance, be working on growth eventhough existence or relatedness needs are unsatisfied; or all three need categories could be operating at the same time. ERG theory also contains a frustration-regression dimension. Maslow argued that an individual would stay at a certain need level until that need was satisfied. ERG theory counters by noting that when a higher-order need level is frustrated, the individual's desire to increase a lower-level need takes place. Inability to satisfy a need for social interaction, for instance, might increase the desire for more money or better working conditions. so frustration can lead to a regression to a lower need.

4.1.4 Job characteristics

Table 18 reveals that majority (70.67%) of the respondents perceived 'very much' autonomy in their job, and more than half (54.00%) perceived 'very much' variety in their job. However, the findings also reveal that there is ample scope of enhancing the identity of job, significance of job and feedback through job. This finding is reinforced by the data in Table 19 which shows that only 30 per cent of the respondents had a high motivating potential score for their job in KAU. The mean score value obtained (14) was also only 51.8 per cent of the maximum possible motivating potential

Table 18. Distribution of respondents with respect to perceived job characteristics

(n = 150)

Description	Variety in job	Identity of job	Significance of job	Autonomy in job	Feedback through job
Very little	29 (19.33)	44 (29.33)	54 (36)	20 (13.33)	31 (20.67)
Moderate	40 (26.67)	70 (46.67)	42 (28)	24 (16.00)	74 (49.33)
Very much	81 (54.00)	36 (24.00)	54 (36)	106 (70.67)	45 (30.00)

Figures in parenthesis are percentages to the total

Table 19. Distribution of response with respect to job's motivating potential score

(n = 150)

Sl.No.	Description	Class interval	f	Percentage
1.	Low	Below 5.94	44	29.33
2.	Medium	5.94 to 16.33	61	40.67
3.	High	Above 16.33	45	30.00
	Total		150	100.00

Range : 1 to 27; $\bar{x}$ = 14

Table 20. Correlation of job characteristics with work motivation

Sl.No.	Variable	Correlation coefficient (r)
1.	Identity of job	0.930**
2.	Variety of job	0.901**
3.	Significance of job	0.902**
4.	Autonomy of job	0.878**
5.	Feedback through job	0.899**

** Significant at 0.01 per cent level

score. Table 20 reveals that all the five job characteristics had positive and significant relationship with work motivation of teachers in KAU.

The findings of the present study evidently validate the Job Characteristics Model (JCM) propounded by Hackman and Oldham (1976). The core job dimensions specified in the Job Characteristics Model are tied directly to a set of action principles for redesigning jobs. While the manner in which these principles should be implemented may vary, the underlying direction in which the results of the present study should find application in the Kerala Agricultural University

are given by these principles elucidated by Hackman and Oldham (1976) as detailed below:

Job Dimensions	Change Principles
Variety	Combining Tasks
Identity	Forming Natural Work Units
Significance	Establishing Client Relationships
Autonomy	Vertical Loading
Feedback	Opening Feedback Channels

The implications of these principles are briefly discussed below.

These principles specify what type of changes in jobs are most likely to lead to improvements in each of the five core job dimensions, and thus to an increase in the motivating potential of the job as a whole. It must be noted however that job redesign is not merely increasing the work load. Jhansirani (1985) had found no significant association between perception of work load and productivity of agricultural scientists.

Principle No.1: Combining Tasks

Combining tasks (like forming natural work units) contributes in two ways to the experienced meaningfulness of

the work. First, task identity is increased. Secondly, as more tasks are combined into a single worker's job, the individual must use a greater variety of skills in performing the job, further increasing the meaningfulness of the work.

For example if a researcher had been involved with the development of a particular variety/practice the same researcher should be made responsible for the conduct and monitoring of adaptive trials, publication of extension material on the same and so on.

Principle No.2: Forming natural work units

A critical step in the design of any job is the decision about how the work is to be distributed among the people who do it. Numerous considerations affect that decision, such as level of teacher's qualifications, and experience, seniority, equity etc. Work designed on the basis of these factors usually is distributed among employees rationally and logically. The problem is that the logic used often does not include the needs of employees for personally meaningful work. By contrast, creating natural units of work increases employee "ownership" of the work and improves the chances that employees will view their work as meaningful and important rather than as irrelevant and boring.

This principle should find application in the Kerala Agricultural University by taking into consideration the aptitude and option of the teacher when assigning him/her to specific posts. Some teachers now in the teaching institutions may be better fit for administration of research stations or extension work and vice versa. Once a teacher has opted for a particular post and is posted accordingly he should be given the assurance that he would not be transferred so that he may specialize in his field of option and plan his work with the confidence that he would himself reap the benefits of all efforts he will put in. At present the threat of a transfer prevents teachers from long-term planning and institutional development. The person-job-fit concept if applied strenuously will definitely go a long way in enhancing the productive efficiency of the Kerala Agricultural University. It will also create in all employees the awareness that their best efforts are essential and that they will share in the rewards of the University's success.

Principle No.3: Establishing client relationships

Jobs designed according to traditional criteria often provide workers with little or no contact with the ultimate user of their product or service. As a consequence, workers may have difficulty generating high commitment and motivation to do the job well.

By establishing direct relationships between workers and their clients, jobs often can be improved in three ways. First, feedback increases because additional opportunities are created for the employees to receive direct praise or criticism of their work outputs. Second, skill variety may increase, because of the need to develop and exercise one's interpersonal skills in managing and maintaining the relationships with the client. Finally, autonomy will increase to the degree that individuals are given real personal responsibility for deciding how to manage their relationships with the people who receive the outputs of their work.

The recent trend of the university to market its products directly to the farmers rather than through developmental agencies is in line with this principle. The opening up of several sales and information counters in various parts of the state will definitely bring the farmers and the University closer. There is also immense scope for the conduct of directed tours at fixed rates to highlight the major centres and achievements of the Kerala Agricultural University. This would also serve as an exercise in Public Relations and would boost the perception of the Kerala Agricultural University as being second to none in the nation. But this would call for the establishment of a separate cell exclusively responsible for conducted tours.

Principle No.4: Vertical Loading

When a job is vertically loaded, responsibilities and controls that formerly were reserved for management are given to the employee as part of the job. Some ways this might be achieved are the following:

* Giving job incumbents responsibility for deciding on work methods and for advising or helping to train less experienced workers;

* Providing increased freedom in time management, including decisions about when to start and stop work (flextime), when to take breaks, and how to assign work priorities;

* Encouraging workers to do their own trouble-shooting and to manage work crises, rather than calling immediately for a supervisor;

* Providing workers with increased knowledge of the financial aspects of the jobs and the organization, and increased control over budgetary matters that affect their work.

Vertically loading a job inevitably increases autonomy.

A typical situation where the flextime principle finds application in the Kerala Agricultural University set up is

that of the Research Stations where it is often insisted that farm labourers and farm assistants report for duty from 8 am to 3 pm, scientific staff from 9 am to 4 pm and administrative staff from 10 am to 5 pm. Again with the lunch break spaced out differently for each category, the effective net time that the entire work force is working together boils down to hardly a few hours while each category rightly claims to have put in a 7 hour day of work! This system if legalistically followed will be counter productive and calls for need based modification.

The principle of vertical loading should also be applied in the Kerala Agricultural University by adopting a major organizational reform towards decentralization of its constituent institutions and research stations with emphasis on autonomy and entrepreneurship - like breaking a corporation into small companies and encouraging them to think independently and competitively. The Kerala Agricultural University has today become an unwieldy organization and any attempt at organizational renewal should ensure a simple form, few administrative layers and few people at the upper levels with a preference for doing something rather than sending a question through cycles and cycles of analysis and committee reports.

Principle No.5: Opening Feedback Channels

In virtually all jobs there are ways to open channels of feedback to individuals, to help them learn not only how well they are performing their jobs but also whether their performance is improving, deteriorating, or remaining at a constant level. Although there are various sources from which information about performance can come, it usually is advantageous for a worker to learn about his performance directly as he does the job - rather than from management on an occasional basis. The Kerala Agricultural University will not serve the purpose for which it exists until and unless it remains close to the farming community - learning the farmer's problems and preferences and catering to them.

The Training and Visit System when practiced as envisaged by Benor *et al.* (1984) was indeed the best system of opening feedback channels through its fortnightly meetings, monthly workshops and combined field visits. The present researcher is of opinion that with the establishment of 1001 Krishi Bavans, one in each panchayat, the stage is right for a return to implementing the Training and Visit System with renewed vigour. It should have been at this stage in the progress of events that the T&V System be implemented.

4.1.5 Organizational characteristics

Table 21 reveals that majority (70.67%) of the teachers perceived the work climate in KAU was good. Over half (57.33%) of them perceived morale as good. While these two aspects of the organizational characteristics were encouraging it must also be noted that 26 per cent of the respondents opined that the management style was poor and 22.67 per cent perceived poor communication patterns. Thus the scope for improvement in management style and communication patterns was

Table 21. Distribution of respondents with respect to perceived organizational characteristics

Description	Work climate	Communication patterns	Management style	Morale
Poor	20 (13.33)	34 (22.67)	39 (26)	26 (17.33)
Moderate	24 (16.00)	53 (35.33)	66 (44)	38 (25.33)
Good	106 (70.67)	63 (42.00)	45 (30)	86 (57.33)
Range	9 to 14	9 to 18	8 to 23	10 to 24
$\bar{x}$	12.43	14.46	13.85	18.45

Figures in parenthesis are percentages

Table 22. Correlation of organizational characteristics with work motivation

Sl.No.	Variable	Correlation coefficient (r)
1.	Work climate	0.917**
2.	Communication patterns	0.994**
3.	Management style	0.947**
4.	Morale	0.998**

** Significant at 0.01 per cent level

evident. Going by the mean values however it is observed that the mean score obtained for Communication Patterns (14.46) was 80.3 per cent of the maximum possible score. The mean values obtained for Work Climate (12.43), Management Style (13.85) and Morale (18.45) were 59.19, 57.7 and 76.87 per cent of the maximum possible scores. From Table 22, it is seen that all the variables representing organizational characteristics had significant and positive relationship with work motivation of teachers. This contradicts the findings of Jhansirani (1985) who observed no significant relationship between organizational climate and productivity of agricultural scientists.

4.1.5.1 Work climate

Majority of the respondents (70.67%) perceived the work climate as good (Table 21). The findings in Table 22 indicate that work climate has a positive and significant influence on work motivation. There must therefore be a conscious shift from the traditional work climate to an empowering work climate. More than two decades ago Tannenbaum and Davis (1969) suggested that such a shift takes place only when there is a fundamental shift in values as detailed below:

Traditional values to More Away from	New Values to More Towards
Distrust people	Trust people
Man is essentially bad	Man is essentially good
Individuals are unchanging	Individuals are ever-growing. Accept and utilize individual differences
Resist or deny individual differences	Accept and utilize individual differences
Negative or no evaluation of employees	Confirm individuals as human beings
Individuals can only do their job description	Individuals are whole and can do more
Status, is keeping power and personal prestige	Use status for organization-ally relevant purposes
Politics and games to accomplish tasks	Authentic honest behaviour

Avoid facing people with unpleasant data	Confronting people is okay
Process feedback is unproductive and risky	Process feedback is essential for effectiveness
No expression of feelings	Appropriately express and utilize feelings
Avoidance of risk taking	Willingness to take risk
Emphasize competition	Emphasize collaboration

4.1.5.2 Communication patterns

Forty two per cent of the respondents found the communication patterns as good (Table 21).

The findings of the present study in Table 22 indicating that communication patterns had positive and significant relationship with work motivation support the observations of Robbins (1993) who from the expectancy theory perspective stated that the degree of effort an individual exerts depends on his or her perception of the effect-performance, performance-reward, and reward-goal satisfaction linkages. If individuals are not given the data necessary to make the perceived probability of these linkages high, motivation will suffer. If rewards are not made clear, or the criteria for determining and measuring performance are ambiguous, or if individuals are not relatively certain that their effort will lead to satisfactory performance, then effort will be reduced.

So communication plays a significant role in determining the level of work motivation.

Reddy and Sinha (1992) in studying the communicative load of agricultural scientists observed that "many times they have to take up less specialised or general communication jobs like preparing reports, writing minutes of meetings, and also attending meetings which are of administrative rather than academic nature. This has resulted in higher communicative load to them (as perceived by them) leading to more role ambiguity and conflict, and less job satisfaction.

4.1.5.3 Management Style

Only 30 per cent of the respondents perceived the management styles adopted in the KAU as good (Table 21). From Table 22 it is evident that management style had a positive and significant relationship with work motivation.

In their essay on "Motivation through participative management" Mendonca and Kanungo (1994) emphatically stated that although the theories and related practices of participative management have been developed in western countries, these have the potential of universal application. Indeed, organizations in developing countries also need and can benefit from participative management. However, the modalities of its implementation should be modified and

adopted in order to overcome the cultural constraints, and to avail of the cultural facilitators.

Mendonca and Kanungo (1994) delineated the following strategies for managers in developing countries. First, the manager should function as mentor and coach in order to create a supportive and trusting climate. Second, the manager should facilitate the subordinates 'enactive attainment,' that is, provide employees with opportunities to experience task accomplishment. Third, the manager should set high performance expectations for their subordinates and, at the same time, express confidence in the ability of their subordinates to meet these expectations.

4.1.5.4 Morale

The findings in Table 21 that 57.33 per cent perceived the morale to be good contradicts with the observation of Misra and Kanungo (1994) that workers at all levels of organizations in India seem to manifest a personal sense of low morale and helplessness. From Table 22 it is evident that morale had a positive and significant relationship with work motivation.

The findings of the present study that morale had a positive and significant relationship with work motivation are in agreement with Leavitt (1978) who brought out the intricate

relationship of morale with the communication network and decision making patterns in organizational settings and how these ultimately affect work motivation. He pointed out that the type of communication network within which a group works is important, both to the effectiveness with which a group performs its task, and to the morale, attitudes and even creativity of its members when the work groups is making the decisions usually made by management, the outcome is a wiggly, uneven productivity curve, but with averages a good deal higher than under the previous engineered design and with lowered turnover and higher morale as free riders.

4.1.6 Relationship of individual, job and organizational indices with each other and with work motivation

The results in Table 23 and Figure 2 reveal the strong and positive inter correlations between the individual, job and organizational indices with work motivation. The extremely high correlation coefficients obtained in the present study were not surprising as the variables included in the study were not essentially extraneous but rather highly integrable variables and a high degree of overlap anticipated in the conceptual framework of the study itself. The variables included in the study had been short listed from the very extensive review of motivation research that had over the years precisely delineated those variables that tend to

FIG. 2 RELATIONSHIP OF INDIVIDUAL, JOB AND ORGANIZATIONAL INDICES WITH EACH OTHER AND WITH WORK MOTIVATION

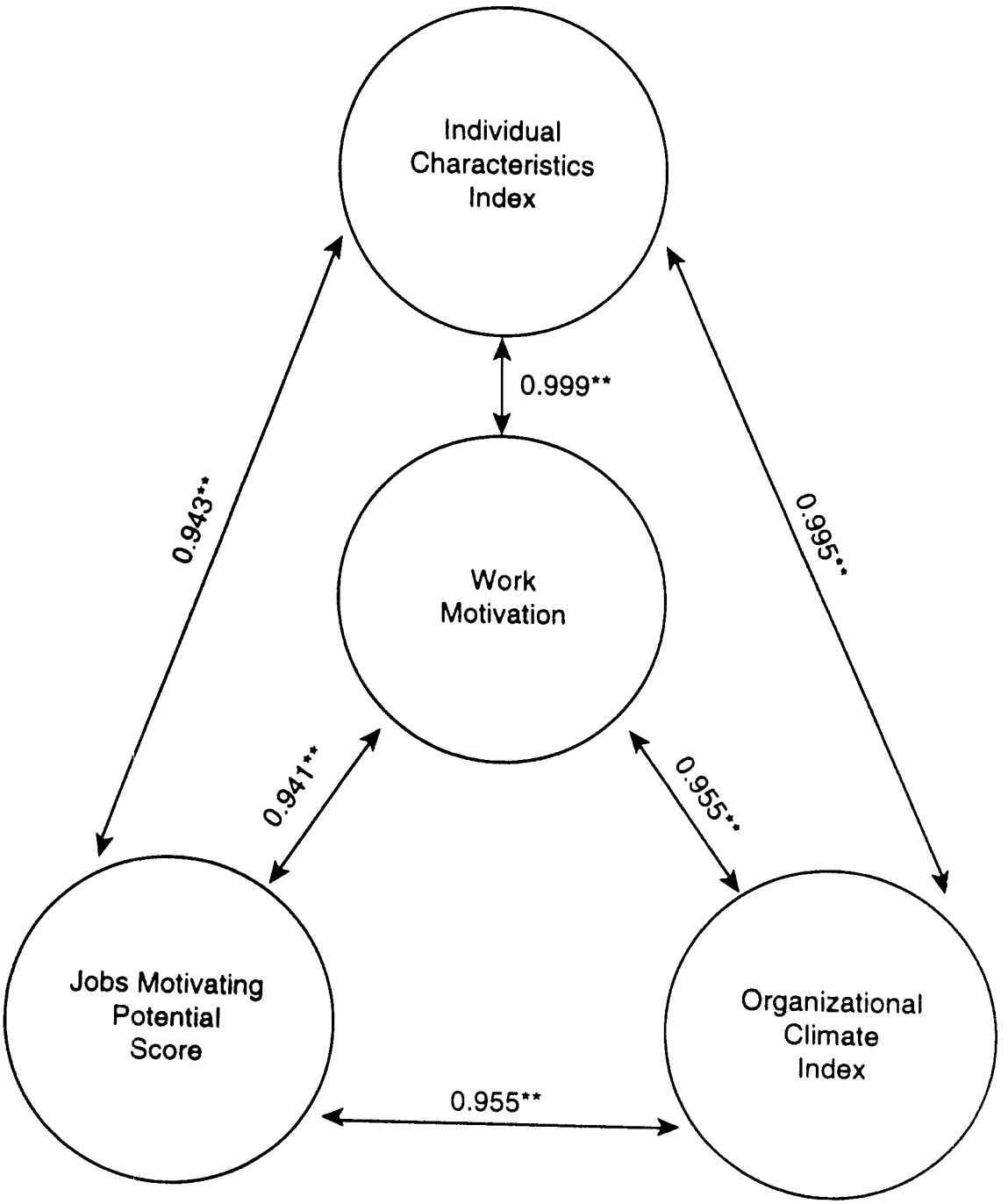


Table 23. Relationship of individual, job and organizational indices with each other and with work motivation

Sl.No.	Relationship between	r
1.	Individual Characteristics Index and Jobs motivating Potential Score	0.943**
2.	Jobs Motivating Potential Score and Organizational Climate Index	0.955**
3.	Organizational Climate Index and Individual Characteristics Index	0.995**
4.	Individual Characteristics Index and Work Motivation	0.999**
5.	Jobs Motivating Potential Score and Work Motivation	0.941**
6.	Organizational Climate Index and Work Motivation	0.995**

** Significant at 0.01 per cent level

explain work motivation. Moreover the conceptual framework of the present study uniquely brought together a number of independent theories each of which claimed to explain work motivation on its own. In combination these theories were reasonably expected to explain more of work motivation than each could on its own. The strong correlations justified an

important assumption of the study: that when variables involved in work motivation are studied, a strong integrative approach is a must. Relationships among variables must be given prime importance rather than focusing on any one variable in isolation. Only then, a greater understanding of the complexities of the motivational process will be achieved.

The present study provides strong evidence that job characteristics have a major role to play in enhancing work motivation. This is in line with the findings of Hackman and Oldham (1976) and Steers and Porter (1987). However, since the job characteristics had a significant and positive relationship with individual characteristics (Table 2) one must assume as stressed by Fein (1973) that not everyone wants to the same degree to have an enriched job, nor does everyone necessarily perform better when assigned to one. Recognition must be given, therefore, to the background characteristics of individual employees when considering job design changes. Similarly, the results also reveal that the Organizational Climate Index had a strong and positive relationship with the Job's Motivating Potential Score and Individual Characteristics index as well as with work motivation. Therefore organizational characteristics have a major moderating effect on the other factors related to work motivation and on work motivation itself.

In concluding this section of the results and discussion it must be stated that the null hypothesis that there will be no significant relationship between individual, job and organizational characteristics with work motivation was rejected in toto, since all the independent variables had significant relationship with the dependent variable, either positively or negatively.

4.2 Identification of the determinants of work motivation among teachers in KAU

While correlation analysis gives the relationship (if any) between the independent variables and the dependent variable, it does not give any indication of the contribution or determinant value of the independent variables on the dependent variable. For this purpose, multiple regression analysis is usually the statistical tool employed. However multiple regression assumes that the independent variables are uncorrelated with each other. Strictly speaking, this condition means that the zero-order correlation among all pairs of independents should be zero; but practically, one acts as if the assumption has been met if the intercorrelations among the independents are low. In the present study, the intercorrelations among the independents were very high. In such a case the regression coefficients (especially partial and standardized slopes) and the multipleregression coefficient (R^2) are not trust worthy and

multiple regression technique not useful. However the technique was employed in the present investigation using Bunch-Map analysis as described in the Chapter on Methodology.

The dependent variable, work motivation was first treated as a free function of all the eighteen independent variables. This, however as anticipated led to the problem of multicollinearity due to the mutually interdependent nature of the independent variables. Hence individual regressions were worked out for each independent variable on the dependent variable and statistically nonsignificant variables were dropped. The dropped variables were: locus of control, power motive, growth need, relatedness need, preferred organizational culture, variety of job, significance of job, autonomy of job and work climate.

The remaining nine independent variables were regressed randomly adding one variable at a time and the relative magnitudes in the values of the coefficients and t values were observed progressively. When the final variable was introduced, the system converged into a singular matrix. The estimated regression equations at each stage are given in Table 24. It is evident from the Table that among the independent variables regressed, three variables viz. affiliation motive, existence need and identity of jobretained their influence under all magnitudes, thereby short listing

Table 24. Estimated Regression Equations at each stage of Bunch-Map Analysis

Stage	Estimated Regression Equation
ONE	Achievement Motive (AM) on Work Motivation:
	$Y = -1.06 + 1.97\ AM$
	SE : (0.014)
	t : 134.87
	R^2 : 0.992
	F : 18190
TWO	Affiliation Motive (AF) introduced
	$Y = 60.42 + 0.174\ AM - 1.81\ Af$
	SE : (0.168) (0.169)
	t : 1.03 **-10.73**
	R^2 : 0.995
	F : 16174

THREE Equity - Sensitivity (ES) introduced:

$$Y = 60.41 + 0.174\ AM - 1.82\ Af + 0.0036\ ES$$

SE :	(0.168)	(0.179)	(0.0468)
t :	1.03	**-10.165**	0.079
R^2 :	0.995		
F :	10710		

FOUR Existence Need (EN) introduced:

$$Y = 46.32 + 0.202\ AM - 1.46\ Af + 0.00959\ ES + 0.517\ EN$$

SE :	(0.156)	(0.179)	(0.0432)	(0.100)
t :	1.3	**-8.13**	0.22	**5.13**
R^2 :	0.996			
F :	9437			

FIVE Identity of Job (IJ) introduced:

$$Y = 44.55 + 0.216\ AM - 1.37\ Af - 0.00556\ ES + 0.509\ EN + 0.293\ IJ$$

SE :	(0.153)	(0.178)	(0.0428)	(0.988)	(0.112)
t :	1.41	**-7.71**	-0.13	**5.15**	2.61

R^2 : 0.996

F : 7851

SIX Feedback through Job (FJ) introduced:

$$Y = 42.91 + 0.242\ AM - 1.32\ Af - 0.0037\ ES + 0.482\ EN + 0.342\ IJ + 0.249\ FJ$$

SE :	(0.151)	(0.177)	(0.042)	(0.0979)	(0.112)	(0.105)
t :	1.60	**-7.45**	-0.08	**4.92**	**3.03**	2.36

R^2 : 0.996

F : 6745

SEVEN Communication Patterns (CP) introduced:

$Y = 42.67 + 0.237\ AM - 1.31\ Af - 0.0089\ ES + 0.438\ EN + 0.325\ IJ + 0.235\ FJ + 0.0691\ CP$

SE :	(0.15)	(0.176)	(0.042)	(0.101)	(0.112)	(0.105)	(0.0445)
t :	1.58	-7.43	-0.21	4.31	2.87	2.23	1.55

R^2 : 0.997

F : 5845.69

EIGHT Management Style (MS) introduced:

$Y = 42.45 + 0.220\ AM - 1.27\ Af - 0.269\ ES + 0.435\ EN + 0.357\ IJ + 0.194\ FJ + 0.0581\ CP + 0.041\ MS$

SE :	(0.15)	(1.18)	(0.043)	(0.101)	(0.115)	(0.108)	(0.0451)	(0.0296)
t :	1.46	-7.165	-0.614	4.306	3.11	1.78	1.29	1.38

R^2 : 0.997

F : 5148.21

the determinants of work motivation among teachers of KAU to these three. In the last estimated equation it may also be noted that only these three variables were statistically significant because the t value was more than 1.96. Among these three independent variables. Affiliation motive had the maximum influence followed by existence need and identity of job. Affiliation motive had a negative influence on work motivation whereas the influence of existence need and identity of work was positive.

In discussing these findings, the observations of the following authors are pertinent. DuBrin (1988) states that a person with a strong affiliation motive finds compatible working relationships more important than high-level accomplishment. Robbins (1993) observes that affiliation motive has received the least attention from researchers. He also observed that the best managers are low in their need for affiliation. Misra and Kanungo (1994) observed that the unique influences of socialization in India manifests itself in an organizational ethic of personalized relationships. The organizational ethic of Indian workers is shaped by a strong sense of insecurity and dependence on others. Their work relationships are personalized rather than contractual. They work for their superiors, friends and relatives, rather than for accomplishing the task of organizational goals under contractual obligations. Personal loyalty takes precedence

over organizational efficiency. Within the organization, seeking and maintaining personal status becomes the primary objective for which organizational interests may be sacrificed. All this implies that high levels of affiliation motive can be detrimental to work motivation *per se* as the findings of the present investigation indicate.

The finding that the second important determinant of work motivation among teachers in the Kerala Agricultural University was existence need supports the ERG theory as against Maslows need hierarchy. The ERG theory contains a frustration - regression dimension whereby when a higher - order need level is frustrated, the individual's desire to increase a lower-level need takes place. In the context of the UGC/ICAR scheme implementation the crises related to its anomalies had drawn the attention of the teachers towards a greater awareness of their existence needs. But the paradox here is that when a teacher is more conscious of his/her existence need he/she becomes a more motivated worker. One explanation for this may be that the sense of insecurity inculcated leads one to commit himself to his work, for its own sake or merely as a psychological escape mechanism. Another explanation may be that in such a situation the teacher increasingly realises the need to improve his professional competence so that he may stake his claim for

greener pastures when opportunity provides and thereby satisfy his existence need.

The third important determinant of work motivation among teachers of the Kerala Agricultural University was found to be identity of job - the degree to which the job requires completion of a whole and identifiable piece of work. This may ultimately be attributed to man's basic self-centered nature whereby he is concerned primarily for himself and the recognition or threat that will come his way. Thus when a job is specifically delieniated and delegated wholly to a person he not only derives a sense of ownership and meaning but also derives a personal sense of gratification of a job well done and the recognition obtained thereby can also be personalised. At the same time a whole and identifiable piece of work clearly delegated to a person makes him aware of his accountability and he knows he cannot pass the buck. All this can reasonably be expected to enhance work motivation.

In concluding this section on identification of the determinants of work motivation among teachers of the Kerala Agricultural University, it must once again be stated that the findings and interpretation of this section are limited in that the basic requirement of low intercorrelations among independent variables has not been satisfied and hence to that extent the results of multiple regression are not trustworthy.

However the use of Bunch-Map Analysis has brought to light the important determinants of work motivation, despite the problem of multicolinearity and thus the desired objective has been accomplished.

The null hypothesis that there will be no significant independent variable that determines the work motivation of teachers was partially rejected since, affiliation motive, existence need and identity of job were found to be significant determinants of work motivation among teachers in the Kerala Agricultural University.

4.3 Comparison of Assistant Professors, Associate Professors and Professors with respect to work motivation, individual, job and organizational characteristics

The third specific objective of the present study was to compare Assistant Professors, Associate Professors and Professors with respect to work motivation, individual, job and organizational characteristics. This was done using Analysis of Variance (ANOVA). The results are given in Table 25, but for quick and easy perception the results are summarized as follows.

1. **Associate Professors had (significant at 1% level)**

Lower	Higher
Work motivation	Affiliation motive
Locus of control	Equity sensitivity (benevolent)
Achievement motive	Preference for formal
Growth need	mechanistic, rule-oriented
Relatedness need	and structured organizational
Existence need	culture
Identity of job	
Variety of job*	
Significance of job*	
Autonomy of job	
M.P.S.*	
Communication patterns	
Management style	
Morale	
O.C.I.	

than Assistant Professors and Professors

2. In all the above variables except in those marked by an astrick, there was no significant difference between Assistant Professors and Professors.

3. With respect to variety of job, significance of job and jobs motivating potential score Assistant Professors, Associate Professors and Professors differed from each other significantly, with Assistant Professors having the highest and Associate Professors having the least scores.

4. Assistant Professors perceived a significantly better work climate and obtained significantly greater feedback through their job than Professors and Associate Professors.

In discussing these findings a number of questions arise. First, why is it that Associate Professors had significantly lower work motivation than Assistant Professors and Professors? This question is reinforced when comparing results reported in Tables 9, 20 and 22 with results reported in Table 25. Associate Professors were significantly lower in variables that had positive and significant relationship with work motivation and were significantly higher in variables that had negative and significant relationship with work motivation. The only reason that can be attributed for this was the discrepancy in the implementation of the UGC scales of pay. At the time of conduct of the present study most of the Assistant Professors and Professors had received the benefit of the UGC scales while most of the Associate Professors particularly the non cadre Associate Professors had not been

Table 25. Results of ANOVA: Assistant Professor, Associate Professor, Professor comparison

Variables	Standard mean score			F ratio	Critical differences		
	Group 1 Assistant Professor (n=35)	Group 2 Associate Professor (n=52)	Group 3 Professor (n=63)		1,2	1,3	2,3
1	2	3	4	5	6	7	8
Work motivation	6.120 (36.7)	5.422 (28.8)	5.909 (34.3)	20.313**	0.285	0.320	0.334
Locus of control	3.002 (8.1)	2.639 (6.1)	2.905 (7.5)	17.966**	0.363	0.397	0.266
Achievement motive	4.473 (19.1)	3.997 (15.2)	4.318 (17.8)	20.183**	0.195	0.218	0.228
Power motive	4.316 (17.9)	3.903 (14.6)	4.229 (16.9)	11.043**	0.232	0.261	0.272
Affiliation motive	3.968 (14.9)	4.430 (18.8)	4.132 (16.2)	20.295**	0.188	0.210	0.220
Equity sensitivity	4.979 (23.9)	5.376 (28.1)	5.122 (16.2)	19.952**	0.163	0.183	0.191
Growth need	4.296 (17.5)	3.984 (15.0)	4.211 (16.8)	19.694**	0.130	0.146	0.153
Relatedness need	3.899 (14.3)	3.663 (12.6)	3.878 (14.1)	8.552**	0.156	0.175	0.183
Existence need	4.055 (15.5)	3.722 (13.0)	3.965 (14.8)	19.671**	0.139	0.156	0.163

Contd.

Table 25 (Contd.)

1	2	3	4	5	6	7	8
Prefered organizational culture	3.704 (13.3)	4.634 (21.2)	4.030 (15.7)	20.533**	0.930	0.326	0.604
Identity of job	1.853 (2.5)	1.702 (1.9)	1.916 (2.7)	12.364**	0.102	0.115	0.120
Variety of job	1.814 (2.3)	1.564 (1.5)	1.710 (1.9)	25.605**	0.090	0.101	0.105
Significance of job	1.853 (2.5)	1.549 (1.5)	1.710 (1.9)	28.874**	0.102	0.115	0.120
Autonomy of job	1.962 (2.9)	1.754 (2.1)	1.916 (2.7)	18.694**	0.090	0.101	0.106
Feedback through job	1.864 (2.5)	1.625 (1.7)	1.710 (1.9)	27.788**	0.085	0.095	0.100
Jobs motivating potential score	4.364 (19.5)	2.730 (7.8)	3.643 (13.3)	28.221**	0.560	0.628	0.656
Work climate	3.727 (12.9)	3.570 (11.8)	3.670 (12.5)	10.749**	0.088	0.980	0.103
Communication patterns	4.055 (15.5)	3.722 (13.0)	3.965 (14.8)	19.671**	0.139	0.156	0.163
Management style	4.073 ((15.9)	3.502 (11.5)	3.817 (13.7)	19.498**	0.235	0.264	0.276
Morale	4.584 (20.1)	4.122 (16.2)	4.434 (18.8)	20.201**	0.189	0.212	0.221
Organizational climate index	8.063 (64.4)	7.272 (52.4)	7.774 (59.9)	19.500**	0.327	0.367	0.383

Numbers given in parenthesis are the actual mean scores

given the benefit as yet. This reasoning is supported by the finding that there was no significant difference between Assistant Professors and Professors on all except three variables viz., variety of job, significance of job and Motivating potential score.

The second question that needs to be addressed is: why is it that Assistant Professors, Associate Professors and Professors differed from each other significantly on the variables such as job variety, significance of job and jobs motivating potential score with Assistant Professors having the highest and Associate Professors having the least score? Reasons for the above can be made merely by speculation. Variety in job by definition is the degree to which the job requires a variety of different activities so that the employee can use a number of different skills and talent. It may be assumed that Assistant Professors being the lowest cadre in the hierarchy of teachers are assigned with various kinds of activities from the superiors which contributes for the highest perceived variety in job. Significance of job is the degree to which the job has a substantial impact on the lives or work of other people. The reason for Associate Professors having the least score for significance of job may be attributed to the fact that due to the non-implementation of UGC scales for non-cadre Associate Professors that category of the teachers had become demoralized (as evidenced by their

significantly lower work motivation score). They may have, over time, developed feelings of insignificance, powerlessness and belief in the futility of their actions. These beliefs may have led to attitudes of fatalism and indifference to work and to the organization.

Since the Job's Motivating Potential Score is a function of variety of job and significance of job among other variables, the significantly lower Job's Motivating Potential Score for Associate Professors may be attributed to the significantly lower scores the Associate Professors gave for variety of job and significance of job.

The third question that needs to be addressed is: why Assistant Professors perceived a significantly better work climate and obtained significantly greater feedback through their job than Professors and Associate Professors.

The reason for those at the lower end of the hierarchy (Assistant Professors) to perceive a significantly better work climate than those higher up in the hierarchy (Associate Professors and Professors) may be due to the authoritarian practices experienced by them from their superiors. Misra and Kanungo (1994) have observed that in developing countries those who are in authority positions tend to overcontrol their subordinates through the use of formal authority and rule-minded supervision. Unconditional obedience by

surrendering to authority is considered a virtue. Personal initiative, originality, and independence in thinking and decision making meets with disapproval. As a result, independent critical thinking and reasoning diminish. Positional or status authority rather than informed reason forms the basis of blind conformity and compliance. Such tendencies will definitely not be perceived as good work climate".

The reason for Assistant Professors to obtain significantly greater feedback through their job than Professors and Associate Professors may be attributed for in different ways. Assistant Professors involved in teaching are likely to be more approachable to their clientile group - the students. Likewise, Assistant Professors involved in research may be more closely related with actual layout and observation of field research. Assistant Professors involved in extension activities are likely to be more approachable by the farmers or at least may receive feedback through informal communication which would not be as forthcoming to the senior staff.

In the light of all the results discussed under this section the null hypothesis that there will be no significant difference between Assistant Professors, Associate Professors and Professors of KAU with respect to work motivation,

individual, job and organizational characteristics was rejected.

4.4 Comparison of teachers in teaching, research and extension institutions with respect to work motivation, individual, job and organizational characteristics

The fourth specific objective of the present study was to compare teachers in teaching, research and extension institutions with respect to work motivation, individual, job and organizational characteristics. This was done using Analysis of Variance (ANOVA). The results are given in Table 26 but for quick and easy perception, the results are summarized below.

1. **Teachers in teaching institutions had (significant at 1% level)**

Higher	Lower
Work motivation	Affiliation motive
Achievement motive	Equity sensitivity
Growth need	Preference for formal mechanistic, rule-oriented and structured organisational culture
Existence need	
Identity of job	
Variety of job	
Feedback through job	

M.P.S.

Work climate

Communication patterns

Management style

Morale

O.C.I.

than teachers in Research Stations

2. With respect to all variables listed under item 1 above

   A. the difference between teachers in teaching institutions and teachers in extension centers, and

   B. the difference between teachers in research stations and teachers in extension centers

   was not significant.

3. There was no difference among teachers in teaching, research and extension institutions with respect to locus of control, significance of job and autonomy of job.

4. There was significant difference between teachers in teaching, research and extension institutions with respect to power motive and relatedness need with those in extension having the highest and those in research having the least.

Results reported in Table 26 were compared with results reported in Tables 9, 20 and 22. It was found that when compared to teachers in research institutions, teachers in teaching institutions were significantly higher in variables that had positive and significant relationship with work motivation and were significantly lower in variables that had negative and significant relationship with work motivation.

In other words, when compared to teachers in research institutions, teachers in teaching institutions were significantly geared towards greater work motivation in terms of individual, job and organizational characteristics.

It seemed paradoxical that power motive and relatedness motive be high simultaneously. How and why these two motives were significantly higher in teachers in extension institutions is even more intriguing.

However since the sample of respondents in extension institutions was only seven, the validity of these findings are questionable. Hence no conclusions or implications are drawn from these results.

In the light of the results discussed under this section the null hypothesis that there will be no significant difference between teachers of KAU in teaching, research and

Table 26. Results of ANOVA: Teaching, research and extension, institution comparison

Variables	Standard mean score			F ratio	Critical differences		
	Group 1 Teaching (n=91)	Group 2 Research (n=52)	Group 3 Extension (n=7)		1,2	1,3	2,3
1	2	3	4	5	6	7	8
Work motivation	5.970 (35.0)	5.600 (30.7)	5.695 (32.9)	5.656**	0.288	0.651	0.668
Locus of control	2.916 (7.6)	2.761 (6.7)	2.730 (6.7)	3.554**	0.159	0.362	0.371
Achievement motive	4.369 (18.3)	4.117 (16.1)	4.162 (17.0)	5.670**	0.196	0.444	0.455
Power motive	4.202 (17)	3.972 (14)	4.849 (22)	11.516**	0.215	0.486	0.499
Affiliation motive	4.070 (15.7)	4.334 (17.9)	4.171 (17.0)	6.516**	0.188	0.426	0.437
Equity sensitivity	5.073 (24.9)	5.276 (26.9)	5.217 (26.7)	5.182**	0.164	0.372	0.382
Growth need	4.233 (17)	4.061 (15.6)	4.108 (16.1)	5.878**	0.130	0.295	0.303
Relatedness need	3.865 (14.1)	3.659 (12.4)	4.258 (17.1)	14.764**	0.139	0.315	0.323
Existence need	3.988 (15.0)	3.806 (13.6)	3.852 (14.1)	5.835**	0.139	0.315	3.323
Prefered organizational culture	3.907 (15.0)	4.463 (19.3)	3.952 (17.1)	7.372**	3.375	0.850	0.871

Contd.

Table 26 (Contd.)

1	2	3	4	5	6	7	8
Identity of job	(2.6)	(2.0)	(2.1)	11.198**	0.095	0.215	0.220
Variety of job	1.749 (2.1)	1.616 (1.6)	1.749 (2.1)	7.063**	0.093	0.209	0.215
Significance of job	1.741 (2.1)	1.662 (1.8)	1.749 (2.1)	1.734NS	0.111	0.252	0.258
Autonomy of job	1.911 (2.7)	1.841 (2.4)	1.749 (2.1)	3.436*	0.090	0.207	0.213
Feedback through job	1.811 (2.3)	1.634 (1.7)	1.749 (2.1)	14.319**	0.085	0.192	0.197
Jobs motivating potential score	3.975 (16.5)	3.025 (9.3)	3.630 (15.9)	8.979**	0.576	1.300	1.338
Work climate	3.695 (12.7)	3.609 (12.1)	3.568 (11.9)	4.249*	0.085	0.192	0.197
Communication patterns	3.988 (15.0)	3.806 (13.6)	3.852 (14.1)	5.835**	0.139	0.315	0.323
Management style	3.953 (14.9)	3.544 (11.7)	4.040 (16.1)	11.344**	0.228	0.517	0.531
Morale	4.483 (19.3)	4.238 (17.1)	4.285)18.0)	5.691**	0.190	0.430	0.442
Organizational climate index	7.896 (61.9)	7.419 (54.4)	7.701 (60.1)	7.094**	0.325	0.737	0.756

Numbers given in parenthesis are the actual mean scores

extension institutions with respect to work motivation, individual, job and organizational characteristics was rejected except with regard to locus of control, significance of job and autonomy of job.

Summary and Conclusion

Chapter 5

SUMMARY AND CONCLUSIONS

The success of an organization depends primarily on how well its human resources are managed. Financial, technological and other material resources are undoubtedly critical to the organization's success, but these resources are generated by the industrious and creative efforts of its employees, and it is their ingenuity that ensures that these resources are effectively deployed. It is no wonder then that the importance of the human resources function is increasingly being recognized.

The recognition of the strategic and operational importance of human resource management by management scholars and practitioners in the West has done much to advance the state of the art in the human resources function. Developments in human resource management techniques and practices to promote work motivation particularly through performance management work design, reward systems, employee supervision, and organization development and change strategies, have enabled organizations to create conditions which foster, promote, support, and reinforce employee effectiveness.

Organizations in developing countries - traditionally those in the private sector and, more recently, the public sector organizations - have invested considerable resources, time, and effort to adopt the state-of-the-art human resources management practices developed in the West. Some argue that adopting management practices which have proven to be effective is a better alternative for an organization than to needlessly invest its limited and scarce resources in research efforts, to develop new management practices which do not amount to much more than 'reinventing the wheel'. The effectiveness of this approach, however noble and laudable its objectives is open to serious questions.

The underlying intention of the present study was to investigate the relevance of work motivation theories and practices with reference to the Indian socio-cultural context and very specifically to the Kerala Agricultural University.

The specific objectives of the present study were:

1. To study the distribution of teachers of KAU with respect to work motivation, individual, job and organizational characteristics.

2. To study the relationships between individual job and organizational characteristics with work motivation.

3. To identify the determinants of work motivation among teachers of KAU.

4. To compare Assistant Professors, Associate Professors and Professors of KAU with respect to work motivation, individual, job and organizational characteristics.

5. To compare teachers of KAU in teaching, research and extension institutions with respect to work motivation, individual, job and organizational characteristics.

6. To suggest ways and means of enhancing the work motivation of teachers of KAU on the basis of the findings of this study.

Ex post facto research design was used for the present study. The population of teachers of the Kerala Agricultural University was divided into 13 strata consisting of the seven educational institutions, the five NARP zones and one strata consisting of those engaged primarily in extension work. The total sample size was fixed as 150 and the sample size for each strata was allocated in proportion to the strata size. Selection within each stratum was done by simple random sampling such that the number of Professors, Associate Professors and Assistant Professors selected was proportionate to their number in the total population. Thus the selected

sample consisted of 35 Professors, 52 Associate Professors and 63 Assistant Professors. Of these 150 teachers, 91 worked in teaching institutions, 52 in research stations and seven in extension centres.

The very objective of the study necessitated the selection of the dependent variable: work motivation. Work motivation was operationally defined as the expressed inner urge that energises, directs and sustains one's work in the Kerala Agricultural University. A scale was developed, tested for reliability and validity using accepted scientific procedures and was used for quantifying work motivation.

To identify and select the independent variables to be included for the study, a list of variables seemingly related to work motivation was prepared based on the review of literature. This list was rated by judges and based on their responses, eighteen independent variables were selected for inclusion in the study. These included locus of control, achievement motive, power motive, affiliation motive, preferred organizational culture, equity sensitivity, growth need, relatedness need, existence need, identity of job, variety of job, significance of job, autonomy of job, feedback through job, work climate, communication patterns, management style and morale.

These independent variables were quantified using internationally accepted scales adapted if need be for the study.

A pretested, structured and standardised mailed questionnaire was used for data collection during November 1994 to March 1995. Analysis of data was carried out using appropriate statistical procedures like frequencies, percentages, correlation coefficient, ANOVA and bunch-map analysis.

The salient findings of the study are summarised below:

1. Almost half of the respondents (48%) had a high level of work motivation. The remaining 52% were either medium or low in their work motivation.

2. While more than half (54 to 56%) of the respondents expressed a very high urge (motivation) in five out of ten dimensions of work motivation 48 per cent of the respondents expressed that their urge to work in KAU was slightly lower now than when compared to the past, 44 per cent had a very low urge to overcome obstacles and hindrances in their work for KAU, and 54 per cent agreed with the statement that it was not worth putting a great deal of effort for their work in KAU.

3. Among the personal variables studied, age and experience had no significant association with work motivation whereas induction into the UGC/ICAR scheme was positively and significantly associated with work motivation.

4. Teachers inducted into the UGC/ICAR scheme expressed significantly higher levels of work motivation than teachers who had not been inducted into the UGC/ICAR package.

5. Strong and positive correlations were observed between individual, job and organizational indices.

6. Strong and positive correlations were observed between the individual, job and organizational indices and work motivation.

7. Among the individual characteristics studied, locus of control, achievement motive, power motive, growth need, relatedness need and existence need were positively and significantly correlated with work motivation of the respondents.

8. Affiliation motive, preferred organizational culture and equity sensitivity were negatively and significantly correlated with work motivation of the respondents.

9. More than 80 per cent of the respondents had either a high or at least moderate internal locus of control i.e., they felt that task accomplishment was under their own control.

10. Almost half of the respondents (48%) had high achievement motive, 43.33 per cent had high power motive and with respect to affiliation motive the distribution was almost equal in the medium and high categories.

11. 32.67 per cent of the respondents preferred a formal, mechanistic, rule-oriented and structured organizational culture. Twenty four per cent preferred an informal, humanistic, flexible and innovative culture while 43.33 per cent preferred a culture that was mid-way between the two extremes.

12. Majority (77.34%) of the respondents were Entitleds i.e., individuals who prefer outcome/input ratios exceed those of the comparison others.

13. Forty two per cent of the respondents felt that growth was an extremely important need. Thirty four per cent opined that relatedness was a moderately important need. 33.33 per cent of the respondents felt that existence was a very important need.

14. Majority (70.67%) of the respondents perceived very much autonomy in their job.

15. More than half (54%) of the respondents perceived very much variety in their job.

16. Half (49.33%) of the respondents perceived the feedback through job to be only moderate.

17. Almost half (46.67%) of the respondents perceived the identity of job to be only moderate.

18. The distribution of respondents with respect to significance of job was almost uniform with 36 per cent expressing very little significance, 28 per cent expressing moderate significance and 36 per cent expressing very much significance of job.

19. Only 30 per cent of the respondents had a high motivating potential score for their job.

20. Majority of the respondents (70.67%) perceived the work climate as good.

21. Forty two per cent of the respondents found the communication patterns good.

22. Only 30 per cent of the respondents found the management styles adopted as good.

23. More than half (57.33%) of the respondents perceived the morale to be good.

24. Among the independent variables, affiliation motive, existence need and identity of job were found to be the most important determinants of work motivation among teachers of the KAU.

25. Associate Professors had significantly lower levels of work motivation when compared to Assistant Professors and Professors.

26. Associate Professors had significantly higher affiliation motive, equity sensitivity and preference for formal, mechanistic, rule-oriented and structured organizational culture.

27. Except in variety of job, significance of job and motivating potential score of the job, there was no significant difference between Assistant Professors and Professors.

28. Assistant Professors perceived a significantly better work climate and obtained significantly greater feedback through their job than Professors and Associate Professors.

29. Associate Professors were significantly lower in variables that had positive and significant relationship with work motivation and were significantly higher in variables that had negative and significant relationship with work motivation.

30. Teachers in teaching institutions had significantly higher work motivation than teachers in research stations.

31. When compared to teachers in research institutions, teachers in teaching institutions were significantly higher in variables that had significant positive relationship with work motivation and were significantly lower in variables that had significant negative relationship with work motivation.

32. There was no difference among teachers in teaching, research and and extension institutions with respect to locus of control, significance of job and autonomy of job.

33. There was significant difference between teachers in teaching research and extension institutions with respect to power motive and relatedness need with those in extension having the highest and those in research having the least.

Implications of the study

Agricultural universities in India occupy a central position among developmental organizations leading the efforts for the improvement of agriculture through their three fold and integrated functions of teaching, research and extension. The Kerala Agricultural University established over two decades ago has been striving to serve the cause of agricultural development in the state through the praiseworthy contributions of its staff in the areas of education, research and extension, thereby contributing value and strength to the society that pays for its existence.

The important implications of the present study are discussed under the following heads.

1. Establishing an H.R.D. cell

2. Resolving equity sensitivity issues for Associate Professors

3. Modifying the performance appraisal and reward systems.

4. Evolving an agricultural education, research and extension policy for the nation

5. Providing enriched jobs

6. Improving the communication climate to enhance information sharing.

7. Opening up the university system to the dynamics of entrepreneurship.

8. Adopting a covenant of commitment on the part of teachers.

1. Establishing an H.R.D. cell

The overall implication of the present study is the need to recognize the strategic and operational importance of human resource management by the Kerala Agricultural University. It is necessary to shift to the state-of-the-art in the human resources function by adopting techniques and practices to promote work motivation particularly through reward systems, work design and organizational change strategies. Such techniques will create conditions which foster, promote, support and reinforce employee effectiveness, thereby ensuring Kerala Agricultural Universities significance both in the short and long term, as well as in the domestic and international scenarios.

Perhaps one of the most important implications that can be made from this study is that if the management truly wants to improve performance and work attitudes, they must take an

active role in **managing** motivational processes at work. Managing motivation is a conscious, intentional activity; it is not something that just happens.

If teachers motivational levels - and consequently performance - are to be increased, it becomes especially important to involve the teachers themselves in a cooperative venture aimed at improving output for, after all, they too have a stake in what happens to the university. Thus, one key factor in motivating teachers is to engage them more fully in the processes aimed at attaining organizational effectiveness.

An implication of academic as well as practical significance is that the western theories of work motivation seem to have trans-cultural applicability. While the manner in which the theories are implemented may vary, the underlying psychological principles in the theories seem to be universally valid.

To develop and utilize the full potential of employees as resources for change would require teaching employees the basics of motivation theory, discussing with them the strategy and tactics of work redesign. Such an approach would be costly but it would have the advantage of encouraging employees to become full collaborators in the redesign of their own work, thereby creating a process for improving jobs that is

consistent with the ultimate objectives of the change. Moreover, and of special importance to the quality of work life in organizations, the approach would provide employees with greatly increased opportunities for furthering their own personal growth and development - and at the same time would significantly increase their value as human resources to the organization.

To effectively fulfil these tasks it is recommended that the Kerala Agricultural University establish a Human Resource Development Cell exclusively to monitor teacher attitudes on a continuous basis and propose ways and means of human resource development.

The traditional system of deputing officers for training needs to be replaced by newer methods of human resource development as Jhansirani (1985) reported that there was no significant relationship between training received and productivity of agricultural scientists. Instead of sending teachers for training elsewhere, HRD consultants should be brought to KAU, workshops conducted with the entire division/ research station teachers present, so that problems can be thrashed out then and there.

2. Resolving equity sensitivity issues for Associate Professors

An important finding of the present study was that Associate Professors were significantly lower in work motivation when compared to Assistant Professors and Professors.

Problems resulting from differences in the status of employees cannot be totally overcome because they are normally part and parcel of the institutional structure. They can however be minimized and the Kerala Agricultural University must take all possible steps to ensure that all categories are equitably paid. Salaries, career development plans, and rules for promotion should be compatible with regulations and with expectations. Moreover, incentives should be at least on par with those in other similar universities in the nation.

Somewhat relatedly, it is important that teachers see a clear relation between successful performance on their part and the receipt of their desired rewards. It, therefore, becomes incumbent upon management to be able to identify superior performers and reward them accordingly. When this is done, employee expectations generally increase, and this in turn should lead to greater effort toward goal attainment. Such an implication raises questions about the use of non-merit-based compensation systems and of seniority as a

major factor in promotions. Where rewards are not based upon performance, we would expect motivational levels to be markedly reduced. This leads to the next implication.

3. Modifying the performance appraisal and reward systems

The finding that teachers in teaching institutions were significantly more motivated than teachers in research and extension institutes imply that the reward systems currently in use are not generally compatible with the goals of technology systems. Management should design new systems that reward technology generation and transfer, rather than scientific publication (Eponou, 1993).

Satapathy and Choudhury (1990) concluded that the parameters for measurement of scientific productivity among farm scientists consisted of the following factors in order of decreasing importance; production of specific technology, acceptance of technology by the farmers, publication of results in local newspaper, inclusion of findings in the package of practices publication of research papers of state/ national/international level, feedback for details by the users, guiding of Ph.D. and M.Sc. scholars, presentation of scientific papers at various levels, reference of research work by other scientists, number of projects completed, recognition of work by way of reward/award and writing of technical books. It may be noted that teaching and extension

per se found no place in the above list of parameters for measuring achievements of farm scientists. Both teaching and extension *per se* are low in the attributes that define job identity.

It must be acknowledged that it is extremely difficult to evaluate or even define the research performance of individual scientists or research groups. There should be some provision to evaluate the unique contribution of each member of the team in addition to evaluating the team. An objective and critical evaluation of any research activity is difficult since the process of evaluating research is not standardised. It would be a formidable task to combine the various components of scientific productivity into a single meaningful measure. According to Sabarathnam (1992), many studies of scientific productivity have been reported which have used a number of publications as an indicator of scientific productivity. But use of publication as a major index of scientific productivity has been strongly criticised in that the efficiency of any research set up must be determined by the extent to which technology can be applied for development. Yet another view is that technical evaluation must refer to how and what the researcher has done and not necessarily to the achievement of success.

Eponou (1993), in a study of National Agricultural Research Systems in seven developing countries revealed that there existed a flagrant incompatibility between professional reward systems and organizational goals. While the *raison d'etre* of most of the publicly-funded research systems is to generate relevant technologies for farmers, their employee reward systems do not reflect this. In some cases, researchers who devote their efforts to technology development or to establishing linkages with technology transfer may even be penalized. Promotion and peer recognition are perceived by researchers as the most important professional rewards. What criteria are used to assess and reward researchers? In many of the technology systems studied, promotion is officially based largely or solely on the number of scientific articles published, practical pamphlets and bulletins aimed at technology transfer to agents and farmers are given little attention for assessment. Moreover, no specific mechanism exists to encourage researchers to produce this type of information. Peer recognition is based on a researcher's scientific publishing record, as well as on participation in scientific seminars, conferences, and networks. Researchers gain little or no peer recognition from working effectively with technology transfer. None of the systems studied has awards or events to mark high achievement in technology development or good collaboration with extension.

However much be the difficulty of quantifying scientific productivity the implication is clear. Unless there is a shift in the performance appraisal and reward system, such that extension and research are given due weightage, the present trend will continue. This trend will be counter productive for the Kerala Agricultural University in fulfilling its triple mandate of teaching, research and extension in a balanced manner. Moreover, the Kerala Agricultural University being only a sub-system in the entire nation wide system of agricultural teaching, research and extension, it would not be easy to make such a shift unless there comes into existence a national agricultural education research and extension policy in tune with this emphasis.

4. Evolving an agricultural education, research and extension policy for the nation

Sant (1995) stated: "If economics can be reformed and technology can be upgraded, why not the educational policy be reformed to suit our needs. Only we have to be clear in our objectives. We need to attract the best (or better) talent in the higher education portfolio, create atmosphere and means to retain them, identify 'good' teachers 'competent' researchers and 'dynamic' extension workers, inculcate urgency for need-based, application oriented research even in the basic research field, re-write university regulations for a research

degree, restrict severely Ph.D. admissions and provide good facilities to the limited research projects. Simultaneously, motivate and re-orient our 'faculty' towards meaningful research and inculcate in them (through short-term and long-term training courses) leadership qualities and communication skills. To bring in all such 'attitudinal' changes, the top management of the university has to do a very honest, serious and hard re-thinking in consultation with leaders of industry, business, finance and government. We cannot afford to lose any more time." There is an enormous increase in the number of Ph.D. holders and Professors. In all such cases, the quality or the standard always suffers. In the United Kingdom, professorship was a title conferred to a person par excellent in his area of specialization and given to extremely few. It was not a title gained by having put in a certain number of years of service. Thus the title of the professor had great symbolic motivational power.

An American Ph.D. has a greater written - examination content than the original research content (they call it Ph.D. dissertation). He or she is trained how to use tools of research and thereby gets fully equipped to start the research career whereas in India, award of Ph.D. is virtually an end of the candidate's research.

The concept of 'original piece work' insisted upon by universities results in pressurising researchers and research scholars to manipulate data to prove one's hypotheses. This is an out moded concept and needs to be drastically modified. All over the world changes are taking place in educational systems and we must also redefine what we really expect from a researcher.

Existence need being positively associated with work motivation, implies that changes in the present job security system need to be thought of. The university job is at present taken for granted. A system wherein the sense of security is contingent on productivity should be developed so that strong and creative research will be pursued with a healthy competitive spirit and with a challenge to reach excellence. A fool-proof system of additional pay for additional work done over and above normal duties should also be contemplated.

5. Providing enriched jobs

The relevance of the job characteristics model has been well supported by the findings of the present study.

Hence questions should be raised by the management concerning the feasibility of providing teachers with enriched

jobs: jobs that offer greater challenge, diversity, and opportunities for personal need satisfaction.

Providing computer facilities in each department and encouraging all teachers to use the computer themselves can be one specific long term investment in job enrichment.

Fund requirement for research, books, capital equipment, consumables, administrative support services, travel for attending seminars, surveys, reference work, etc. When considering the unavailability of funds from traditional sources (like State, UGC, etc.) industry - university interaction must be considered. But for this the university will have to be geared into action to market their knowledge.

The phenomenon of inbreeding is perpetuated within each university system. Gregor Mendel's law of 'cross-fertilization' giving rise to strong and healthy second generation is true for 'ideas' too.

A system of teacher exchange for a one year sabbatical among State Agricultural Universities should also help 'cross-fertilization in the Indian agricultural educational system.

6. Improving the communication climate to enhance information sharing

The study reveals the need to improve the communication climate. An organization wide strategy for improving interpersonal communication is required to establish a positive communication climate or atmosphere. A good communication climate is one that permits or promotes a free and open exchange of ideas and information among its members. Since the communication climate is part of the organization culture, it develops over a long period of time.

One way of promoting such a climate is for organization members to strive to share useful information. Another way is for the management to be receptive to employee suggestions for improvement.

Informal communication also controls behaviour. When work groups tease or harass a member who produces too much (and makes the rest of the group look bad), they are informally communicating with, and controlling, the member's behaviour. This form of demotivating verbal and non verbal communication often pervades technology generation system.

Personal jealousies may abound in the under currents of departmental interpersonal relationships which percolate down inhibiting free discussions and exchange of ideas.

While improving the communication network will as this study has shown enhance work motivation, merely providing infrastructure of phone, fax and other communication media available would not motivate good research or inculcate a research culture. Creative thinking, diligence and application of mind are the basic elements of research culture.

7. Opening up the university system to the dynamics of entrepreneurship

The finding that achievement motive and growth need were positively and significantly associated with work motivation implies that the Kerala Agricultural University should provide sufficient opportunity to its teachers to satisfy these needs lest they seek greener pastures. This is especially important because the agricultural scenario is fast changing.

Independent/private sector consultants are beginning to fill a gap formerly occupied by publicly supported agricultural scientists and extension specialists.

Meanwhile, private firms, more for profit than for service, are beginning to function quite differently than they did a decade ago. They are selling product packages, including a core technology (seed or hormone), and included with the package is information concerning the best use of the product.

The race is on. The parenthetical state of flux that now is will not continue forever. The integrity of the state agricultural university, the feed back mechanisms from producers to scientists, and the continuing source of trained human capital in the agricultural sciences must continue, but the chart must be clear and the mission redefined.

The time has come to emphasise market-orientation in research programmes. Fascination with intellectual problems, rather than with human and market requirements, has been reinforced in the academic system where there is excessive interest in the 'R' of R&D (Research and Development).

Scientists, as well as administrators, must become more involved in public dialogue. Improved linkages, networking, and collaborative efforts with the private sector need to be forged and a balance struck between what is done for service and for profit. New state - university - research station - industry relationships unlike those of the past, must evolve and pave the way for a second century of growth, progress, and service. Till date, most collaborative efforts have been within the public sector, yet the private sector has unique expertise for development of technologies and their delivery. To encourage the private sector to collaborate in agricultural research and development will require both innovation and

changes in attitudes of all concerned. The government on its part would have to redefine the role of private sector in supporting public enterprise.

8. Adopting a covenant of commitment on the part of teachers

Madden (1986) prophetically warned that "the survival and prosperity of agricultural academia require that we adopt a new covenant, a commitment to be scientifically excellent, socially relevant, and ecologically responsible. The development of such a covenant is complicated by the rapidly changing roles of the public and private sectors in the technology delivery system, as well as the constantly changing array of problems and opportunities facing agriculture and society as a whole. Difficult as the task may seem, however, it is imperative. The survival of agricultural academia demands it. Even more importantly, in the hard times that lie ahead, society will need the best we can offer. We can deliver our best only as we lay aside our chauvinisms, heal our separateness, and commit ourselves and our institutions to the solution of important problems and the attainment of worthwhile opportunities".

In concluding it does seem appropriate to recall the reverential attitude that Indian culture has always bestowed towards a teacher. In India, a teacher is not merely a conveyor of instruction. He is a symbol of an ancient and

noble calling, a model on which one can shape one's life - a guru. However, in the recent past, the teacher, has not been spared the complexities and competitions of modern living. Like others, teachers have had to contend with problems of livelihood and, not unoften, with unsatisfactory conditions of work. If the nobility and sacredness of the profession is to be maintained, the needs of the teachers must be taken care of by the authorities. Then, and only then will the Kerala Agricultural University raise to the expections of the farming and student communities that are looking upto it for a high level of performance.

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* Originals not seen

Appendices

Appendix I

Sampling Strata

Strata No.	Description
1.	College of Agriculture, Vellayani
2.	College of Horticulture, Vellanikkara
3.	College of Co-operation and Banking Mannuthy
4.	College of Forestry, Vellanikkara
5.	College of Fisheries, Panangad
6.	College of Veterinary and Animal Sciences, Mannuthy
7.	Kelappaji College of Agricultural Engineering and Technology, Thavanur
8.	N.A.R.P. Southern Zone (hqrs: Vellayani)
9.	N.A.R.P. Special Zone (hqrs: Kumarakom)
10.	N.A.R.P. Central Zone (hqrs: Pattambi)
11.	N.A.R.P. Northern Zone (hqrs: Pilicode)
12.	N.A.R.P. High Range Zone (hqrs: Ambalavayal)
13.	Extension Institutions

Appendix II

List of Independent Variables and their Mean Relevancy Score

(Conceptual definitions of variables that do not find a place in the text of the Chapter on Methodology are given in this appendix)

Sl. No.	Variable	Mean relevancy score obtained on judges rating
1.	Locus of Control	3.80
2.	The P.I. Motive*	2.78
3.	Achievement Motive	3.78
4.	Power Motive	3.76
5.	Affiliation Motive	3.72
6.	Power Distance*	3.00
7.	Preferred Organizational Culture	3.84
8.	Associative Thinking*	3.55
9.	Equity-Sensitivity	3.73
10.	Growth Need	3.70
11.	Relatedness Need	3.68
12.	Existence Need	3.64
13.	Individualism*	3.19
14.	Identity of job	3.69
15.	Variety of job	3.75
16.	Significance of job	3.73
17.	Autonomy of job	3.78

18.	Feedback through job	3.78
19.	Reward Immediacy*	3.47
20.	Reward Valance*	3.39
21.	Work Climate	3.63
22.	Communication Patterns	3.72
23.	Management Style	3.73
24.	Morale	3.61
25.	Central Life Interest*	3.55

$Ex = 90 \qquad \bar{x} = 3.6$

$\bar{x}$ = average mean relevancy score

* Conceptual definitions given here below

1. **The PI Motive** refers to the need for unique path-breaking accomplishments (pioneering), such as a desire to climb an unscaled peak, and the need for transforming the status quo (innovating), such as a desire to design a revolutionary new product.

2. **Power Distance** refers to the degree to which managers and subordinates accept their respective positions in the organizational hierarchy, and operate from these fixed positions.

3. **Associative Thinking** refers to the degree to which job behaviours are largely determined by the immediate context that is salient rather than any normative work ethic relevant and appropriate to the job.

4. **Individualism** refers to the degree to which work concerns and achievement of the individual take precedence over family concerns and group attainments.

5. **Reward Immediacy** refers to the time delay in administering the reward.

6. **Reward Valence** is the degree to which employees prefer or value a reward.

7. **Central Life Interest** refers to the activity that provides most meaning and purpose to ones life.

List of items/dimensions in the Work Motivation Scale and their Mean Relevancy Scores

Sl. No.	Item	Mean relevancy score obtained on judges rating
1.	Urge to use the very best of ones ability	3.85
2.	Relative importance of other commitments when compared to work in KAU	2.50
3.	Willingness to come early and/or stay late for work	3.91
4.	Agreement one has with KAU policies on work related issues	2.70
5.	Urge to improve ones work	3.98
6.	Relative value attributed to hard work	4.52
7.	Pride one has in talking about KAU to his/her friends	2.80
8.	Enthusiasm and commitment towards work	4.32
9.	Voluntary undertaking of work assignments	4.60
10.	Regret one has for having decided to work for KAU	3.10
11.	Updating of ones work related information base	4.10
12.	Urge to help KAU be successful	2.90
13.	Urge to improve ones competence and capability	4.44
14.	Change in the urge to work when compared to the past	4.82
15.	Urge to overcome obstacles and hindrances in work	4.46

$x = 57 \quad \bar{x} = 3.8$

Appendix IV

t values obtained for each item of the Work Motivation Scale

Sl. No.	Item	t value
1.	Urge to use the very best of ones ability	4.00
2.	Willingness to come early and/or stay late for work	4.00
3.	Urge to improve ones work	18.50
4.	Relative value attributed to hard work	24.36
5.	Enthusiasm and commitment towards work	34.29
6.	Voluntary undertaking of work assignments	21.15
7.	Updating of ones work related information base	34.86
8.	Urge to improve ones competence and capability	21.04
9.	Change in the urge to work when compared to the past	17.83
10.	Urge to overcome obstacles and hindrances in work	24.31

From

Alexander George
Assistant Professor
Central Training Institute
Mannuthy - 680 651

To

Sir/Madam,

Ref: Project No. TOT-08-01-02/93 VKA(6) KAU/PG approved in the 42nd FRC on 30.7.1993

Please find enclosed a questionnaire for my Ph.D. research work on Work motivation of teachers in the Kerala Agricultural University. I request you to kindly spare some of your precious time to answer the questions posed. Please rest assured that this study is purely for academic purpose and that your identity will be kept confidential. Hence do not hesitate to provide honest and accurate responses. The answered questionnaire may please be returned using the stamped envelope enclosed at an early date.

Thanking you,

Yours faithfully,

Alexander George

Mannuthy,
1.10.1994

Appendix V

Questionnaire

WORK MOTIVATION - A MULTIVARIATE ANALYSIS AMONG TEACHERS OF THE KERALA AGRICULTURAL UNIVERSITY

I. For each of the following statements, please tick the alternative that best expresses your present state. There are no right or wrong answers, so please be completely honest in your responses

1. The urge I have to use the very best of my abilities for my work in KAU is:

   (a) Very High (b) High (c) Average (d) Low (e) Very low

2. I am prepared to come early and/or stay late for my work in KAU.

   (a) Strongly Disagree (b) Disagree (c) Uncertain
   (d) Agree (e) Strongly Agree

3. The urge I have to improve my work in KAU is:

   (a) Very High (b) High (c) Average (d) Low (e) Very low

4. It is not worth putting a great deal of effort for my work in KAU.

   (a) Strongly Disagree (b) Disagree (c) Uncertain
   (d) Agree (e) Strongly Agree

5. The enthusiasm and commitment I have for my work in KAU is:

   (a) Very High (b) High (c) Average (d) Low (e) Very low

6. I avoid voluntarily taking up assignments related to my work in KAU.

   (a) Strongly Disagree (b) Disagree (c) Uncertain
   (d) Agree (e) Strongly Agree

7. The urge I have to keep myself equipped with up-to-data\e information for my work in KAU is:

   (a) Very High (b) High (c) Average (d) Low (e) Very low

8. The urge I have to improve my capabilities and competence for my work in KAU is:

(a) Very low (b) Low (c) Average (d) High (e) Very High

9. When compared to the past the urge I have to do my work in KAU in the most befitting manner is

(a) much higher now
(b) slightly higher now
(c) the same as it was before
(d) slightly lower now
(e) much lower now

10. The urge I have to overcome obstacles and hindrances in my work for KAU is:

(a) Very High (b) High (c) Average (d) Low (e) Very low

II Please indicate by a tick mark whether you agree with choice A or choice B in each of the following sets of statements

1. A. Making a lot of money is largely a matter of getting the right breaks.

   B. Promotions/selections are earned through hard work and persistence.

2. A. I have noticed that there is usually a direct connection between how hard I work and the recognition I get.

   B. Many times the reactions of superiors seem haphazard to me.

3. A. The unemployment rate indicates that people are not willing to make a living from what they can.

   B. Unemployment is the fate of some.

4. A. It is silly to think that one can really change another person's basic attitudes.

   B. When I am right I can convince others.

5. A. Getting promoted/selected is really a matter of being a little luckier than the next person.

   B. In our society a person's future earning power is dependent upon his or her ability.

6. A. If one knows how to deal with people they are really quite easily led.

   B. I have little influence over the way other people behave.

7. A. My present position is the result of my own efforts; luck has little or nothing to do with it.

   B. Sometimes I feel that luck has had a lot to do in my becoming what I am now.

8. A. People like me can change the course of world affairs if we make ourselves heard.

   B. It is only wishful thinking to believe that one can readily influence what happens in our society at large.

9. A. A great deal that happens to me is probably a matter of change.

   B. I am the master of my fate.

10. A. Getting along with people is a skill that must be practiced.

    B. It is almost impossible to figure out how to please some people

III. For the following statements please circle the number that most closely agrees with how you feel. Consider your answers in the context of your current job and/or past work experience.

		STRONGLY DISAGREE				STRONGLY AGREE
1.	I try very hard to improve on my past performance at work	1	2	3	4	5
2.	I enjoy competition and winning	1	2	3	4	5
3.	I often find myself taking to those around me about non work matters	1	2	3	4	5
4.	I enjoy a difficult challenge	1	2	3	4	5
5.	I enjoy being in charge	1	2	3	4	5
6.	I want to be liked by others	1	2	3	4	5
7.	I want to know how I am progressing as I complete tasks	1	2	3	4	5
8.	I confront people who do things I disagree with	1	2	3	4	5
9.	I tend to build close relationships with co-workers	1	2	3	4	5
10.	I enjoy setting and achieving realistic goals	1	2	3	4	5
11.	I enjoy influencing other people to get my way	1	2	3	4	5
12.	I enjoy belonging to groups and organizations	1	2	3	4	5
13.	I enjoy the satisfaction of completing a difficult task	1	2	3	4	5
14.	I often work to gain more control over the events around me	1	2	3	4	5
15.	I enjoy working with others more than working alone	1	2	3	4	5

IV. For each of the following statements, circle the level of agreement or disagreement that you personally feel:

SA = Strongly Agree

A = Agree

U = Uncertain

D = Disagree

SD = Strongly Disagree

1.	I like being part of a team and having my performance assessed in terms of my contribution to the team	SA	A	U	D	SD
2.	No person's needs should be compromised in order for a department to achieve its goals	SA	A	U	D	SD
3.	I prefer a job where my boss leaves me alone.	SA	A	U	D	SD
4.	I like the thrill and excitement from taking risks.	SA	A	U	D	SD
5.	People shouldn't break rules.	SA	A	U	D	SD
6.	Seniority in an organization should be highly rewarded.	SA	A	U	D	SD
7.	I respect authority.	SA	A	U	D	SD
8.	If a person's performance is inadequate, it's irrelevant how much effort he or she made.	SA	A	U	D	SD
9.	I like things to be predictable	SA	A	U	D	SD
10.	I'd prefer my identity and status to come from my professional expertise than from the organization that employs me.	SA	A	U	D	SD

V. For each question, divide ten points between the two answers (A and B) by giving the most points to the answer that is most like you and the fewest points to the answer that is least like you. You can, if you like, give the same number of points to both answer. And you can use zeros if you'd like. Just be sure that A+B totals to 10 for each question.

1. It would be more important for me to:

_____ A. Get from KAU

+_____ B. Give to KAU
10

2. It would be more important for me to:

_____ A. Help others

+_____ B. Watch out for my own good
10

3. I would be more concerned about:

_____ A. What I receive from KAU

+_____ B. What I contribute to KAU
10

4. The hard work I would do should:

_____ A. Benefit KAU

+_____ B. Benefit me
10

5. _____ A. If you don't look out for yourself, nobody else will

+_____ B. It's better to give than to receive
10

VI. Kindly indicate how important each of the following is in the job you would like to get.

Write the numbers 1, 2, 3, 4 or 5 on the line after each item.

1 = Not important

2 = Slightly important

3 = Moderately important

4 = Very important

5 = Extremely important

1. Co-operative relations with my co-workers. _____
2. Developing new skills and knowledge at work. _____
3. Good pay for my work. _____
4. Being accepted by others. _____
5. Opportunity for independent thought and action. _____
6. Frequent raises in pay. _____
7. Opportunity to develop close friendships at work. _____
8. A sense of self-esteem. _____
9. A complete fringe benefit program. _____
10. Openness and honesty with my co-workers. _____
11. Opportunities for personal growth and development. _____
12. A sense of security from health hazards. _____

VII. JOB CHARACTERISTICS

Describe your present job in the KAU using the following questionnaire. Circle/tick mark the alternative that best describes the job. Be as objective as possible in your answers.

1. VARIETY IN JOB

How much variety is there is your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

a. Very little, the job requires me to do the same routine things over and over again.

b. Moderate variety

c. Very much, the job requires me to do many different things, using a number of different skills and talents.

2. FEEDBACK FROM JOB

To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing - aside from any feedback co-workers or supervisors may provide?

a. Very little; the job itself is set up so that I could work forever without finding out how sell I am doing.

b. Moderately; sometimes doing the job provides feedback to me; some times it does not.

c. Very much; the job is set up so that I get almost constant feedback as I work about how well I am doing

3. IDENTITY OF JOB

To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end, or is it only a small part of the overall piece of work, which is finished by other people or by machines?

a. My job is only a tiny part of the overall piece of work, the results of my activities cannot be seen in the final product or service.

b. My job is a moderate sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.

c. My job involves doing the whole piece of work, from start to finish, the results of my activities are easily seen in the final product or service.

4. SIGNIFICANCE OF JOB

In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well being of other people?

a. Not very significant; the outcomes of my work are not likely to have important effects on other people.

b. Moderately significant

c. Highly significant; the outcomes of my work can affect other people in very important ways.

5. AUTONOMY IN JOB

How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

a. Very little; the job gives me almost no personal "say" about how and when the work is done.

b. Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.

c. Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

VIII. ORGANIZATIONAL CLIMATE INDEX

Please indicate your opinion on the following statements by ticking (/) the most appropriate alternative

A. WORK CLIMATE

1. KAU provides adequate orientation training for new employees

2. KAU provides adequate in service training for employees from time to time

3. The duties expected from me are realistic and clearly stated

4. Work facilities are clean, safe, and functional

5. Information, materials, and equipment necessary to do my work are provided

6. My work is challenging and contains enough variety to be interesting

7. The quality of work associated with my job is not too much or too little

B. COMMUNICATION PATTERNS

1. The College/Department/Station I work at has clear policies, procedures, and guidelines

2. There is an adequate amount of communication within the Department/Station/College I work at

3. Methods of communication within the College/Department/ Station are varied (individual contact, group meetings, circulars/letters, newsletters, etc.)

4. Communication within the Department/Station/College is timely, accurate, and complete

5. Two-way communication is encouraged and present in the Department/College/Station I work at.

6. There is regular direct person to person contact and opportunity for communication between supervisors and subordinates in the Department/ Station/College I work in

C. MANAGEMENT STYLE

1. Effective planning is a characteristic of the Department/ College/ Station I work at.

2. Decision making is timely and effective

3. People are given an opportunity to participate in decisions that affect them

4. Evaluations are handled in a fair and professional manner

5. Disciplinary action is taken only when justified and actions taken are appropriate

6. Grievance situations are handled in a fair and unbiased manner

7. Authority is adequately delegated in the Department/ Station/College

8. My Superior is receptive to innovation and change

D. MORALE

1. Salaries are fair in relation to job requirements, experience, and quality of work.

2. Benefits are adequate

3. Working relationships with co-workers are positive and enjoyable

4. Working relationships with supervisors are positive and enjoyable

5. In the Department/Station/College I work there is tolerance for individual differences and dissent

6. Good work brings appreciation and recognition.

7. A spirit of cooperation and respect for others exists in the Department/Station/College I work

8. Employees take pride in their work in the Kerala Agricultural University.

WORK MOTIVATION - A MULTIVARIATE ANALYSIS AMONG TEACHERS OF THE KERALA AGRICULTURAL UNIVERSITY

By

ALEXANDER GEORGE

ABSTRACT OF THE THESIS

Submitted in partial fulfillment of the
requirement for the degree of

Doctor of Philosophy in Agriculture

(Agricultural Extension)
Faculty of Agriculture
KERALA AGRICULTURAL UNIVERSITY

Department of Agricultural Extension
COLLEGE OF HORTICULTURE
VELLANIKKARA - THRISSUR
KERALA, INDIA
1996

ABSTRACT

Work motivation, the inner urge that energises, directs and sustains work, was the dependent variable while the independent structure consisted of eighteen variables: Locus of control, achievement motive, power motive, affiliation motive, equity-sensitivity, growth need, relatedness need, existence need, preferred organizational culture, variety in job, identity of job, significance of job, autonomy in job, feedback through job, work climate, communication patterns, management style and morale. The sample of 150 teachers constituted 21.6 per cent of the total population of teachers in the Kerala Agricultural University. Distribution of teachers with respect to the variables mentioned above, relationships between the variables and determinants of work motivation were studied. Cadre-wise comparison of teachers was undertaken and teachers in teaching, research and extension institutions were also compared using ANOVA. All independent variables studied had strong correlations with work motivation. The relationship of affiliation motive, preferred organizational culture and equity-sensitivity with work motivation was negative. Bunch-map analysis was used to confront the problem of multicollinearity and identify the determinants of work motivation: affiliation motive, existence need and identity of job. The study proposes a

cohesive and unifying model to explain work motivation. Relevance of work motivation theories and practices with reference to the Indian socio-cultural context and applicability of existing models to educational and service sector organizations are discussed. Recommendations are made for the design and dynamics of human resource management practices applicable to the around 30,000 agricultural scientists in the country.