

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN
GRADUATE COLLEGE DEPARTMENTAL FORMAT APPROVAL

THIS IS TO CERTIFY THAT THE FORMAT AND QUALITY OF PRESENTATION OF THE THESIS
SUBMITTED BY NAFTALI MEDOTI MOLLEL AS ONE OF THE
REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
ARE ACCEPTABLE TO THE COLLEGE OF EDUCATION
Full Name of Department, Division or Unit

3/15/90

Date of Approval

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06 APR 2001

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

THE GRADUATE COLLEGE

SEPTEMBER 1989

WE HEREBY RECOMMEND THAT THE THESIS BY

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ENTITLED A COMPARATIVE ANALYSIS OF JOB DESIGN CHARACTERISTICS,
ORGANIZATIONAL STRUCTURE, AND PERSONAL CHARACTERISTICS AFFECTING JOB
SATISFACTION OF EXTENSION AGENTS IN TWO EXTENSION ORGANIZATIONS IN TANZANIA

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**A COMPARATIVE ANALYSIS OF JOB DESIGN CHARACTERISTICS,
ORGANIZATIONAL STRUCTURE, AND PERSONAL CHARACTERISTICS
AFFECTING JOB SATISFACTION OF EXTENSION AGENTS
IN TWO EXTENSION ORGANIZATIONS IN TANZANIA**

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The present study was designed to compare two extension organizations in Tanzania: Commodity extension and General extension. Comparisons were made at three levels. First, to determine whether the two organizations differ in levels of job satisfaction; second, to determine whether the two organizations also differ in organizational structure, job design characteristics and personal characteristics of extension agents; and third, to determine whether the independent variables could explain the differences in levels of job satisfaction between the two extension organizations.

Data were collected through a questionnaire distributed to extension agents during their monthly meetings. Data for the study came from 120 General extension agents and 64 Commodity extension agents. Additional information was obtained through personal and group interviews and analysis of documents.

The major findings of the study are as follows:

1. Both at the individual and organizational level of analysis Commodity extension had significantly higher scores on satisfaction with supervision and satisfaction with promotion.

2. Differences in satisfaction with supervision could be explained by differences in formalization, autonomy and feedback.

3. Differences in satisfaction with promotion could be explained by differences in formalization and years of agricultural training.

From these findings the following recommendations are suggested:

1. To enhance satisfaction with supervision extension organizations should develop effective communication channels to increase extension agents' awareness of rules and procedures governing their jobs. Further, tasks and activities performed by extension agents should be structured to provide autonomy and feedback.

2. Satisfaction with promotion can be increased by developing programs to increase extension agents knowledge of the rules, procedures and communications governing their work and the organization and by developing a promotion policy that takes into account individual levels of agricultural training.

ACKNOWLEDGEMENTS

This study would not have been completed without the cooperation and efforts of many individuals. I wish to thank all those who helped in one way or another in bringing this work to completion.

Special thanks are extended to my thesis director, Professor Johannes C. van Es for his guidance and encouragement. His criticisms and suggestions were instrumental to the success of this effort. I am also indebted to Professor Andrew Sofranko who as a member of the committee provided valuable criticisms and suggestions. His interest in the study helped put my ideas into proper perspective.

I also owe a debt of gratitude to two special women, Professor Violet Malone and Professor Jean Due, for their substantial assistance and advice while serving on the committee. Professor Malone provided an academic environment where I felt free to share ideas, and as her T.A. I learned from her the value of what it means to be an educator. Professor Due made special contributions to this study because of her experience with the Tanzania extension service.

Gratitude is expressed to Professor Edward Osborne who as chairman of the committee encouraged excellence. I am also indebted to Professor Burton Swanson for providing space where much of this work was done.

I wish to express gratitude to my employer, Sokoine University of Agriculture for granting me leave of absence and my sponsors the Bean Cowpea CRSP funded by USAID, for funding my research in Tanzania and for paying for my entire study in the

USA. My thanks are also extended to Center for African Studies, University of Illinois for awarding me a research grant to supplement my research in Tanzania. I owe a note of thanks to members of the department of Agricultural Education and extension of the Sokoine University of Agriculture for their suggestions and criticisms during construction and validation of the instrument.

To my wife, Margaret, who took care of the family in my absence and encouraged, supported, and helped me during the entire period of my study; and to my two daughters, Nai and Unmki, for their patience and support; and to my parents who understood the value of education; to you all, I extend my very special thanks.

And to Gary Morgan who helped and taught me the use of computers in data analysis, I extend my gratitude.

TABLE OF CONTENTS

CHAPTER		PAGE
I	THE PROBLEM	1
	Introduction	1
	Background	2
	Statement of the Problem	5
	Objectives of the Study	7
	Significance of the Study	7
	Assumptions	8
	Limitations of the Study	8
	Definition of Terms	9
II	REVIEW OF LITERATURE	11
	Theories of Job Satisfaction	11
	Fulfillment Theory	12
	Discrepancy Theory	13
	Equity Theory	14
	Job Satisfaction--Job Performance Controversy	15
	Satisfaction Causes Performance	16
	Performance Causes Satisfaction	16
	Moderator Approach	17
	Current Status of the Controversy	17
	Facets of Job Satisfaction	18
	Salary and Promotion	18
	Supervision	19
	Work Itself	19
	Co-workers	20
	Variables Related to Job Satisfaction	20
	Relationship Between Organizational Structure and Job Satisfaction	20

TABLE OF CONTENTS (CONTINUED)

CHAPTER		PAGE
	Relationship Between Job Characteristic and Job Satisfaction	22
	Demographic Variables and Job Satisfaction	25
	Hypotheses	26
	Hypothesis 1	27
	Hypothesis 2	27
	Hypothesis 3	28
	Hypothesis 4	28
	Hypothesis 5	28
	Hypothesis 6	29
	Hypothesis 7	29
	Hypothesis 8	29
	Hypothesis 9	29
	Hypothesis 10	29
	Hypothesis 11	30
	Hypothesis 12	30
	Hypothesis 13	30
	Hypothesis 14	30
III	METHODOLOGY	31
	Design of the Study	31
	Population	32
	Sampling Procedure	32
	Instrumentation	33
	Demographic Variables	35
	Job Satisfaction	35
	Job Design Characteristics	39
	Organizational Structure	41
	Pilot Testing	43
	Administration of the Survey	44
	Data Analysis	45
IV	CASE STUDY	46
	Functions, Terms, and Conditions of Service	47
	Internal Organizational Structure	56

TABLE OF CONTENTS (CONTINUED)

CHAPTER	PAGE
Effect of the Political and Economic Environment on the Two Extension Organizations	60
Availability of Resources in the Two Extension Organizations	64
Communication Between the Extension System and Other Agencies Involved in Agricultural Development	68
Summary and Implications for Research	73
V FINDINGS	76
Comparisons of the Two Organizations on Selected Variables	76
Job Satisfaction	76
Organizational Structure	80
Job Design Characteristics	81
Age Distribution	83
Years of Schooling	83
Years of Agricultural Training	84
Length of Employment	84
Present Position	87
Summary	90
Hypothesis Testing	91
Hypothesis 1	91
Hypothesis 2	92
Hypothesis 3	93
Hypothesis 4	94
Summary	95
Relationships Between Independent and Dependent Variables	96
Hypothesis 5 (modified)	97
Hypothesis 6 (modified)	98
Hypothesis 7	98
Hypothesis 8 (modified)	99
Hypothesis 9 (modified)	100
Hypothesis 10	101
Hypothesis 11 (modified)	101
Hypothesis 12 (modified)	102

TABLE OF CONTENTS (CONTINUED)

CHAPTER		PAGE
	Hypothesis 13 (modified)	103
	Hypothesis 14 (modified)	104
	Discussion on Organizational and Individual Level Relationships	105
VI	CONCLUSIONS AND RECOMMENDATIONS	108
	Job Satisfaction of the Respondents	108
	Organizational Structure Variables	109
	Job Design Characteristics	109
	Demographic Characteristics of the Respondents	110
	Hypotheses Testing	110
	Factors That Explain the Differences Between Levels of Job Satisfaction in the Two Organizations	114
	Recommendations	116
	Role of the Bean Cowpea Program (CRSP) and Other Donor Agencies	120
	Suggestions for Future Research	121
	REFERENCES	123
	APPENDIX	
A	QUESTIONNAIRE	129
	VITA	163

LIST OF TABLES

Table		Page
1	Scale Characteristics of the Satisfaction Measures	39
2	Scale Characteristics for the Measures of Job Design Characteristics	41
3	Scale Characteristics of Measures Organizational Structure	43
4	Summaries of the Job Attitudes in Three Organization Contexts and Their Standard Deviations	78
5	Job Attitudes of Commodity Extension Agents in Two Organizational Contexts	80
6	Distribution of Mean Scores and Standard Deviation of Scores on the Organizational Structure Scale Within the Two Extension Organizations	81
7	Distribution of Mean Scores and Standard Deviation Scores on the Scale Measuring Job Design Characteristics in Two Extension Organizations	82
8	Years of Schooling by Type of Extension Organization	84
9	Years of Agricultural Training by Type of Extension Organization	85
10	Years of Employment in the Extension Service by Type of Extension Organization	85
11	Distribution of Respondents by Level of Training	86
12	Distribution of Respondents by Job Level in the Organization	88
13	Distribution of the Respondents by Their Exposure to Farming Before Joining the Extension Service	89
14	Differences in Satisfaction Between Commodity Extension and General Extension	92

LIST OF TABLES (CONTINUED)

Table		Page
15	Differences in Organizational Structure Variables Between Commodity Extension and General Extension	93
16	Differences in Job Design Characteristics Between Commodity Extension and General Extension	94
17	Differences in Demographic Characteristics Between Commodity Extension and General Extension	95
18	Individual Level Relationships Between Formalization and Measures of Satisfaction	99
19	Individual Level Relationships Between Autonomy and Measures of Satisfaction	100
20	Individual Level Relationships Between Feedback and Measures of Satisfaction	101
21	Individual Level Relationships Between Years of Training and Measures of Satisfaction	103
22	Individual Level Relationships Between Age and Measures of Satisfaction	104
23	Individual Level Relationships Between Years of Schooling and Measurements of Satisfaction	105

LIST OF FIGURES

Figure		Page
1	Organization structure of Commodity extension (coffee)	57
2	Organization structure of the General extension service	61

CHAPTER I

THE PROBLEM

Introduction

The present study is designed to compare two extension organizations in Tanzania, one dealing with a specific crop (Coffee Commodity extension) and the other dealing with both crops and livestock (General extension). Comparisons are made of the organizational structure, job design characteristics and personal characteristics of the extension agents, and of the extent to which these variables affect employee job satisfaction in the two organizations. While job attitudes of the General extension agents are determined in their current job, those of Coffee Commodity extension agents are determined for when they were employees of the defunct Coffee Authority.

Data were obtained through a survey of a sample of extension agents from five regions in Tanzania, and through personal and group interviews conducted by the researcher. Official documents were also used as sources of data. The results of the study are expected to help the Tanzanian government in improving the organizational structure of the General extension service and the morale of the extension agents which will in turn improve their level of performance.

Background

Tanzania is predominantly an agricultural country with 83 percent of its 23 million people living in the rural areas and deriving their livelihood from the land (World Bank, 1984, p. 78). Agriculture, including livestock and fishing, currently contributes 52 percent of GDP (Gross Domestic Product) and one quarter of this originates in the subsistence sector (Mmari, 1985). The export trade is also dominated by agriculture which contributed 74 percent of the export earnings in 1982 with 80 percent of all exports produced by smallholders (Mmari, 1985, p. 152).

Seidman (1972) summarized the following important roles of agriculture in the economic development of Tanzania, including:

- Agriculture is the main component of GDP and, therefore, the main potential source of investible surpluses for development projects.
- Agriculture provides the major source of foreign exchange earnings required to buy industrial inputs.
- Agriculture provides many of the raw materials needed by emerging industrial sector and can provide adequate amounts of food for the urban workers at reasonable prices.
- Agriculture is a source of cash income for the farmers who utilize the income to buy farm inputs and other consumer goods from industries. (pp. 151-152)

Agricultural and food production per capita in Tanzania has been declining in the last two decades. According to a World Bank report, the index of food production per capita fell from 100 in 1969-71 to 88 in 1980-82 and the index of agricultural production per capita fell to 93 during the same period. The same report also notes that the average annual growth rate of real GDP per capita has fallen from 3.0 percent per annum from 1960 to 1970 to 1.9 percent from 1970 to 1982 (World Bank, 1984, p.

57). The contribution of agriculture to GDP fell from 57 percent in 1960 to 52 percent in 1982 (World Bank, 1984, p. 59).

This poor performance is attributed to both external and internal factors. Since the mid-1970s, the government was forced to spend 50 percent of its foreign exchange earnings on petroleum imports. A recession in the western world led to a decrease in exports and consequently lower foreign exchange earnings. This meant the government had less money to import agricultural inputs, implements, transport, and spare parts.

Like many African countries, Tanzania was also affected by drought in the mid 70s and early 1980s, leading to a decline in agricultural production (World Bank, 1981).

Other important internal factors responsible for the poor performance are the government's farm and incentive policy, an overvalued exchange rate, inefficient and high cost agricultural marketing boards and state farms, high export crop taxes, increasing debt and debt servicing cost and a population growth rate of 3.4 percent per annum (World Bank, 1981).

The Ministry of Agriculture and Livestock Development is the agency responsible for the implementation of agricultural programs through the dissemination of useful agricultural information to the rural people and in assisting them to acquire the necessary knowledge, skills, and attitudes to effectively utilize this information (Swanson & Claar, 1984).

The extension service was and is the main instrument through which the government provides technical and educational assistance to farmers (Mollel, 1986). Before the 1983 national agricultural policy was implemented, there were two extension

systems in Tanzania involved in the transfer of technology to farmers: the General extension system and the Commodity extension system. The main objective of the General extension system was to increase national agricultural production of both food crops, export crops and livestock products. The General extension system was organized within the Ministry of Agriculture. The provision of inputs to farmers was organized by a different agency and not integrated with other aspects of technology transfer.

Commodity extension was aimed at increasing the production of export crops in the small holder sector. Commodity extension was mainly financed through external sources and partly by the government. In the Commodity programs, the agricultural extension services, credit, inputs, marketing, and processing were administered through parastatal organizations with links with many ministries. Administratively, Commodity extension services were under the Ministry of Agriculture, but they had considerable autonomy.

In 1983, the Commodity extension agents were all transferred to the Ministry of Agriculture and Livestock Development (MALD). The purpose of this deployment was to give MALD complete control of the agricultural extension services and to enhance coordination of extension activities. The Commodity extension are now left with the marketing function only. Some of the former Commodity extension agents are now required to provide information/services which deal with more than one crop (where General extension agents are not available), a field in which they have little expertise.

Some former Commodity extension agents continue to provide specialized information dealing with one crop.

The two extension systems described above had different organizational and job design characteristics. The conditions and terms of service of Commodity extension agents were different from those of General extension agents.

Statement of the Problem

The extension service in Tanzania has undergone ten reorganizations since independence in 1961. The objectives of these reorganizations were to evolve an organizational structure that is efficient and effective.

The latest of the reorganizations was done in 1983 when Commodity extension agents were all deployed under the Ministry of Agriculture and Livestock Development leaving commodity organizations with only the marketing function. In spite of the reorganizations, several constraints still hamper the General extension service in Tanzania, such as poor supervision, weak linkages with research and other agricultural related institutions, lack of housing, lack of working facilities resulting in a demoralized extension staff.

There is a consensus that the Commodity extension system performed better than the General extension system. What positive experiences can the General extension service adopt from the former Commodity extension service in order to improve the organization of the General extension service?

Several studies have been done to compare the Commodity extension and the General extension systems. Studying Tobacco versus the General extension workers in Nigeria, Harrison (1968) reported that the Tobacco extension workers work harder, shoulder responsibility better and have more effective working relationships with farmers and co-workers than the General extension workers.

A similar study was done by Ekpere (1974) comparing the performance of Rubber extension workers and General extension workers in Nigeria. The Rubber extension workers were found to have performed better than the General extension workers in seven out of eight indicators of performance. DeVries and Fortman (1974) reported that in the Iringa region in Tanzania, Special Crop extension workers had more up-to-date expertise than the General extension workers. Although the above reviews suggest that Commodity extension tends to do better than General extension, none of these studies compare the two systems in terms of their organizational structure, job characteristics and job satisfaction of extension agents. Chambers (1974), Jiggins (1977), and Johnson (1978) pointed out that low morale and low job satisfaction among extension agents in developing countries should not be blamed on the agents themselves, but on the structure of the system under which they operate.

The present study will analyze and compare organizational structure, job design characteristics, personal characteristics, and job satisfaction of extension agents in two extension organizations: Coffee extension workers, and General extension workers.

An understanding of the structure of the organization under which field level extension agents and their supervisors operate is important in suggesting

recommendations that may help managers in restructuring the organization. No such study under Tanzanian conditions is known to the author.

Objectives of the Study

The general objective of this study is to compare the organizational structure, job satisfaction, job design characteristics and personal characteristics of village level extension agents when they were employed by the Commodity (coffee) extension system and the village level extension agents of the General extension system.

Specific objectives are:

1. To compare the General extension with the Commodity (coffee) extension.
2. To determine the differences in the levels of job satisfaction of village level extension agents in the two systems.
3. To identify and discuss the factors that may explain the differences in levels of satisfaction between two systems.
4. To determine the relationships between individual levels of job satisfaction of village level extension agents, and personal characteristics, job characteristics and organizational variables.

Significance of the Study

Results of this study will be of assistance not only in comparing the two systems but also in making recommendations for improvements in the General extension

service. For example, an understanding of factors that motivate extension agents will help the extension service in making recruitment and placement decision. It will also help management to provide appropriate incentives for field level extension agents and supervisors to tailor their supervisory behavior in the direction favorable to their subordinates. The desirable qualities that may have been present in the organizational structure of former Coffee Authority (Commodity extension) could be emulated by the General extension service.

Assumptions

The following assumptions are made in this study:

1. The perceptions of the respondents towards the two organizations will reflect differences in the structure of the organizations.
2. Job satisfaction is a factor in job performance; extension agents who are satisfied with their work are likely to perform better than those who are not.

Limitations of the Study

1. The study is limited to five of eight coffee growing regions in Tanzania. Generalizations from these findings should be made with caution.
2. The questionnaire for Commodity extension agents required responses about an organization which was abolished in 1983. The responses are, therefore, based on recall data.

Definition of Terms

Autonomy. The extent to which the extension agents have a major say in scheduling their work and deciding on procedures to be followed.

Centralization. The extent to which the focus of decision making is in the upper levels of hierarchy.

Commodity Extension Service. An agricultural extension agency that provides educational and informational services to farmers on how to improve the production of an export crop. Essential functions related to the production of the commodity such as research, extension services, credit, input supply and marketing are performed by the Commodity extension service.

Feedback. The degree to which extension workers receive information as to how they are performing on the job.

Formalization. The extent to which rules, procedures, guidelines, instructions, and communications are written.

Formal Education. Level of secondary education attained (12 to 14 years of schooling)

General Extension Service. An agricultural extension agency that provides educational informational services to farmers on how to improve the production of both livestock and crops. Essential function related to the production of livestock and crops such as research, credit, input supply, and marketing are performed by a different institution.

Job Facets. This refers to the definable aspects of the jobs environment such as salary, promotions and so on.

Job Satisfaction. Vroom (1964) pointed out that job satisfaction and job attitudes can be used interchangeably and defined them as follows;

Both refer to effective orientation on the part of individuals toward work roles which they are presently occupying. Positive attitudes towards a job are conceptually equivalent to job satisfaction and negative attitudes towards the job are equivalent to job dissatisfaction (p. 99).

Parastatal. A quasi-government establishment created to provide a particular service or to produce a particular crop.

Span of Control. The problems imposed on the extension agent because of a large number of farmers and field assistants under his/her jurisdiction.

Variety. The degree to which extension workers are expected to perform a wide range of operations in their work.

Village Level Extension Agents. Agricultural technicians who work mainly as agricultural knowledge disseminators at the field level.

Utilitarian Organization. An organization that uses material rewards in order to gain the cooperation of its members.

CHAPTER II

REVIEW OF LITERATURE

CHAPTER I highlighted the importance of agriculture in the economic development of Tanzania. The two extension systems concerned with dissemination of agricultural information were briefly discussed. The objective of the study, statement of the problem, assumptions, limitations, and definition of terms were also presented.

This chapter will discuss three major theories of job satisfaction as well as the major controversies surrounding the job satisfaction/job performance relationships. Subsequently, the literature on the determinants of job satisfaction will be presented, followed by the hypotheses guiding the study.

Theories of Job Satisfaction

The first major theory of job satisfaction evolved out of the famous studies conducted by Herzberg and his associates (Herzberg, Mausner, & Synderman, 1959). They formulated the "two factor theory of job satisfaction." According to this theory, satisfaction and dissatisfaction are not the poles of a single continuum, but rather are two mutually exclusive dimensions. Job satisfaction occurs when factors that are related to an individual's needs for psychological growth (for example, the intrinsic nature of the job) are present, but their absence does not lead to dissatisfaction. Job

dissatisfaction occurs when factors that are work related such as pay or supervision are deficient, but their presence does not lead to job satisfaction.

Although Herzberg's theory has served as a basis for research in the area of job satisfaction, it has been criticized by many authors. For example, Lawler III (1973) and Gruneberg (1976) point out that the same factors can cause both satisfaction and dissatisfaction and that the methodology used in Herzberg's study is questionable. The same criticisms are leveled by Lindsay, Marks, and Gordon (1967), and Vroom (1964).

Current models on job satisfaction differ from the Herzberg's models. Current models treat overall job satisfaction as a set of values along one bipolar continuum. Hultaker (1977) refers to these models as "linear models of job satisfaction" (p. 56). A job dimension, such as promotion, can be a source of satisfaction but can also be a source of dissatisfaction. The present study will conceptualize a linear model of job satisfaction.

Lawler III (1973) divided the linear models of job satisfaction into three groups. These are reviewed below.

Fulfillment Theory

Theorists in this group (Schaffer, 1953; Vroom, 1964) view job satisfaction as a function of how much of a given outcome or group of outcomes a person receives. For example, Schaffer (1953) asserts that the extent to which an individual is satisfied or dissatisfied depends on the extent to which the job provides him with opportunities for meeting his/her important needs. Schaffer measured the extent to which 12 individual needs of 72 employees were being satisfied in the work situation and their

overall job satisfaction. He found that the greater the relative strength of the need the greater the overall satisfaction. Vroom (1964) contends that employees reports of their satisfaction with their job are directly related to the extent to which their jobs provide them with rewarding outcomes (such as pay). The more a person values these outcomes, the greater will be his satisfaction with the job.

Discrepancy Theory

Discrepancy theory states that satisfaction is determined by the differences between the actual outcomes a person receives and some other outcome levels. Lawler III (1973, pp. 67-68) identifies three different discrepancy approaches depending on how the other outcome level is defined. The first approach looks at what the people want, the second at what people feel they should receive and the third at what people expect to receive.

According to Locke (1969), the last discrepancy approach has seldom been used; getting more than expected may lead to surprise, but it hardly need to lead to dissatisfaction. Getting less than what is expected is a real source of frustration.

Porter (1961) in measuring satisfaction asks people how much of a given outcome there should be for their job and how much of a given outcome there actually is. He considers the discrepancy between the two answers to be a measure of satisfaction. This discrepancy approach has been the most widely used of all satisfaction theory.

Equity Theory

Inequity is bound to exist for people whenever they perceive that the ratio of their outcomes to inputs and the ratio of other people's outcomes to other people's inputs are unequal. This inequality leads to dissatisfaction (Adams, 1965). Among the "inputs" listed by Adams are education, intelligence, experience, and age; "outputs" include such items as pay, supervision, and rewards intrinsic to the job.

Roethlisberger and Dickson (1939) argue that employees regard age, seniority, education, ethnicity, and sex as assets they invest in the job. The authors predict that employees whose degree of reward was favorable in comparison with their perceived investments would express a greater degree of satisfaction than workers whose degree of reward was unfavorable in relation to their investments.

A more elaborate conception of equity is provided by Vroom (1964).

Equity and its opposite, inequity are defined in relative rather than absolute terms. Inequity is assumed to result, not from a discrepancy between rewards received from and investments made in one's job, but from discrepancies in the relative magnitudes of rewards and investments of a person and those of other persons with whom he compares himself. (p. 170)

Dawis and Lofquist (1981) suggest that the three theories above should not be viewed as conflicting but rather as contributing different and often complementary dimensions for understanding the nature of job satisfaction. In the present study, I will consider various approaches for understanding job satisfaction as complementary. For example, satisfaction with pay considers whether it is adequate to cover workers' needs (fulfillment theory) or whether it is reasonable compared to similar jobs or to

individuals with the same qualifications in a similar job (equity theory) or whether the policies are fair (discrepancy theory).

The three theories of job satisfaction reviewed in this section have rarely been applied to extension settings in developing countries. However, Leonard's (1977) widely known study of the attitude and behavior of extension agents in Kenya, makes use of the three theories of job satisfaction.

The extension service in Kenya has a similar structure to that of Tanzania extension service, the agents are trained in similar situations and do basically the same kinds of jobs. The same theories used to explain the behavior and attitudes of agents in Kenya should, therefore, also apply to the situation in Tanzania.

Job Satisfaction--Job Performance Controversy

One of the assumptions made in this study in the pervious chapter is that job satisfaction is a factor in job performance. However, the relationship between job satisfaction and job performance is complex. Even though much research has been devoted to understanding the relationship between job satisfaction and job performance, the nature of the relationship is yet to be fully understood. Schwab and Cummings (1970) and Nord (1976) present three viewpoints with respect to the satisfaction-performance relationship:

1. Satisfaction causes performance
2. Performance causes satisfaction

3. The satisfaction-performance relationship is moderated by a number of other variables.

Satisfaction Causes Performance

Vroom (1964) states that "it was typically assumed by most people associated with the human relations movement that job satisfaction was positively associated with job performance" (p. 151). However, a review of literature by Brayfield and Crockett (1955) casts doubts on the satisfaction causes performance assumption because of the low level of the statistical relationships between the two concepts.

Vroom's review of 23 studies conducted between 1949 and 1963, relating satisfaction and performance, found a median correlation of .14. Only 3 of his 23 studies yielded negative correlations and, according to Organ (1977), the probability of obtaining 20 positive correlation by chance out 23 studies would be only .0002 (assuming no functional relationship exist between satisfaction and performance).

The majority of studies reviewed by Brayfield and Crockett (1955) and Vroom (1964) had correlation in the range between .10 and .30. In the light of these findings, Organ (1977) concluded that the results of previous research, though not impressive, in terms of the strengths of the measured relationships, still warrant an open mind, and continuing research on the issue.

Performance Causes Satisfaction

Lawler III and Porter (1967) citing reviews by Vroom (1964) and Brayfield and Crockett (1955) concluded that the evidence on the satisfaction-causes performance

relationship indicates a low but consistent relationship. Lawler III and Porter (1967) do not question the existence of the relationship between satisfaction and performance but rather how and why they are related. They proposed that it is performance that causes satisfaction through rewards. Good performance leads to rewards and if these rewards are perceived to be equitable, will lead to satisfaction.

Moderator Approach

The generally low correlation results of satisfaction-performance studies have led other theorists to speculate that various moderating factors may affect the relationship, an approach which is similar to the one advocated by Lawler III and Porter (1967). Potential moderators include variables such as occupational group, degree of job fit, supervisory level, self esteem, need for achievement (Carlson, 1969; Doll & Gunderson, 1969; Jacobs & Solomon, 1977; Slocum, 1971; Steers, 1975).

Current Status of the Controversy

At the present moment, the nature of the relationship between job satisfaction and job performance remains unclear. According to Steers (1981), empirical support for each of the theoretical positions outlined above has been weak, causing doubt on their correctness.

Despite the lack of consistency or conclusiveness of previous research, however, Fisher (1980) states that the intrinsic appeal of the satisfaction performance relationship may be sufficient to warrant further study.

Using Meta-Analysis techniques, Petty, Mcgee, and Cavender (1984) analyzed correlational literature concerning the relationships between individual job satisfaction and individual performance. Their results indicate that the relationship between job satisfaction and performance is stronger and more consistent than that reported in previous reviews by Brayfield and Crockett (1955) and Vroom (1964). They argue, however, that the stronger relationship is due to the inclusion of a larger number of studies of professional supervisory and managerial employees and the strong positive relationships between positions in the organizational hierarchy and job satisfaction.

Facets of Job Satisfaction

Bilings (1978) has listed the following characteristics as determinants of job satisfaction: salary, promotion, supervision, work itself and conditions of service. The same factors either singly or in combination have been investigated by Leonard (1977), Johnson (1978), Chambers (1974), Morris (1973), and Jiggins (1977) and found to affect job satisfaction of extension agents in developing countries. Except for the study by Leonard, none of the other studies have used the theories of job satisfaction in explaining behavior of extension organizations in developing countries. A brief discussion of the factors is considered below.

Salary and Promotion

In a study of extension systems, Axinn and Thorat (1972) observed that if extension agents' salaries are low, they tend to find other employment or carry out

other activities to supplement their income. This will adversely affect their performance. Leonard (1977), in his study of extension organization in Kenya, shows that dissatisfaction with salaries and promotion among extension agents is widespread. Similar views were expressed by Jiggins (1977, p. 5) in her criticisms of the salary structure in public extension agencies. She points out that salaries of junior staff are not only the lowest in a tall hierarchy of scales but often lower than those of agriculturalists and other extension staff working on commercial schemes.

Supervision

According to Morris (1973), Chambers (1974), Leonard (1977), and Johnson (1978), failure of most rural development programs in developing countries can be attributed, at least in part, to poor supervision. Lack of effective supervision is attributed to authoritarian management, excessive reporting demands, lack of trust of subordinates, poor training of field level extension agents and supervisors' concern for loyalty rather than efficiency, lack of well-defined structure and poor communication between supervisors and subordinates.

Work Itself

Work itself refers to the tasks that the extension agent performs during the normal execution of his or her tasks. Although the extension agent's role is that of educator they often perform other regulatory and service oriented tasks that may require a disciplinary style of operation. This may result in a hostile relationship with farmers (Chambers, 1976). The lack of clearly defined responsibilities for the extension

agents lead to conflicting expectations and demands from various groups in the extension service. These conflicts lead to frustration, confusion, and dissatisfaction on the part of extension agents (Henderson, 1970).

Co-workers

Vroom (1964) contends that experiences with one's co-workers may be a major satisfaction in work. This level of satisfaction depends on the frequency of interactions and the extent to which an individual is valued or liked by his/her co-workers. Lawler III (1973) reports that the acceptance and support of co-workers are often sufficient to satisfy an individual's social needs. The perception of what an individual believes he/she should receive in terms of pay or promotions may be influenced by the relationship with co-workers.

The above review suggest that the change agency incentive system has a significant impact on the attitudes of the extension agents. On the other hand, there is abundant empirical evidence which show that other factors such as demographic variables, job characteristics and the structure of the organization have also an impact on the attitudes of the extension agents. I now turn to a discussion of these factors.

Variables Related to Job Satisfaction

Relationship Between Organizational Structure and Job Satisfaction

Since organizations vary in their structure it is appropriate to examine whether differences in the structure of organizations are related to differences in the attitude of

individuals. This section attempts to review the literature on properties of organizational structure in relation to job attitudes.

The most frequently studied properties of organizational structure are size, configuration (number of hierarchical levels), formalization, centralization and span of control. For example, Miller, Schooler, Kohn, and Miller (1979) report generally negative relationships between four properties of departmental structure: size, number of levels, centralization, formalization, and employee satisfaction. This study will focus on the last three structural variables since they are likely to vary for village level agents. Significant associations have been found between these dimensions and job attitudes.

Centralization. Collins (1980) reveals that overly centralized structures have impeded the successful implementation of agricultural development programs in the western state of Nigeria. The implication is that centralization causes delays in communication, and decision making. It also precludes the participation of relevant people in the bottom of the chain in making decisions on those matters that needed urgent attention.

This view is similar to the one expressed by Hall (1977) who reasons that highly centralized organizations often limit the contribution employees can make in carrying out their work.

Formalization. With regard to formalization, Hackman and Lawler III (1971) and Hulin and Blood (1968) report that formalization may limit job scope, resulting in boredom, alienation, job dissatisfaction, absenteeism, turnover, and low output. House



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(1971) and House and Rizzo (1972) find that low formalization and standardization lead to role ambiguity and conflict which, in turn, lead to low motivation, low satisfaction, and low performance. They, however, indicate that leadership behavior and individual differences may mediate the relationship. The opposite (high formalization), however, leads to less ambiguity, conflict, and anxiety; but it may also lead to low task complexity and high group formality, and low group involvement and low achievement and satisfaction.

Span of control. Theorists in organizational behavior have assumed that a small span of control is a good thing for any organization. These views are in conflict with those suggested by Worthy (1950) who reports that a large span of control is good since it provides better communication and greater opportunities for individual growth and initiative, and is positively related to job satisfaction.

Relationship Between Job Characteristic and Job Satisfaction

Several dimensions of job design characteristics have been studied in the literature. For the purpose of this study, three dimensions will be considered, namely, variety, autonomy, and feedback. These are defined below:

Variety. The degree to which extension workers are expected to perform a wide range of operations in their work.

Autonomy. The extent to which the extension agents have a major say in scheduling their work and deciding on procedures to be followed,

Feedback. The degree to which extension agents receive information as to how they are performing on the job. The three variables are often presented in a group

when their relationships to job satisfaction is discussed in their literature. No attempt is made to present them individually in this review.

Most writers have argued that jobs must be expanded both vertically and horizontally if they are to be motivating, satisfying, and truly enriched. The rationale is that enriched jobs produce greater satisfaction and motivation than simplified jobs and may lead to higher quality work. Increased satisfaction is economically desirable because of its association with turnover and absenteeism (Lawler III, 1973).

Ford (1969) reports that job design variables explained 27 percent variance in turnover. Many studies have reported similar results. However, studies by Blood and Hulin (1967) and Turner and Lawrence (1965) find significant individual differences in how people respond to enriched jobs. They find that town workers (people from small towns and rural backgrounds) respond to enrichments as predicted by the proponents of the approach. However, workers with city background do not show high productivity, high quality and satisfaction when they work on enriched jobs; nor do they show low absenteeism and turnover in the absence of enrichment factors.

The influence of job design characteristic on satisfaction has been demonstrated by Lewin, Dembo, Festinger, and Sears (1944), and Argys (1964). They argue that individuals respond positively when they learn that they have accomplished something they believe is personally worthwhile or meaningful. Such satisfaction should be obtained when an employee works effectively on a job that allows him or her to feel personally responsible for a meaningful portion of the work, provides outcomes that are

intrinsically meaningful or are otherwise experienced as worthwhile, and provides feedback about what is accomplished.

Hackman and Lawler III (1971) examined the relationship between job design characteristics and employee work attitudes in 13 jobs in a telephone company. Data were collected from 200 employees on 4 core dimensions: variety, autonomy, task identity, and feedback. Their results indicate that an average employee had an overall positive relationship between the four job dimensions and employee work motivation, satisfaction, performance and attendance. Alderfer's (1967) data taken from one large organization show that there is a strong interaction between the way jobs are structured and the interpersonal relationships between superiors and subordinates. While employees working on jobs high on variety, autonomy, and feedback were satisfied with their work, they were substantially more dissatisfied with supervision. One reason for this attitude, according to Alderfer, is that when jobs are more complex, they are more difficult to supervise and performance on such jobs is more difficult to evaluate. A recent study (Lawler III, Hackman, & Kaufman, 1973) found results similar to those reported by Alderfer. In the Lawler III et al. (1973) research, jobs were changed so that they were higher on autonomy and feedback. The result was a decrease in the quality of the interpersonal relationships in the work group.

In summary, jobs which are high in four-core job dimensions are likely to produce high satisfaction on work itself, but likely to negatively effect satisfaction with supervision and relationships with co-workers.

Demographic Variables and Job Satisfaction

Numerous studies (Glenn, Taylor, & Weaver, 1977; Herman, Dunham, & Hulin, 1975; Newman, 1975; Rousseau, 1978; Staines & Quinn, 1979) demonstrated that individuals with different personal and background characteristics have different reactions to the work and work context. The variables often used in studies of job satisfaction include age, gender, years of schooling, work experience, formal training, and rural background. This study will also focus on the above variables (excluding gender) because they are important in recruitment and employment decisions in the extension service in Tanzania.

Age and years of work experience. A study of job satisfaction of extension agents in Trinidad found that age and years of extension experience were positively correlated with performance. The same relationships are expected to hold for job satisfaction as well (Thomas, 1976). As extension agents mature in the profession, they become better paid; and because they have invested more, they expect to receive more in their pension schemes. They also are likely to become more skilled in their professional work.

Years of schooling. Leonard (1977) finds that extension workers with secondary schooling had lower levels of job satisfaction than those with primary schooling. These findings are consistent with those of Lawler III (1973) who suggests that the higher the level of education of individuals, the more likely they are to be dissatisfied. The rationale for this is that the higher a persons' perceived personal inputs, that is, the greater his education or skills, the more he feels he should receive. Thus, unless the

high input person receives more outcomes, he will be dissatisfied with his job and the rewards his job offers.

Rural background. Individuals with a rural background are more likely to relate to farmers than those with an urban background. Leonard (1977) found that rural background was positively related to performance. This is probably because those with a rural background are better accepted by farmers, more motivated to help farmers, and adjust more easily to rural living conditions.

Hypotheses

The previous section presented three theories of job satisfaction, the controversies surrounding job satisfaction/job performance relationships and the determinants of job satisfaction. The hypotheses guiding the study are presented in this section. Before presenting the hypotheses, however, a brief discussion of measurement is in order. The specifics of measurements are discussed in the next chapter.

Both the independent and dependent variables were measured through self-reporting. I am aware of the limitations of this procedure such as the bias associated with reporting and perceptions sometimes may not represent reality. However, in the case study, the objective structure and job design characteristics are presented. A combination of methods have been used to collect data in the case study. The survey uses perceptions on the grounds that perceptions reflect meaningful experiences of the individual; to the individual they are a meaningful representation of objective reality.

The hypotheses are divided into two parts. As will be documented in the case study in Chapter IV, the two organizations, Commodity extension and General extension, have very different histories, resources, and work environments. The comparison between the two organizations will ascertain whether the different environments express themselves in differences between the employees of the two organizations. The differences will be analyzed for measures of the dependent variable (satisfaction) as well as in terms of variables identified in the literature as related to satisfaction.

Hypothesis 1

There will be significant differences between Commodity extension and General extension in the following job satisfaction facets:

1. Satisfaction with work itself
2. Satisfaction with salary
3. Satisfaction with supervision
4. Satisfaction with promotion
5. Satisfaction with co-workers

Hypothesis 2

There will be significant differences between Commodity extension and General extension in the following organizational structure variables:

1. Span of control
2. Centralization
3. Formalization

Hypothesis 3

There will be significant differences between Commodity extension and General extension in the following job design characteristics:

1. Variety
2. Autonomy
3. Feedback

Hypothesis 4

There will be significant differences between Commodity extension and General extension in the following demographic characteristics:

1. Years of training
2. Years of schooling
3. Length of employment
4. Age

In an attempt to explain the differences on the dependent variable between Commodity and General extension organizations, the following propositions which link the independent and dependent variables are proposed. For those hypotheses which were not rejected, I will follow the analysis with a discussion of the relationship between the dependent and independent variables at the individual level.

Hypothesis 5

The organization with the lower mean span of control will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

Hypothesis 6

The organization with the higher mean formalization will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, (e) co-workers.

Hypothesis 7

The organization with the higher mean centralization will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

Hypothesis 8

The organization with the higher mean autonomy will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

Hypothesis 9

The organization with the higher mean feedback will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

Hypothesis 10

The organization with the higher mean variety will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

Hypothesis 11

The organization with employees with lower mean years of agricultural training will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

Hypothesis 12

The organization with employees with higher mean years of employment will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

Hypothesis 13

The organization with employees with lower mean age will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

Hypothesis 14

The organization with employees with lower mean years of schooling will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, (c) salary, (d) work itself, and (e) co-workers.

CHAPTER III

METHODOLOGY

The previous chapter presented a review of a body of theoretical and empirical literature relevant to the conduct of this study. What follows is the methodology of the study which is presented under the following headings: Design of the Study, Population, Sampling Procedure, Instrumentation, Pilot Testing, Administration of the Questionnaire, and Data Analysis.

Design of the Study

Information for the study was obtained through survey research. Survey instruments were distributed to a sample of General extension agents and Commodity extension agents in ten districts in Tanzania. Taped individual and group interviews were held with administrators as well as with the sample of extension agents who filled out the questionnaires. Official documents were also analyzed.

The study describes the level of job satisfaction of the extension agents and other variables using descriptive and inferential statistics. In addition, relationships between selected independent and dependent variables are explored through correlational techniques.

Population

The study population consists of all village extension agents continuously working under the General extension service, and village level extension agents who worked under the defunct Coffee Authority and now employed by the General extension service.

Sampling Procedure

The field work was conducted in five of the eight coffee growing regions in Tanzania. The districts selected in the five regions were based on their accessibility to the researcher. The availability of regular transport would have made it more possible for the researcher to visit other districts and this has implications on the extent to which findings can be generalized. The selected regions also grow other crops; both Commodity extension and General extension services operate in these regions.

It was originally envisaged to obtain a sample of 100 Commodity extension agents and 100 General extension agents. Visits to different Commodity extension offices in Tanzania confirmed that it was difficult to obtain a sample of 100 Commodity extension agents using an earlier established criterion of a general certificate of agriculture. Since many Commodity extension agents did not meet this criterion another minimum criterion was used and this was completion of primary education (7 to 8 years of schooling) and a short course in agriculture of not less than four months. Even at this minimum criterion only 64 Commodity extension agents were obtained and

using the same criterion the sample obtained from General extension was 120 extension agents.

The sample was selected from a list of extension agents which was kept at the headquarters of each district. The list contains both Commodity extension agents and General extension agents names and the village in which they work. With the help of the district agricultural development officer, the researcher randomly selected at least one extension agent per village or per ward depending on the number of the extension agents in the Division. In some wards there were no Commodity extension agents.

Instrumentation

The instruments that were originally constructed for data collection consisted of a written survey form which was to be filled out by both the extension agents. On arrival to Tanzania, the researcher learned that the Commodity extension agents had been transferred to the Ministry of Agriculture and Livestock Development. Since 1983, Commodity extension organizations were no longer involved with agricultural extension services. The original questionnaire was, therefore, only appropriate for soliciting information about agents' perception of the current organization, the General extension service. To obtain information about the Commodity extension agents' former employment, a questionnaire was constructed in the past tense; the questions were the same except that they requested information about agents' perception of their former employer, the Coffee Authority.

Individual interviews were held with the general manager of the Tanzania Coffee Marketing Board, six district coffee officers, five district agricultural officers, one zonal manager, and the assistant commissioner for agriculture. The individual interviews covered the following areas:

1. Functions, terms, and conditions of service
2. Internal organizational structure
3. How the political and economic environment has affected the organizations
4. The availability of transport for field work, availability of funds; teaching aids, and other resources for implementing extension programs
5. The nature and pattern of communication between the extension systems and other agencies involved in agricultural development

Documents relating to structure of the organization and job characteristics were reviewed and analyzed.

The questionnaire was supplemented with individual and group interviews with a sample of General and Commodity extension agents who filled out the questionnaire and a sample of extension administrators in the ten districts. After reviewing some of the responses, the researcher felt that some items needed clarification especially "pay and promotion"; the interview dealt mostly with these aspects.

Commodity extension agents, therefore, filled out two questionnaires; one which requested information about their perception of former employer, the Coffee Authority, and the other which requested information about their perception of current employment the General extension service. General extension service agents filled out

only one questionnaire requesting information about their perception of the current employment (see APPENDIX A). The questionnaire filled out by both agents has four sections.

Demographic Variables

In this section, data were collected on demographic variables which were identified in the literature as likely to affect job satisfaction of extension agents.

Job Satisfaction

Data were collected using a modified version of the job satisfaction instrument by Smith, Kendall, and Hulin (1969). Modifications involved changes in the scale and content. While the original questionnaire used a 3-point scale, the modified version used a 5-point scale ranging from strongly disagree to strongly agree. Some of the specific words were also changed to reflect the situation in Tanzania.

The scale consists of items reflecting positive and negative attitude towards the job. Respondents were required to indicate the extent to which they agree or disagree with the statements.

Scale analysis was done to determine the reliability and validity of the instruments. The two concepts are briefly defined below and the methods used to measure them is described.

Reliability is the extent to which an instrument provides consistent results across repeated measurement. Validity is the extent to which an instrument measures what it is intended to measure.

Content validity was achieved through a thorough review of the literature on the dependent and independent variables and through pilot testing. Item analysis was done during pilot testing. The internal consistency method was used to determine the reliability of the scales. The reliability estimate was given as Cronbach's alpha. Reliability coefficients were obtained by deleting items in the scale whose alpha was below the standardized item alpha. A maximum alpha is obtained when no more items can be deleted from the scale.

In calculating the mean scores for the strongly agree to strongly disagree scales the following procedure was used. For positively worded items, the scoring was strongly disagree = 1, disagree = 2, undecided = 3, agree = 4, and strongly agree = 5. For negatively worded items the scoring was reversed as follows: strongly disagree = 5, disagree = 4, undecided = 3, agree = 2, and strongly agree = 1. Scale items for the dependent and the way they are coded is presented below:

Satisfaction with work (after scale analysis, items 6 through 8 were deleted):

- | | |
|--|------|
| 1. I feel satisfied with the work I do. | SA=5 |
| 2. Sometimes I feel that my job is a source of frustrations. | SA=1 |
| 3. Most of the things I do not help farmers very much. | SA=1 |
| 4. My job allows me to contribute new ideas and suggestions. | SA=5 |
| 5. The farmers and those I work with respect my job. | SA=5 |
| 6. I do the same kind of work everyday. | SA=1 |
| 7. I always know what is expected of me in this job. | SA=5 |
| 8. Sometimes I feel that I am doing too much work. | SA=1 |

Satisfaction with pay (after scale analysis, items 3 through 8 were deleted):

- | | |
|---|------|
| 1. Compared to others with similar qualification my salary is low. | SA=1 |
| 2. My salary is not related to my qualifications. | SA=1 |
| 3. My salary is enough to support me and my family. | SA=5 |
| 4. Sometimes I do not get paid on time. | SA=1 |
| 5. When I am transferred to a new station, my organization provides me with fair reimbursements of my money expenses. | SA=5 |
| 6. Salary increments in this organization depends on length of service rather than technical abilities. | SA=1 |
| 7. The policies for granting salary increases in this organization are unfair. | SA=1 |
| 8. Compared to what I do, my salary is more than adequate. | SA=5 |

Satisfaction with promotion (after scale analysis, items 7 and 8 were deleted):

- | | |
|---|------|
| 1. Opportunities for promotion are limited in this organization. | SA=1 |
| 2. Those who do a good job have a good chance of being promoted. | SA=5 |
| 3. My chances for promotion are not affected by how well I perform in my job. | SA=1 |
| 4. Promotions in this organization depends on "who you know" rather than good work. | SA=1 |
| 5. I have been unfairly considered in promotions. | SA=1 |
| 6. Promotions are very infrequent in my organization. | SA=1 |
| 7. There are good opportunities for advancement in my job. | SA=5 |
| 8. Those who get promoted in this organization deserve to be promoted. | SA=5 |

Satisfaction with supervision (after scale analysis, item 6 through 8 were

deleted):

- | | |
|---|------|
| 1. My immediate supervisor often asks for my advice. | SA=5 |
| 2. My immediate supervisor praises good work. | SA=5 |
| 3. My immediate supervisor is not concerned with me as an individual. | SA=1 |
| 4. My immediate supervisor is always there when I need him. | SA=5 |
| 5. My immediate supervisor tells me how I am doing in my job. | SA=5 |
| 6. My immediate supervisor rarely visits me in the field. | SA=1 |
| 7. My immediate supervisor is very strict when it comes to work. | SA=5 |
| 8. My immediate supervisor gets me the inputs I need in time. | SA=5 |

Satisfaction with co-workers (after scale analysis, items 7 and 8 were deleted):

- | | |
|---|------|
| 1. My co-workers are easy to make friends with. | SA=5 |
| 2. My co-workers have always provided me with good advice. | SA=5 |
| 3. Most of the time I do not look forward to meeting my co-workers. | SA=1 |
| 4. I have a good working relationship with my co-workers. | SA=5 |
| 5. Sometimes I feel that my co-workers are undermining me. | SA=1 |
| 6. The spirit of cooperation among my co-workers is high. | SA=5 |
| 7. My co-workers do not get along together. | SA=1 |
| 8. In periods of stress my co-workers will support me. | SA=5 |

Table 1 shows characteristics of the satisfaction scale.

Table 1

Scale Characteristics of the Satisfaction Measures

Facets of satisfaction	Number of items	Scale means	Scale <u>SD</u>	Cronbach's alpha
Work	5	18.70	3.08	.50
Pay	2	5.37	2.20	.61
Promotions	6	15.89	4.98	.70
Supervision	5	17.29	3.51	.67
Co-workers	6	23.42	3.30	.73

Job Design Characteristics

Data were collected on three dimensions of job design characteristics: variety, autonomy and feedback. Hackman and Lawler (1971) developed a validated instrument to measure the three dimensions of job design characteristics. Using the researcher's experience with the extension service in Tanzania, the instrument was modified to reflect conditions in Tanzania. Respondents were requested to indicate on a 5-point Likert scale (strongly disagree to strongly agree) the extent to which they agree or disagree with the statements.

Scale items for independent variable job design characteristics after scale analysis are as shown below:

Variety scale (after scale analysis, items 3 and 4 were deleted):

- | | |
|---------------------------------------|------|
| 1. I do different things each day. | SA=5 |
| 2. In my job there is much variety. | SA=5 |
| 3. My duties are repetitious. | SA=1 |
| 4. I perform the same tasks everyday. | SA=1 |

Autonomy scale (item 3 was deleted after scale analysis):

- | | |
|--|------|
| 1. I have the freedom to do pretty much what I want in my job. | SA=5 |
| 2. I have the opportunity for independent action in my job. | SA=5 |
| 3. I am often left on my own to do my job. | SA=5 |

Feedback scale (no items were deleted from this scale):

- | | |
|--|------|
| 1. My immediate supervisor always tells me how I am doing my job. | SA=5 |
| 2. I am very much aware of the level of my performance on the job. | SA=5 |
| 3. There are a lot of opportunities for me to find out how I am doing on my job. | SA=5 |
| 4. I am satisfied with the extent of feedback I receive from my supervisors. | SA=5 |

Table 2 below shows the characteristics of the job design characteristics variables.

Table 2

Scale Characteristics for the Measures of Job Design Characteristics

Dimension of job design characteristics	Number of items	Scale means	Scale <u>SD</u>	Cronbach's alpha
Variety	2	7.26	1.79	.54
Autonomy	2	6.76	1.78	.48
Feedback	4	14.53	2.59	.60

Organizational Structure

Data were collected on three structural dimensions of the two organizations.

Formalization: the extent to which rules, procedures, instructions, and communications are written. **Centralization:** The extent to which the locus of decision making is in the upper levels of the organization hierarchy. **Span of control:** the problems imposed on the extension agent because of a large number of farmers and field assistants under his/her jurisdiction. The dimensions were measured using a 5-point Likert scale. Items were developed from the literature and from the researcher's own experience with the two extension organizations.

Span of control (after scale analysis, items 3 and 4 were deleted):

1. I am unable to meet my objectives because I have too many farmers to supervise. SA=5
2. I am unable to keep up my schedule because there are too many farmers who need my attention. SA=5

3. The quality of my work has been affected because I have too many farmers under my jurisdiction. SA=5
4. Sometimes the field assistants I supervise take much of my time. SA=5

Centralization (after scale analysis, items 4 and 5 were deleted):

1. It is difficult for me to know who makes important decisions in this organization. SA=5
2. The decisions regarding how much should be spent in my project can only be made by the district agricultural officer. SA=5
3. There is only one person in this organization who can authorize payment of my field allowance. SA=5
4. My immediate supervisor can employ new agricultural assistants without consultations with the principal secretary. SA=1
5. My district agricultural officer has the authority to fire me from my job if my performance is very unsatisfactory. SA=1

Formalization (after scale analysis, item 5 was deleted):

1. When I joined this organization a document describing my job was given to me. SA=5
2. As a new graduate from an agricultural training institute joining the Civil Service for the first time, I went through a formal orientation program before. SA=5
3. I have read a document which specifies my salary per year, fringe benefits and other conditions of service. SA=5
4. My immediate supervisor keeps a written record of my performance. SA=5
5. Sometimes I feel that the excessive rules and administrative procedures in this organization have affected my performance. SA=1

Table 3 shows the characteristics of the organizational structure measures.

Table 3

Scale Characteristics of Measures of Organizational Structure

Dimension of organization structure	Number of items	Scale means	Scale <u>SD</u>	Cronbach's alpha
Span of control	2	6.46	2.15	.72
Centralization	2	8.85	2.53	.54
Formalization	4	13.54	3.08	.59

Pilot Testing

The instrument was pilot tested with five first-year undergraduate students of the Sokoine University of Agriculture who previously worked with the General extension services and two coffee Commodity extension agents currently working at the district agricultural office in Morogoro. The extension agents were asked to fill out the questionnaire and write any comments they had regarding clarity and relevance of the questions. Responses from the pilot test indicated a need for rewording a few of the items. The questionnaire was also felt to be too long.

After making adjustments, the instrument was reviewed by five academic members of the Department of Agricultural Education and Extension of Sokoine University of Agriculture. On the advice of the five members of the department, some

items on job satisfaction were removed, because the statements were either too negative or ambiguous, and were expected to affect responses from the extension agents. The department members also suggested rewording of some ambiguous items.

A final review of the instrument was done by the research and publication committee of the Sokoine University of Agriculture where the researcher was required to defend the proposal in order to justify additional funds. The committee gave suggestions on the methodology of the study but suggested no changes in the questionnaire format.

Administration of the Survey

The questionnaires were distributed by hand to potential respondents at their monthly meetings at the district headquarters. A letter of introduction was obtained from the head of the researcher's department at Sokoine University of Agriculture. The letter was sent to the Regional Development Director who in turn sent letters to District Development Directors to solicit their cooperation. Finally the District Executive Officers introduced the researcher to the District Agricultural Officers.

The Districts' Agricultural Heads then sent letters to the divisional extension agents informing them to remind those selected to fill out questionnaires to attend the monthly meetings. If an individual selected did not attend, another individual from the same division or ward who attended the meeting was asked to fill out the questionnaire. The questionnaires were filled out on the same day and either picked up

by the researcher himself or the district agricultural officer in cases where the researcher was not there in person.

Using this procedure a sample of 90 General extension agents and 40 Commodity extension agents was obtained. A follow up of extension agents in their places of work in the villages and visits to two agricultural training institutes where Commodity extension agents who worked in the five regions were attending a one year training course increased the sample size to 120 General extension agents and 64 Commodity extension agents.

Data Analysis

Frequencies, percentages, and measures of central tendency are used to organize the data. A t -test of differences between means is used to compare the two extension organizations on selected variables and correlation techniques are used to determine relationships between variables.

CHAPTER IV

CASE STUDY

The case study presented here is an attempt to describe in detail the two extension organizations. It will cover the following areas: functions, terms, and conditions of service; internal organization structure, effect of the political and economic environment on the two organizations, and interorganizational problems.

The bulk of the materials for the case study were obtained through interviews with a group of extension agents from Commodity and General extension, the general manager, zonal manager, district coffee officers, and district agricultural development officers. The Assistant Commissioner was interviewed at Pamba House (headquarters for Ministry of Agriculture Livestock Development). Documents relating to the two extension organizations were also analyzed.

Most of the interviews were tape-recorded by the researchers. For the few respondents who did not want to be tape-recorded the researcher took notes during the interview. During the analysis, the research summarized the responses that had a common theme (responses that were in agreement with respect to the questions asked) those that were contradictory were neglected unless they were supported by information from document analysis in which case the researcher went back to the respondent for clarification. There were very few cases in which the responses were contradictory.

Functions, Terms, and Conditions of Service

The agricultural extension service in Tanzania originated during the colonial rule. After independence there was no act of parliament to reestablish a new form of extension service, except that the authoritarian approach used by colonial extension agents was dropped in favor of an educational and persuasive approach. The General extension service is tailored towards delivering proven methods of agriculture to farmers in order to improve their farming methods and techniques thereby increasing food and fibre production. The major emphasis has been on serving farmers living in Ujamaa villages. It is expected that by 1990 every village in Tanzania will have one trained extension agent (certificate holder).

The conditions of service stipulated in the letter of appointment for General extension agents state the starting salary and job level, promotion, conditions for dismissal, and the length of probation period. The letter refers the agents to a government circular which stipulates other conditions of service. Interviews with the extension agents indicated that they never read the circular and do not know what it stipulates.

The analysis of documents revealed that the probation period for General extension agents is about two years. After this period they are confirmed into the civil service, but sometimes one does not get a letter of confirmation until after five years. If an individual does not go the headquarters to claim his confirmation it would even take longer.

Certificate and diploma holders are placed in the same salary scale. There is a hot debate going on with regard to this issue and a solution is yet to be found. A diploma holder has spent more years in school (14 years of schooling) in addition to two years of agricultural training while a certificate holder has spent 12 years of schooling in addition to two years of agricultural training. A certificate holder may later go for two years of agricultural training which means he would have invested at least five years of work before going for a diploma, and then be placed on the same scales as someone who had 12 years of schooling and 2 years of agricultural training seems unbelievable.

An agricultural extension agent at certificate or diploma level is eligible for promotion every three years up to a salary scale of MS4 and MS5. Starting salary scale is MS2 for both groups, diploma and certificate.

Certificate or diploma holders can work for 10 years or more without being promoted. District agricultural officers have claimed to have recommended a good number of their extension agents for promotions but they have never been promoted. Even the district agricultural officers themselves have the same complaints. One confided that he has been working as a district agricultural development officer for the last seven years without being promoted.

The district heads claimed that they are required by the Director of Training in MALD, to prepare a priority list of who should go for in-service training, depending on how long one has been employed and how hard they have been working. But since there are no elaborate criteria of measuring performance, the selection of extension

agents for further training is subjective. A few individuals may be picked for interviews for further training, but one's chances of passing the interview if one has not had even a refresher course in the last ten years are minimal. If somebody who had worked say ten years is selected for a diploma, he has to compete with those from form six (grade 14) who are fresh from school (probably worked only for a year). The end of first year exam often find the service agents with long seniority being discontinued from these institutes.

It is not stipulated in the terms and conditions of service whether or not the General extension service will provide housing, transport or working tools to the employees to facilitate their work. The expectation of the employees is that the organization provide these amenities. However, none of these items are currently provided to General extension agents. The General extension agents interviewed indicated that if there was a house available in the village they had always been the last to be considered if any other government employees, such as a medical assistant or a teacher, were also working in the village. The services of the medical assistant and the teacher are more valued than those of the extension agent. Individual extension agents have to look for a house themselves.

With regard to delay in payments of salaries or increments or delay in letters of appointment in General extension, the principal secretary sent a circular on 1st July 1986 to all Regional Agricultural Heads and District Heads. The purpose of the circular was to outline the procedures to be followed to effect immediate salary payments, salary increments, or transfer allowances to the extension agents to avoid

having them travel all the way to the headquarters and waiting for week or so before their problem is solved. Extension agents in General extension complained that they would usually spend at least two days in Dar es Salaam before the registry clerk locates their files and maybe another four days before they get either their increments, transfer allowance or their salary, which would sometimes have been sent to another region. It will take two to three weeks before the salary is sent back to the headquarters and maybe another two weeks before it reaches the extension agents. The principal secretary's concern was a genuine one. A lot of person days are lost by straightening out one's salary at the headquarters.

The Coffee Authority of Tanzania was established in 1977 with the mandate of improving coffee production, processing and marketing. Because coffee is an export crop, quality improvement becomes a prerequisite. Before its establishment, coffee production was organized under Tanganyika Coffee Board and Cooperative Unions.

At the inception of the Coffee Authority, the Coffee Improvement Programme was started to help develop the coffee industry. Funding for this program was provided through the European Development Fund and the Tanzanian government. This program was succeeded in 1981 by another program called the Coffee Development Program also funded by the same agencies until 1986. The program provided massive support for inputs such as sprayers, pulpers, secateurs, coffee tray wires, insecticides, coffee seedlings, short-term and long-term courses for extension agents, visual aids, and cinema vans. Feeder roads were constructed, transport was provided and storage facilities were also constructed. The program adopted the

Training and Visit System of Agricultural extension in the coffee growing areas.

Processing plants were renovated or new ones constructed. The major emphasis of this program has been to serve coffee small holders. These farmers did not live in ujamaa villages.

As far as conditions of service are concerned, the extension agents who are certificate and diploma holders temporarily transferred to the Coffee Authority received their letter of appointment from the General extension service, and it is the same as that received by those employed by the General extension service. Efforts to find out whether they received another letter of appointment upon joining the Coffee Authority did not produce such a document. Interviews with extension agents working for the Coffee Authority and District Coffee officers, however, showed that the terms and conditions of service of Commodity extension agents were in fact much better. They had a much higher salary than their counter-parts and a shorter probation period of only six months. One did not need to travel to the headquarters to get a letter of confirmation or to claim a salary increment. In general, the indication is that once confirmed or promoted or provided with an increment the process did not take long, it was implemented as soon as possible.

There seems to be less friction between diploma holders and certificate holders in the Coffee Authority because there are few diploma holders, and those who hold diplomas have been promoted above the AFOIV rank. The majority of the extension agents either hold certificates or have attended a short course. Justifiably their salary scales are different because they have different academic qualifications and are in

different ranks. Although promotions were also limited in the Coffee Authority, there were fewer complaints than in General extension. More than half of the agents were below the AFOIV level and were unlikely to be promoted without going for further training. This lack of promotions was also masked by the regular in-service training provided through the training and visit (T&V) system and the regular one-month refresher courses offered in the coffee training institutes.

The Coffee Authority had four months of short courses for those directly employed, and one month refresher courses for regular employees. They had three training centers for the purpose and these were under their control.

In order to offer these courses in the future the General extension will have to find a training venue because the Ministry of Agriculture Training Institutes are occupied (by students undergoing 2 years in-service training) throughout the year and, moreover, doing so would incur costs.

Since the Coffee Authority had external funding, for those with a diploma or a certificate, short courses outside the country were provided, and this seemed to be a great incentive for the extension agents. Because of availability of transport, extension agents in the Coffee Authority received regular supervision. Recommendation for further training though not really objective were at least based on some criteria, it was required in principle by T&V that extension agents keep a diary of what they did and these were regularly submitted to supervisor. The supervisor also was required to make surprise checks on their extension agents. It is most likely, therefore, that those who went for further training were those who have been competent in their work.

Once the village extension agent was sent to his place of work, the district coffee officer wrote a letter requesting the village authority to provide accommodation for the extension agent. Sometimes, the Coffee Authority extension agents claimed that the district coffee officer went with them and made sure that the agents were accommodated.

Transport was provided to most of the Coffee Authority extension agents. At the district level were landrovers, at the divisional level motorcycles were provided on a loan basis (and motorcycle allowance) while at the village level bicycles were provided (with bicycle allowance). Other working tools such as secateur and pruning scissors were provided to village extension agents as well as rain boots and coats. These are unheard of in General extension.

When the district coffee officers were asked about other available incentives for the coffee extension agents, they indicated that the best workers were selected annually and recognized during a "May First Celebration." The best worker was then rewarded by a promotion or two salary increments. When the district agricultural officers for General extension were interviewed, there was some indication that the system has failed even to give monetary rewards to their best workers. All they had was a certificate of recognition.

Coffee is a crop susceptible to many fungi diseases. A lot of fungicides are used in order to control their diseases. Fungicide dealers (companies) have created an incentive scheme whereby extension agents who sold/distributed a given amount of fungicides were rewarded. The rewards ranged from a refrigerator, or motorcycle to

other domestic items. Not only did this help the Coffee Authority in the control of the coffee diseases, it also helped to motivate Commodity extension agents to excel in other areas. Extension agents were more likely to work hard to persuade farmers to use these fungicides. Even though fungicides are widely used by General extension service, there was no chemical company with an incentive scheme for customers like the one for coffee. A senior agricultural officer interviewed at the headquarters admitted that there is not incentive system for General extension agents at the moment but is in the pipeline.

In the districts, regions, and even at the headquarters, some General extension agents have resigned to join chemical companies, crop authorities (Sisal corporation), teaching in secondary schools, or simply start their own businesses.

It is worth pointing out here that during the data collection, the movement of Commodity extension agents into General extension was not complete especially at the senior positions. There were some Commodity extension agents who were below form four level of education and didn't have any qualifications. The General extension service did not absorb these individuals. The alternative was to retire them. Tanzania Coffee Marketing Board (TCMB) said it would use these individuals in their nurseries. So these individuals were retained by the TCMB and they were actually doing extension work side by side with former Commodity extension agents.

The District Coffee Officers, and Zonal Managers were still working under Coffee. All of those interviewed indicated their frustrations of not knowing where they will be next. Their salary is still being paid by TCMB. However, they claim to belong

to the parent ministry--the Ministry of Agriculture and Livestock Development. So while it is claimed that the extension service is centralized and moving all extension agents to the Ministry of Agriculture and Livestock Development, there was at the time of data collection, fragmentation of the services and, I might add, great confusion. The senior staff in Commodity extension did not know whether they belong to the Ministry of Agriculture and Livestock Development or the Ministry of local government and cooperatives (under which TCMB operates). The Ministry of Agriculture refuses to re-employ the lower cadre of extension agents working under TCMB because of lower or lack of qualification but TCMB trusts that they are capable of doing a good job and therefore retains them.

The Commodity extension agents who were transferred to the Ministry of Agriculture and Livestock Development have complained bitterly about their salaries which have been readjusted to conform with salary scales in the Ministry of Agriculture and Livestock Development. In fact, they are now receiving much less than before.

What will happen to the senior officers who have not yet been transferred to the Ministry of Agriculture and Livestock Development? One possibility is that they'll remain in their respective zones or districts as subject matter specialists, and work under the District Agricultural Development Officer or in case of Zonal Coffee Managers under the Regional Agricultural Development officer. In either case, there is going to be a power struggle. Both the Zonal and District Coffee managers are paid much higher salaries than the Regional Agricultural officer or District Agricultural

officers. Will the salaries of Zonal managers and District Coffee officers be re-adjusted to conform with salaries in the Civil Service?

Interviews with both the district heads of Coffee and General extension indicated that this would be unlikely. Coffee district heads have alternative employment opportunities in the private sector and are likely to resign and join the private sector if their salaries are readjusted.

When Commodity extension agents now under Ministry of Agriculture and Livestock Development (MALD) were asked what they miss most now that they are under a different ministry they indicated that transport, seminars, prompter paid allowances, and prompt and convenient payment of salaries.

Internal Organizational Structure

The organizational structure of Commodity extension is presented in Figure 1. The Board of Directors is headed by the Chairman of the Board. He is a political appointee, usually a member of parliament. Other members of the board may come from different institutions in the country. The board ensures that the activities of the organization are implemented in line with the national policy.

The General Manager is appointed by the presented. He is in charge of overall management of the organization. He reports regularly to the Board of Directors. Under the General Manager are four directorates: Marketing, Administration, Finance and Planning, and Development. The extension service falls under the Directorate of Planning and Development.

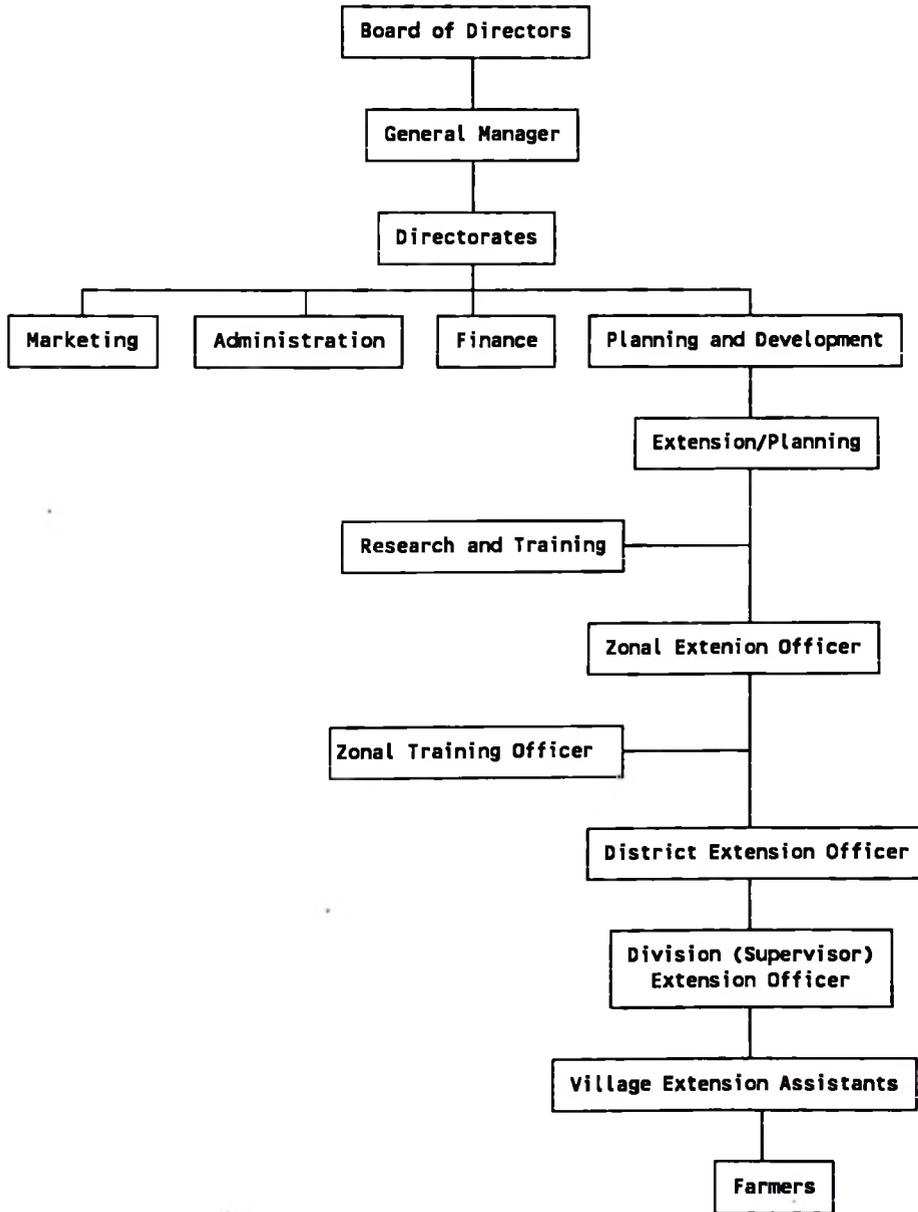


Figure 1. Organization structure of Commodity extension (coffee).

Below the national level, the extension service under commodity is divided into zones which were headed by a Zonal Extension Officer (Zonal Manager) who is assisted by a zonal training officer.

At the district level a district extension officer (District Coffee Officer) heads the Commodity extension and is assisted by a subject matter specialist. A Coffee Supervisor heads the division and is referred to as the Division Extension Officer, who is in charge of the village extension assistants.

A zonal extension officer holds a bachelor's degree in agriculture or a diploma in agriculture or farm management. Most of the district coffee officers hold a diploma in agriculture, although in a few cases a certificate holder may hold that position. Coffee supervisors are certificate holders and about half of the village extension assistants holds certificates in agriculture and the rest are either primary school leavers or form four leavers employed directly from school and given a four months short course in one the of the coffee training centers.

The Minister of Agriculture appoints the principal secretary who is assisted by two deputy principal secretaries one for agriculture and one for livestock. The division of agriculture is headed by the commissioner for agriculture, assisted by the heads of the five sub-divisions; plant protection, crop production and extension services, mechanization, land use planning and farmers education. The Regional Agricultural Development Officer (who may hold a master's or sometimes a bachelor's degree in agriculture) heads the region, and is supported by District Agricultural Development Officer (a bachelor degree holder or a diploma). The Ward is headed by a Ward

extension agent who may hold a diploma, or in rare cases a certificate in agriculture.

The village extension agent is in most cases a certificate holder.

When comparing the structure of the two extension organizations, there is confusion regarding the place of Tanzania Coffee Marketing Board in the organizational structure of the MALD and Ministry of Local Government, Cooperatives and Marketing (MLGCM). Marketing Boards in Tanzania are under MLGCM. there is a link between the Coffee Marketing Board and MALD through the principal secretary. The specific mechanisms of their link are not known to the author.

The following facts, however, suggest closer links between the two ministries: the cooperatives which are under MLGCM are responsible for marketing of the crops and the distribution of inputs to farmers. The extension agents who work for both the General and Commodity extension are centrally trained by MALD. Zonal managers, district coffee officers and other coffee extension agents are paid by TCMB but MALD is their parent ministry AU research stations including those responsible for coffee research are under MALD.

In budgetary allocations, the TCMB get their recurrent and development expenditure through the Ministry of Local Government, Cooperatives and Marketing. The Coffee Development Program and Coffee Improvement Programs were operated by TCMB with funds from European Development Fund and Tanzania Government. One would expect well defined linkages in the organizational structure of the two systems. These are not evident.

Effect of the Political and Economic Environment
on the Two Extension Organizations

Political rather than technical decisions have been paramount in the agricultural sector of Tanzania (see Figure 2). Many of the policies affecting the agricultural sector have been bent towards political inclinations without much regard to the consequences of these political decisions on the economic development of Tanzania. The impact of these policies have either been negative or difficult to evaluate because of their short lived nature.

The 1972 Decentralization policy which put the Ministry of Agriculture field staff directly under the regional administrations of the prime minister's office and forbade direct communication from them to their parent ministry had negative impact on the General extension service. This separation of General extension from the Ministry of Agriculture has undermined the basis for increasing the technical competence of the field staff. Vehicles originally set for use in extension were appropriated by other offices in the regional and district headquarters. Housing and other facilities for extension were also appropriated--this reduced the effectiveness of the General extension service.

The Coffee extension agents were not very much affected by the decentralization policy. There are three coffee training centers in the country which are run and managed by the Commodity extension service and are solely for short courses and seminars for Commodity extension agents. The agents continued to receive their short courses and attend their seminars. Commodity extension agents had their own

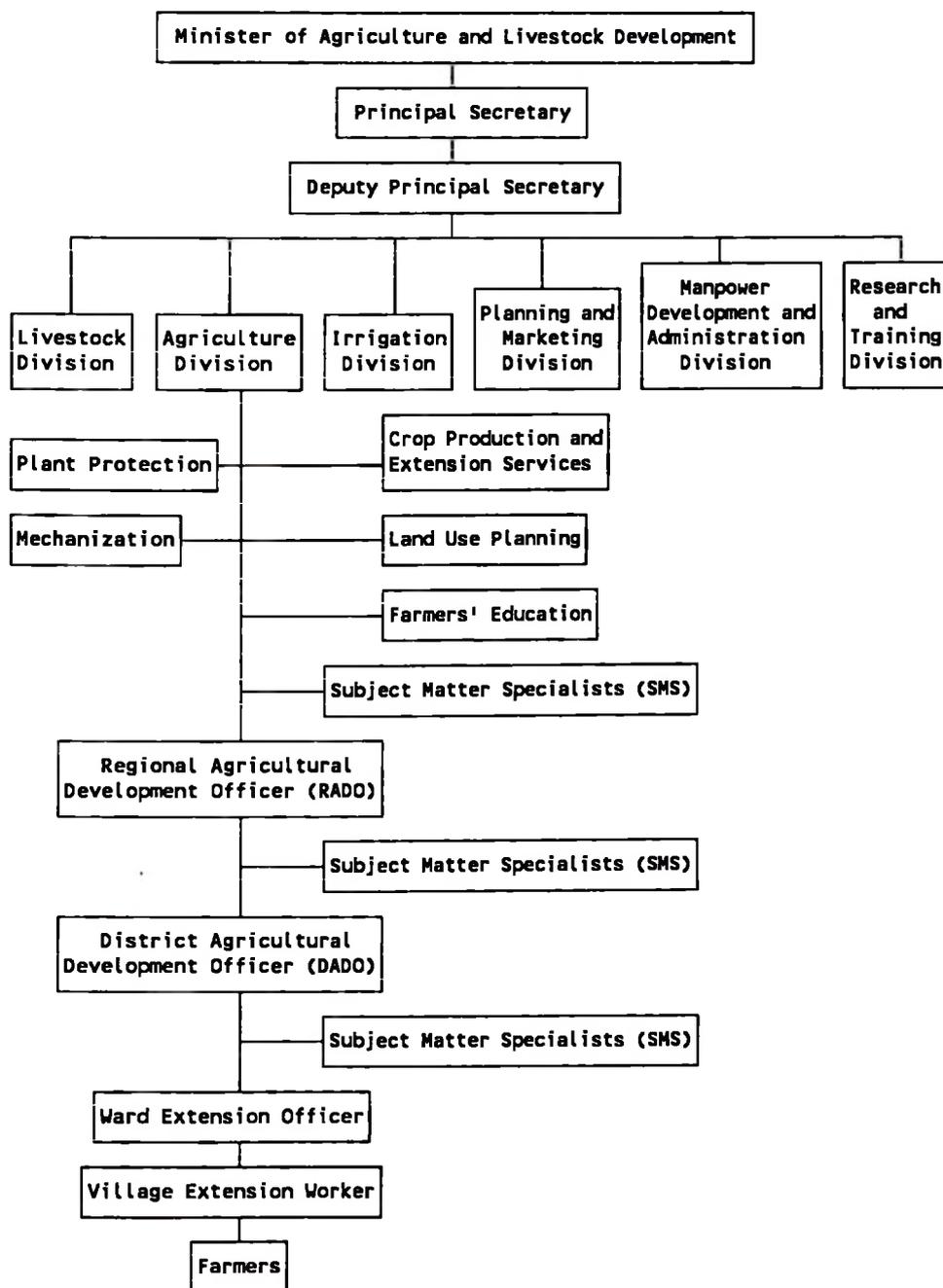


Figure 2. Organization structure of the General extension service.

transport and housing facilities which were not shared by the regional administration. Since this was a parastatal, the sponsors required a report on the conditions of the facilities they are provided and if they were not well maintained the managers were accountable for that.

The Villagization Program of 1974-76, which led to involuntary resettlement of people into Ujamaa villages, led to disruption of agricultural activities. While some cash crops such as cashew nuts were affected by this program, the impact was more on food crops. Much so because the densely populated areas such as Kilimanjaro, Arusha, Kagera, Mbeya, were not heavily involved with this resettlement, because in these areas cash crops such as coffee were well established and they are also progressive areas with permanent structures. This political decision, therefore, had a significant impact on General extension not only because of reduced yields of food crops but because farmers developed negative attitudes towards General extension because extension agents were also involved in this resettlement of people into Ujamaa villages.

Prior to 1976, the cooperatives distributed half of the total fertilizers and a significant proportion of agricultural implements and chemicals. The government abolished the cooperatives in 1976 doing much damage to the distribution network. These functions were transferred to the crop authorities and the Tanzania Rural Development Bank (TRDB). However, TRDB had problems managing the distribution of inputs because it had no storage capacity. The parastatals on the other hand had some storage capacity. They distributed inputs on credit. Only limited distribution of inputs could be done by the parastatals. The Regional Trading Companies tried to sell

inputs on a cash basis but stopped after suffering losses. The Regional Agricultural Development Office opened an input sales office where farmers could purchase inputs but there was a lag between payment and collection of inputs and heavy use of senior agricultural staff who could be doing supervisory field work. Some retail outlets were opened in the regions, but most of them were concentrated in the high response areas, some of which happen to be in the coffee growing areas.

Because of its storage capacity, Commodity extension was able to store the fertilizer and distribute it to farmers on credit while Regional Agricultural Office, Regional trading companies and TRDB which mostly dealt with distribution of inputs for food crops, had no storage capacities and could not adequately handle the physical distribution of inputs.

In its report, the committee on agricultural policy (Tanzania Government, 1983) recommended that extension work in Tanzania should be left to those who are qualified to do it. It is a science that requires professional skills and should, therefore, be done by those who are trained in that profession. Yet in 1988, the National Executive Committee of the ruling party decided to dispatch party cadres to the villages to educate the peasants and rural workers on modernization of agriculture ("The Coffee Programme," 1988). We do not know how much the party cadres are trained in extension methods, agronomy, economics, sociology, and the like to be able to translate research results into practice within the village setting. It is likely that this step will affect both Commodity and General extension.

The above three policies had severe negative impacts on the General extension service. There were other policies such as politics is agriculture, agriculture as a matter of life and death, irrigation policy, and others which had an impact on the extension service, but these three have been more detrimental to the extension service than the others which are not mentioned here.

Availability of Resources in the Two Extension Organizations

It has been earlier pointed out that the Commodity extension organization is funded both by the donor agencies (external funding) and the government of Tanzania (internal funding). Budgetary constraints are less of a limitation in the Commodity extension organization than they are in General extension.

Some of the most important resources provided through external funds to Commodity extension were in the areas of staff provision and training especially at higher levels. Technical assistance was provided by a team of consultants. Other important areas funded by the donors included research, transportation, feeder roads, spare parts for the processing plants, production inputs, housing, storage, establishment of a regional workshop to facilitate maintenance of an enlarged fleet of vehicles. A coffee nursery was also established for production of seedlings.

In the area of transport, the districts were provided with landrovers, while the divisions were provided with motorcycles. Village extension agents were provided with bicycles. Transport was also provided for the distribution of seedlings and hauling of

produce from villages to marketing centers. Transport was also provided in the areas of input distribution to ensure that these inputs reached the coffee growers on time.

Staff training was facilitated through the introduction of the Training and Visit system of agricultural extension. Bi-weekly training sessions were provided to the extension agents before they visited the coffee farmers. Training aids and publications were improved. An additional six mobile training units were provided while a new information unit was introduced in 1985 to prepare and present regular radio programs covering various aspects of the coffee industry. Additional funds were set aside for training staff overseas, for both long-term courses and short-term courses. A priority list for overseas training was prepared and the list was based on the areas mostly needing staff and also on performance of individual extension agents.

Commodity extension has three training centers exclusively for training newly recruited extension agents and seminars for coffee farmers. Facilities within these training centers have also been improved.

There are two research institutions established during the colonial era to deal with research aspects related to coffee. The oldest of these is Lyamungu Research Station which was established in the 1930s. A long-term research program was organized in the areas of plant pathology, plant breeding, entomology, and farm management. Research facilities including equipped laboratories have been constructed at the two research stations.

To improve the transport network in the coffee growing areas, Commodity extension had provided six water tankers, five compactors, and a number of concrete

mixers as well as graders. The transport network has very much improved because a network of feeder roads has also been constructed.

A unique contribution to the coffee industry was the establishment of the Monitoring and Evaluation Unit. This unit monitored and evaluated principal indicators within the coffee industry and reported on the information collected. The information was useful in measuring the progress and improvement of the coffee industry.

While the Ministry of Agriculture and Livestock Development is expected to spend 4,773 05 m/=Tzsh for the development in 1988/89, the coffee industry spent about 425 m/=Tzsh in 5 years, 1981-1986, which is an average of 85 m/=Tzsh a year (Tanzania Government, 1988). It is doubtful that the ministry would even allocate 100 m/=Tzsh for General extension alone. If it did, it would hardly allocate 85 m/=Tzsh for development of a single food crop like maize.

General extension has been plagued with transport problems for a long time, not only for the senior staff at headquarters but more so for the field staff. They hardly have any organized transport to help in distribution of inputs or transporting produce from villages to marketing centers. Spare parts are hard to obtain because of lack of foreign exchange. Maintenance problems are the order of the day because of lack of a centrally maintained regional workshop.

At the field level the General extension organization has more field staff than Coffee extension; but because of lack of transport and infrequent retraining, its level of

effectiveness was surpassed by Commodity extension which regularly trained its extension agents and provided them with adequate transport.

There are also more farmers per General extension agent (1000:1) while there are fewer farmers per Commodity extension agents (500:1). So not only do General extension agents have limited transport, they are also expected to visit more farmers who are widely scattered in some cases.

Although there are more research centers dealing with other crops, they are plagued with budgetary and manpower allocations far below levels which permit an adequate program for any given crop.

There are not established centers for training farmers in General extension. This results in irregular and unreliable training of farmers. Seminars and short courses for extension agents have to be organized through other institutions. Although the Ministry of Agriculture Training Institutes are there to train extension agents, they mainly provide long-term courses ranging from one year to two years. Refresher courses for the General extension agents are, therefore, very infrequent or lacking.

Overseas training within General extension is also limited and disorganized. Sometimes overseas training is available, but the extension agents are not aware that it is available because there is no systematic or organized scheme of who should go for these short courses or long courses overseas.

Communication Between the Extension System and Other Agencies Involved in Agricultural Development

There are many agencies involved in agricultural development either directly or indirectly. The most widely recognized agencies that extension would have direct contact are research institutions, the universities and schools of agriculture, and input distribution agencies.

Experience suggests that linkages between extension and research institutions have been poor or lacking. The situation is more critical for General extension than for Commodity extension. There has never been a formal established system to link the extension service with research or other agencies involved in agricultural development.

Commodity extension agents report that they often received research publications or pamphlets from their research stations. Since they regularly visited their district offices to pick up stationary, they also picked up any newsletters related to their work. The district coffee officers also confirmed this. They maintained that when they received any research publication, they would produce enough copies to be sent to their field agents. During the bi-weekly training of Commodity extension agents, the subject matter specialists from the Coffee Research Center were invited to give lectures on plant protection. New fungicides for control of coffee diseases were tested before they were released to be used by coffee growers. Demonstrations were organized by Commodity extension agents where the chemicals were tested by the researchers. That means coffee extension agents shared demonstrations with coffee researchers.

When interviewing the Zonal manager, this researcher met with two coffee specialists from the research center who were called by one of the division extension agent. Apparently, in one of the farmer's field they used a recommended fungicide to control a leaf disease, but the plants were not responding to the treatment. The district coffee officer, the division extension agent, and the two coffee specialists left together to see what could be done about the problem. This is a good indication of how research and commodity extension are still linked. Furthermore, some of the facilities such as the laboratories of the research center were funded by Commodity extension (coffee) through the European Development Fund.

The Tanzania Coffee Marketing Board Annual Report of 1985-86 (Tanzania Government, 1986) states that a plant breeder, a plant pathologist, and a coffee entomologist would be posted at Lyamungu Coffee Research Station under Phase One of the Coffee Development Program. The report further states that in conjunction with the extension service, demonstration plots will be established and monitored for coffee berry disease control. Thus, under the proposal of the Tanzania Coffee Marketing Board, there were to be working linkages between the Commodity extension service and the research institutions.

The Commodity extension organization also has a good working relationship with the Tanzania Agricultural Research Organization (TARO), an institution that coordinates research in Tanzania. In fact, the Coffee Authority had funded the training of a nematologist working for TARO who is conducting research on nematodes with the Coffee Authority.

Not only did Commodity extension have communication with research centers in the country, it also had collaborations with other international research centers. It collaborated with the Commonwealth Institute of Parasitology (CIP) with the view of establishing control measures for the spread of coffee root nematodes.

Extension agents (with certificates in agriculture) were usually temporarily transferred to the coffee extension organization. Commodity extension, therefore, had either to inform the Ministry of Agriculture if it needed new extension agents or get in touch with the Ministry of Agriculture Training Institutes. Coffee extension organization operated its own three coffee training centers which provided four months courses for their extension agents who were newly employed, and one month refresher courses for those already employed, and a week or more long courses for farmers. For these purposes, they have to contact agricultural training institutes and research centers for help in the training of their staff.

Coffee growers get their inputs through the cooperative unions. Coffee Authority will purchase the inputs because they have foreign exchange, and the cooperatives buy the inputs on credit and sell them or lend them to coffee farmers. To ensure timely distribution of these inputs the Coffee extension agents were often in contact with the production committee of the cooperative to help in follow up of the inputs.

Apart from chemical inputs, the Commodity extension organization did purchase other inputs for its growers. These included knapsack sprayers, hand pulpers, motorized pulpers, stirrup pumps, sectures, pruning saws, coffee tray wires, and so

forth. Construction of feeder roads and their maintenance, as well as construction of factories for processing of coffee, were also undertaken by the Commodity organization. The point being made here is the organization had to collaborate with many other institutions in order to accomplish its goals. Commodity extension had a wide range of these other agricultural development agencies to collaborate with. Proof of this is the many feeder roads and factories as well as processing plants constructed in coffee growing areas.

As pointed out earlier, linkages between the General extension organization and research are not defined at all. Although there are avenues for these two organizations to meet regularly, such as bi-annual conferences, farmer's day, demonstration farms managed jointly by extension and by researchers, popular pamphlets, and visits to research station, for the most part the avenues are not taken advantage of.

On-farm trials are the major means for linking General extension and research, but sometimes lack of transport limit these linkages. Bi-annual conferences have been good linkage mechanisms but sometimes they are not held. Pamphlets are produced by research centers but the distribution system is so poor that only a very few extension agents can get hold of one. As one of the 1987 reports in the ministry indicated, the last bi-annual conferences was held in 1980.

Four research parastatals were created in Tanzania to coordinate research activities. These are: Tanzania Agricultural Research Organization (TARO), Tanzania Livestock Research Organization (TALIRO), Uyolet Agricultural Center (UAC), and Tanzania Pesticide Research Institute (TPRI). All research is supposed to be under

the Director of Research and Training. However, some research activities are not under the four mentioned organizations, for example the Horticultural Research at Tengery, Agro-Scientific Research at Dakawa in Morogoro, the International Research Center in Arusha, and the National Coconut Development Program. These are under the Ministry of Agriculture, but it is not clear who they report to--the principal secretary to the Ministry or to the director of research. Like the extension service, research is fragmented within departments and between ministries. There is limited interaction between the research organizations.

One reason for the lack of linkages between General extension and research and other agencies is a result of internal deficiencies in agricultural research. These are summarized as:

1. Lack of policy direction for research.
2. Nonavailability of competent researchers.
3. Insufficient funds to meet both recurrent and development expenditures.
4. Inadequate transport to supervise field trials.
5. Inadequate research facilities (Tanzania Government, 1983).

Numerous internal weaknesses of the extension systems in Tanzania have been observed by the National Agriculture Policy Paper (Tanzania Government, 1983). These weaknesses also contribute to the lack of linkages between research and extension. They are:

1. Absence of an effective policy or extension
2. Misallocation of manpower

3. Inadequate training and retraining of extension personnel
4. Lack of transport facilities for extension personnel
5. Lack of technical packages suitable for the different ecological zones
6. Total demoralization of extension personnel

The above lists suggest that the two institutions (research and extension) share similar problems. However, the solutions to problems related to research will not necessarily apply to those related to extension.

Where General extension is concerned with the procurement of inputs, it may establish contact with the input distributing agencies, otherwise it is limited in scope to linkages with other agencies. When the district agricultural heads were asked if they knew any research in progress at Uyole or Ukiriguru or Mlingano, they said they did not know any. Commodity extension district heads were able to mention at least some research going on at the coffee research center.

Summary and Implications for Research

Commodity extension had more linkages with other agricultural development institutions. Contact with research was more frequent and because it operated three training centers it had to establish relations with agricultural training institutions in order to obtain training exports. General extension on the other hand has poor linkages with other agricultural related institutions especially with research. There are many research centers which are not well coordinated with each other or with the extension service.

Both Commodity and General extension have the same goals of disseminating new information to farmers. The conditions of service of Commodity extension agents were much better than those of General extension agents. Salaries were much higher, transport and transport allowances were provided, health care was of higher quality and regular refresher courses were offered.

Political decisions had more impact on General extension than they had on Commodity extension. During decentralization transport and housing, were taken from General extension and agents did not have contact with their parent ministry. Their level of competence was affected. Commodity extension had its own transport, housing and institutions which provided short-term courses and seminars; decentralization did not affect these areas. Dissolution of cooperatives affected distribution of inputs in General extension because of lack of storage capacity and the inability of TRDB and the RADO's office to handle physical distribution of inputs. Coffee Authority had adequate storage capacity and retail outlets for distribution of inputs were available in coffee growing areas than in areas dealing with food crops. Areas that grow permanent cash crops, and which are densely populated and progressive, were not affected by the villagization program. Most of coffee areas fall into this category.

Commodity extension was funded externally by donors and internally by the government. It had more resources because foreign exchange was available. The transport and distribution network was well maintained. Regular retraining of the extension agents was easy because they ran their own institutions for short courses. Research facilities were better funded than in General extension. General extension

ash transport problems, and it is difficult to organize seminars and refresher courses without incurring extra costs.

General extension agents working under a system that does not promote those who deserve to be promoted, does not pay salaries on time, has no fringe benefits, does not provide transport nor organize delivery of inputs on time, does not provide regular inservice training, and is dominated by political rather than technical decisions are likely to be frustrated with their work. Their frustration will lead to dissatisfaction and low productivity. Commodity extension agents had enjoyed better salaries and other fringe benefits, transportation was provided, inputs were delivered on time, regular inservice training was provided, and there was less political interference. In general, they had better working conditions which were likely to lead to job satisfaction and higher productivity.

CHAPTER V

FINDINGS

The findings of the study are presented according to the objectives of the study. The chapter is therefore divided into four sections: (a) comparisons of the two organizations on selected variables, (b) job attitudes of Commodity extension agents while they were employed by the Coffee Authority and General extension agents employed by the General extension service, (c) hypotheses testing, and (d) factors that explain the differences in levels of job satisfaction in the two organizations.

Comparisons of the Two Organizations on Selected Variables

Job Satisfaction

As indicated in the case study (CHAPTER IV), the terms and conditions of service of Commodity extension agents were much better than those of General extension agents. Commodity extension agents were, therefore, expected to have positive attitudes towards their jobs and their organization. However, it is expected that when the Commodity extension agents were transferred from the Coffee Authority to General extension their work attitudes changed.

In this section, job attitudes of the village extension agents are compared in three organizational contexts: Commodity extension agents while employed by their former employer the Coffee Authority, Commodity extension agents while employed by their current employer General extension, and the General extension agents while continuously employed by General extension organization.

Table 4 summarizes the job attitudes in three organizational contexts and their standard deviations. An interesting observation in Table 4 is the consistency of the mean scores on satisfaction with co-workers and satisfaction with work itself. For the three organizational contexts satisfaction with co-workers has the highest score followed by satisfaction with work itself. For satisfaction with co-workers and with work itself, Commodity extension agents under Coffee Authority had the highest scores. The lowest satisfaction scores were on satisfaction with salary followed by satisfaction with promotion. The pattern is the same for the three organizational contexts. Again in terms of highest scores on the job satisfaction with salary and with promotion, Commodity extension agents under Coffee Authority have the highest mean score.

Satisfaction with supervision falls between the highest and lowest scores. It is the midpoint. The highest score in this job satisfaction facet was with Commodity extension agents working under the Coffee Authority.

Data indicate that the scores of Commodity extension agents while employed by Coffee Authority were consistently higher on all job satisfaction facets with satisfaction with co-workers having the highest scores. When the Commodity extension agents were transferred to the General extension organization, they experienced a drop in

Table 4

Summaries of the Job Attitudes in Three Organization Contexts and Their Standard Deviations

Job satisfaction facets	Commodity extension under the coffee authority mean scores		Commodity extension under general authority mean scores		General extension agents under general extension mean scores	
	Mean	<u>SD</u>	Mean	<u>SD</u>	Mean	SD
Satisfaction with co-workers	3.76	.42	3.56	.46	3.63	.45
Satisfaction with work itself	3.52	.39	3.34	.44	3.48	.36
Satisfaction with supervision	3.46	.67	3.17	.48	3.23	.60
Satisfaction with promotion	2.98	.50	2.96	.3	2.80	.46
Satisfaction with salary	2.83	.39	2.63	.40	2.59	.36

satisfaction with all aspects of their jobs, but the greatest dissatisfaction was with supervision and the least was with promotion; in fact, they were as dissatisfied with promotion while they were employed by Coffee Authority as they are while currently employed by the General extension organization.

The lowest level of satisfaction was satisfaction with salary. Comparing the three organizational contexts it is observed that the extension agents were dissatisfied with their salary; with General extension agents showing lower dissatisfaction.

Comparing Commodity extension agents while they were employed by the Coffee Authority and while they were transferred to General extension, there is a considerable drop in satisfaction in all five job satisfaction facets (see Table 5). It is argued that the transfer of Commodity extension agents to the General extension organization was detrimental to their self-esteem and their job satisfaction. It is clear from the table that a drop in satisfaction occurred in all job satisfaction facets after the transfer.

It was indicated in the case study in CHAPTER IV that Commodity extension had more resources than General extension. A transfer of extension agents from a high resource organization to a low resource organization was likely to affect job attitudes. All the resources that were available to Commodity extension agents while employed by Coffee Authority such as transport, allowances, seminars, office supplies, health care are no longer available to them.

Moreover, to the Commodity extension agents this transfer also meant re-adjustments to new roles, new working environments and new farmers. They have to deal with more crops while they previously dealt with only coffee. They also have to

Table 5

Job Attitudes of Commodity Extension Agents in Two Organizational Contexts

Job satisfaction facets	Commodity extension agents under coffee extension	Commodity extension agents under general extension
Satisfaction with co-workers	3.76	3.56
Satisfaction with work itself	3.52	3.34
Satisfaction with supervisor	3.46	3.17
Satisfaction with promotion	2.98	2.96
Satisfaction with salary	2.83	2.63

establish new relationships. All these factors may have played a role in reducing levels of satisfaction.

However, there are other variables which may explain the differences in satisfaction between Commodity and General extension agents. These variables may or may not be related to the level of resources available to the organizations. These variables are explored under the section of "Hypotheses Testing."

Organizational Structure

Three variables make up the organizational structure in this study. They are span of control, centralization and formalization. The mean scores and standard deviations for these variables are compared for the two extension organizations.

Commodity extension agents have a higher span of control than General extension agents. However the locus of decision making in General extension is in the higher levels of hierarchy. There were relatively more formal, procedures regarding the Commodity extension organization, than there are in the General extension organization (Table 6).

Table 6

Distribution of Mean Scores and Standard Deviations of Scores on the Organizational Structure Scale Within the Two Extension Organizations

Organizational structure variables	Organizations			
	Commodity extension		General extension	
	Mean	<u>SD</u>	Mean	<u>SD</u>
Span of control	3.53	1.09	3.07	1.03
Centralization	2.68 ^{***}	1.08	2.87	.93
Formalization	3.65	.68	3.24	.77

Job Design Characteristics

The means and standard deviations of the three job design characteristics; variety, autonomy and feedback are compared for the two organizations (Table 7).

General extension agents seem to have more variety in their jobs than do Commodity extension agents. However, Commodity extension agents perceive that they had greater freedom to do what they want in their jobs, and they also received feedback more frequently on how well they were performing in their jobs. General

Table 7

Distribution of Means Scores and Standard Deviation Scores on the Scale Measuring
Job Design Characteristics in Two Extension Organizations

Job design characteristics	Organizations			
	Commodity extension		General extension	
	Mean	<u>SD</u>	Mean	<u>SD</u>
Variety	3.44	.92	3.58	.88
Autonomy	3.56	.94	3.28	.85
Feedback	3.83	.62	3.53	.64

extension agents rely on their supervisors for instructions, they are restricted in making choices on what to do in their jobs and receive less feedback compared to their counterparts in Commodity extension.

To summarize, in other words the respondents report that the jobs that are performed by General extension agents are almost the same as those done by Commodity extension agents. More freedom was exercised by Commodity extension agents in executing their jobs, and they did also enjoy frequent and satisfactory feedback from their supervisors. Because their jobs were more enriched, Commodity extension agents are more likely to enjoy their jobs and be more creative.

Data on organizational structure point to the higher span of control in Commodity extension even though this was not expected. Both organizations are considered

to be fairly centralized. Adherence to rules and procedures of work is more pronounced in Commodity extension than in General extension.

Age Distribution

In both organizations, the majority of the employees are young, however, while 95 percent of the Commodity extension agents are between 20 and 39 years of age, 78 percent of those in General extension are in that age category. Commodity extension agents are thus slightly younger on average than General extension agents.

Years of Schooling

Table 8 shows the distribution of respondents by years of schooling and by organization. Only about 12.5 percent of Commodity extension agents have more than 12 years of schooling compared to 38 percent in General extension. Close to 19 percent of Commodity extension agents have 1 to 8 years of schooling compared to 9 percent in General extension. On average, General extension agents have more years of schooling than Commodity extension agents, while operating at the same village level within each organization. In the hypotheses testing, I will further explore the consequences of this difference for levels of satisfaction in the two organizations.

In the literature review, I indicated that agents with more years of education are more likely to be dissatisfied if educational attainment does not relate positively to position in the organizational hierarchy.

Table 8

Years of Schooling by Type of Extension Organization

Years of schooling	Organizations			
	Commodity extension		General extension	
	<u>n</u>	Percentage	<u>n</u>	Percentage
1 to 4 years	1	1.6	3	2.5
5 to 8 years	11	17.2	8	6.8
9 to 12 years	44	68.8	62	52.5
More than 12 years	8	12.5	45	38.1
Missing	--	--	----	
Total	64	100.0	120	100.0

Years of Agricultural Training

As was already indicated in the discussion of the sample, the distribution of the respondents by years of agricultural training, presented in Table 9, indicates that the majority of the extension agents in both organizations had at least 1 to 2 years of agricultural training, with the General extension agents having slightly more education on average.

Length of Employment

The majority of the extension agents, 84 percent in Commodity extension and 67 percent in General extension, have been working in the extension service for at most 11 years (see Table 10). Beyond the 11-years mark, however, data shows that more

Table 9

Years of Agricultural Training by Type of Extension Organization

Categories of years of training	Organizations			
	Commodity extension		General extension	
	<u>n</u>	Percentage	<u>n</u>	Percentage
1 to 2 years	49	86.0	81	67.5
3 to 4 years	8	14.0	26	21.7
5 to 6 years	0	0	3	2.5
7 to 8 years	0	0	1	0.8
Missing	7	--	9	--
Total	64	100.0	120	100.0

Table 10

Years of Employment in the Extension Service by Type of Extension Organization

Categories of length of employment	Organizations			
	Commodity extension		General extension	
	<u>n</u>	Percentage	<u>n</u>	Percentage
0 to 5 years	39	62.9	58	50.0
6 to 11 years	15	24.2	23	19.8
12 to 17 years	6	9.7	17	14.7
18 to 23 years	1	1.6	12	10.3
24 to 29 years	1	1.6	1	0.9
30 or more	--	--	5	4.3
Missing	2	--	4	--
Total	64	100.0	120	100.0

General extension agents have longer working experience than do Commodity extension agents.

Only about 2 percent of Commodity extension agents have attained "Diploma" qualification as opposed to 31 percent of General extension agents. None of the extension agents have a degree in agriculture or in any other field. That Commodity extension agents have less formal training than the General extension agents is also shown in Table 11. The "short course" category means that the extension agents have attended a variety of short courses ranging from a few weeks to as long as 4 to 6 months without getting a recognized certificate.

Table 11

Distribution of Respondents by Level of Training

Qualifications	Organizations			
	Commodity extension <u>n</u>	Percentage	General extension <u>n</u>	Percentage
Short course	30	46.9	6	5.0
Certificate	33	51.6	76	63.3
Diploma	1	1.6	37	30.8
Degree	0	0	0	0
Missing	--	--	1	--
Total	64	100.0	120	100.0

The level of agricultural training is indicative of the knowledge of agricultural subject matter with those at diploma level expected to know more in their field than those with short courses. In reality, however, this may not be the case because those with a diploma or certificate in the General extension service deal with many crops while those in Commodity extension deal with only one crop. Although Commodity extension agents have fewer years of agricultural training they may be more competent in their field because they deal with only one crop. They also attend regular seminars in which they do a lot of practical work which improves their skills.

Present Position

The positions that village extension agents hold are categorized as Agricultural Field Officer I (AFO I), Agricultural Field Officer II (AFO II), Agricultural Field Officer III (AFO III), and Agricultural Field Officer IV (AFO IV). "Other positions" are categorized as Field Assistants or Field Auxiliaries, usually those who have attended only short courses of a few weeks to as long as 4 to 6 months.

AFO IV is attained after completing schooling through Form Four and attending two years of agricultural training in a Ministry of Agriculture Training Institute, or after Form Six, and attending two years in an agricultural training institute. Positions other than AFO IV are attained through promotions.

The position held by extension agents in the organization reflects the years of agricultural training. Those at the AFO I level either have more years of agricultural training or have worked longer in the extension service. Those at other positions are the ones with the least years of agricultural training. On average, the higher the job

level, the more satisfied the agents will become. It is expected that if those at the higher level do not receive equitable pay or promotions, they are likely to be dissatisfied than those at the lower job level.

The differences between the two sets of respondents on agricultural organizational achievement are shown also in Table 12. More than half of the Commodity extension agents hold positions below AFO IV (see Table 12). This indicates their low level of academic qualifications. Commodity extension agents are about equal in number to General extension agents at the AFO II level. More than three quarters of General extension agents holds certificates in agriculture, which indicates a large number of them clustered at the AFO IV level.

Table 12

Distribution of Respondents by Job Level in the Organization

Present position	Organization			
	Commodity extension n	Percentage	General extension n	Percentage
AFO I	0	0	0	0
AFO II	6	9.4	5	4.2
AFO III	2	3.1	15	12.5
AFO IV	11	17.2	92	76.7
Other positions	44	68.8	8	6.7
Missing	1	--	--	--
Total	64	100.0	120	100.0

Extension agents with a rural background make successful extension agents. Success in ones jobs lead to a sense of accomplishment and therefore job satisfaction. It is also expected that agents with a rural background respond positively to enriched jobs, become satisfied than those with an urban background. For nearly all of the extension agents in both organizations, the occupation of their father's is either full-time or part-time farming. The respondents' exposure to farming before they joined the extension service is shown in Table 13.

Table 13

Distribution of the Respondents by Their Exposure to Farming Before Joining the Extension Service

Exposure to farming	Organization			
	Commodity extension n	Percentage	General extension n	Percentage
Never worked on a farm before	5	7.8	12	10.0
Had worked on a farm occasionally	22	34.4	39	32.5
Had worked on a farm for several years	31	48.4	65	54.2
Missing	6	--	4	--
Total	64	100.0	120	100.0

For the majority of the extension agents in both organizations, they have either worked on a farm occasionally or have worked on a farm for several years. The data presented indicate that the village extension agents in the two organizations both in terms of home background, educational experience and prior work experiences have a rural background.

Summary

Commodity extension agents were more satisfied than General extension agents in the five facets of their jobs. The highest level of satisfaction was satisfaction with co-workers and the lowest was satisfaction with salary. In both Commodity and General extension, dissatisfaction is recorded in salaries and in promotions.

When Commodity extension agents were transferred to General extension, their level of satisfaction fell. The highest area in which their satisfaction fell was in satisfaction with co-workers while the least was in satisfaction with promotions.

When Commodity extension agents were transferred to General extension, they no longer enjoyed frequent interactions with their colleagues because seminars, short courses and workshops which were regularly organized by Coffee Authority were no longer available to them. With their new assignments of dealing with more farmers and new crops the Commodity extension agents may feel more pressure of work that alienate them from their colleagues.

Promotions were limited in both Commodity and General extension organizations. However, about half of the Commodity extension agents had lower academic qualifications which do not allow them to move to the next rank unless they go for

further inservice training. Awareness of their low level of academic qualifications did not change even when they were transferred to General extension.

Hypotheses Testing

This section is devoted to testing the hypotheses stated in CHAPTER II. It is divided into two parts. The first part relate to hypotheses on differences between the two extension organizations and the second part relate to hypotheses on relationships between variables. Hypotheses on differences between Commodity and General extension organizations are presented below.

Hypothesis 1

There will be significant differences between Commodity extension and General extension in the following job satisfaction facets:

1. Satisfaction with work itself
2. Satisfaction with salary
3. Satisfaction with supervision
4. Satisfaction with promotion
5. Satisfaction with co-workers

The results of the test (Table 14) shows that the Commodity extension organization had higher scores on all five job satisfaction facets. Statistically significant differences exist between Commodity extension and General extension in satisfaction with salary, satisfaction with supervision and satisfaction with promotion.

Table 14

Differences in Satisfaction Between Commodity Extension and General Extension

Dependent variables	Commodity mean score	General mean score	t-test value	Significance level
Satisfaction with work	3.52	3.48	.62	.534
Satisfaction with salary	2.84	2.60	3.89	.000*
Satisfaction with supervisor	3.46	3.23	2.15	.034*
Satisfaction with promotion	2.98	2.80	2.21	.029*
Satisfaction with co-workers	3.76	3.63	1.89	.061

*p<.05.

Hypothesis 2

There will be significant differences between Commodity extension and General extension on the following organizational structure variables:

1. Span of control
2. Centralization
3. Formalization

As predicted significant differences exist between Commodity extension and General extension on organizational structure variables, span of control and formalization (Table 15). However, the differences between the two organizations on

centralization is not statistically significant. For both span of control and formalization the Commodity extension agents have the higher mean score.

Table 15

Differences in Organizational Structure Variables Between Commodity Extension and General Extension

Independent variables	Commodity mean score	General mean score	t-test value	Significance level
Span of control	3.53	3.06	2.84	.005*
Centralization	2.68	2.87	-1.26	.208
Formalization	3.65	3.24	3.72	.000*

*p<.05.

Hypothesis 3

There will be significant differences between Commodity extension and General extension in the following job design characteristics:

1. Variety
2. Autonomy
3. Feedback

As anticipated, Commodity extension has high scores on autonomy and feedback while General extension has high scores on variety (see Table 16). The differences

between the two organizations are statistically significant only with respect to autonomy and feedback.

Table 16

Differences in Job Design Characteristics Between Commodity Extension and General Extension

Independent variables	Commodity mean score	General mean score	t-test value	Significance level
Variety	3.43	3.58	-1.01	.312
Autonomy	3.56	3.28	2.02	.045*
Feedback	3.83	3.53	2.99	.003*

*p<.05.

Hypothesis 4

There will be significant differences between Commodity extension and General extension on the following demographic characteristics:

1. Years of training
2. Years of schooling
3. Length of employment
4. Age

As indicated in Table 17, significant differences exist between General and Commodity extension organizations with respect to years of agricultural training, years of schooling, length of employment (years of working experience) and age. Table 17 indicates that Commodity extension is lower on all four demographic variables.

Table 17

Differences in Demographic Characteristics Between Commodity Extension and General Extension

Demographic variables	Commodity mean score	General mean score	t-test value	Significance level
Years of training	1.72	2.52	-5.49	.000*
Years of schooling	10.59	11.93	-3.69	.000*
Length of employment	5.88	8.69	-2.45	.002*
Age	30.69	32.83	-2.16	.032*

*p<.05.

Summary

Commodity extension is found to be higher on all job satisfaction facets. The differences are statistically significant between the two organizations with respect to satisfaction with salary, promotion and supervision, but not for satisfaction with work or satisfaction with co-workers.

With regards to the independent variables, statistically significant differences exist with respect to autonomy and feedback. No differences are found on the variety measure.

Contrary to our expectation Commodity extension has higher scores on span of control than General extension. Commodity extension is high on formalization. No statistically significant differences are found with respect to centralization.

General extension is higher on four demographic variables: years of training, years of schooling, working experience, and age. The differences in these variables are statistically significant.

Relationships Between Independent and Dependent Variables

I have earlier established that significant differences exist between the two organizations on the following dependent variables: satisfaction with salary, satisfaction with promotion, satisfaction with supervision.

The next step would be to explain these differences. By linking the independent and dependent variables we might, for example, be able to find that organizations higher on feedback are also higher on satisfaction with salary. In addition, for those variables found to be significantly different between organizations, I will also use the individual level of analysis.

Significant differences between the organizations were found with respect to the following independent variables: autonomy, feedback, span of control, formalization, length of employment, age, years of schooling, and years of training.

Although significant differences between organizations are found for some dependent and independent variables, these findings do not imply that at the individual level within each organization these relationships also hold. A look at the relationships between the dependent and independent variables at the individual level within organizations may aid in explaining the differences between the two organizations on the dependent variable.

If there are differences between the two organizations on the dependent and independent variables both at the organizational and individual levels of analysis, then these comparisons would help us in making recommendations. It means that when there are significant differences between the organizations at both levels of analysis, there is opportunity for suggesting some recommendations involving changes at the individual level. If there are no significant differences at the individual level, then differences between organizations need to be explained differently.

Hypothesis 5 (modified)

The organization with the lower mean span of control will have the higher mean level of satisfaction with (a) supervision, (b) promotion, and (c) salary.

Commodity extension is found to have a higher mean span of control (Table 15) and therefore it is expected to be lower in satisfaction with supervision, promotion and salary. The analysis shows that Commodity extension has a higher mean level of

satisfaction with salary, with supervisory and with promotion (Table 14). The hypothesis is, therefore, rejected.

Hypothesis 6 (modified)

The organization with the higher mean formalization will have the higher mean level of satisfaction with: (a) supervision, (b) promotion, and (c) salary.

Commodity extension is higher on formalization (Table 15), and is expected to be higher on satisfaction with supervision, promotion, and salary. The analysis in Table 14 shows this to be the case. The hypothesis cannot be rejected.

Since at the organizational level higher formalization is associated with higher satisfaction with supervision, promotion, and salary, I will proceed to examine if these relationships hold at the individual level. The Pearsonian correlation coefficient was used to test the relationships at the individual level of analysis. The results of the analysis are presented in Table 18.

Table 18 shows that at the individual level, higher formalization is associated with higher satisfaction with supervision and promotions. Individual extension agents who perceive that their organization have a set of rules, guidelines and procedures of carrying out their duties are likely to be satisfied with their supervision and promotion but not with their salary.

Hypothesis 7

Hypothesis 7 is eliminated because there are no significant differences between centralization at the organizational level.

Hypothesis 8 (modified)

The organization with the higher mean autonomy will have the higher mean level of satisfaction with (a) supervision, (b) promotion, and (c) salary.

Table 18

Individual Level Relationships Between Formalization and Measures of Satisfaction

Satisfaction with	Pearson correlation coefficient	Level of significance
Supervision	.3726	.001
Promotion	.3447	.001
Salary	.1047	N.S.

At the organizational level Commodity extension is higher on autonomy (Table 16) and is also expected to be higher on satisfaction with supervision, promotion, and salary. Table 14 shows that Commodity extension has a higher mean satisfaction with supervision, promotion and salary. The hypothesis cannot be rejected.

Since these relationships hold at the organizational level of analysis I proceed to examine if the same holds at the individual level of analysis. The results are presented in Table 19.

At the individual level higher autonomy is associated with satisfaction with supervision. Individual extension agents who perceive their organization to be higher on autonomy are likely to be satisfied with supervision. Programs that will be designed

by the organization to increase autonomy will not have an effect on individual levels of satisfaction with promotion or satisfaction with salary. They will only increase individuals satisfaction with supervision.

Table 19

Individual Level Relationships Between Autonomy and Measures of Satisfaction

Satisfaction with	Pearson correlation coefficient	Level of significance
Supervision	.4054	.001
Promotion	-.0152	N.S.
Salary	.1711	N.S.

Hypothesis 9 (modified)

The organization with the higher mean feedback will have the higher mean level of satisfaction with (a) supervision, (b) promotion, and (c) salary.

At the organizational level Commodity extension is higher on feedback and is thus expected to be higher on satisfaction with supervision, promotion and salary.

Tables 14 and 17 show this to be true. Hypothesis 9 cannot be rejected.

At the individual level higher feedback is associated with satisfaction with supervision (Table 20). Individuals who perceive their organization to have a higher level of feedback are likely to be satisfied with supervision. Improving feedback at the

organizational level may not result into satisfaction with promotion or salary among the extension agents. Feedback was defined as the extent to which individuals obtain information on how they are doing and this information is provided by supervisors. Individuals who perceive that the feedback on their work is satisfactory, will be satisfied with supervision.

Table 20

Individual Level Relationships Between Feedback and Measures of Satisfaction

Satisfaction with	Pearson correlation coefficient	Level of significance
Supervision	.5207	.001
Promotion	.1432	N.S.
Salary	.0914	N.S.

Hypothesis 10

Hypothesis 10 is eliminated because there are no significant differences between the organizations in job variety.

Hypothesis 11 (modified)

Organization with employees with lower mean years of agricultural training will have higher mean level of satisfaction with: a) supervision, b) promotion, and c) salary.

At the organizational level Commodity extension have employees who had fewer years of agricultural training and this is expected to lead to satisfaction with supervision, promotion and salary. Tables 14 and 17 indicate that this is the case. Hypothesis 10 cannot be rejected.

In examining these relationships at the individual level (Table 21) it is observed that individuals who have fewer years of agricultural training are likely to be satisfied with promotion. In other words, those with more years of agricultural training are likely to be dissatisfied with promotion. Training programs may have a negative effect on satisfaction with promotion but may not influence individuals satisfaction with supervisory salary. The implication of this to the organization is that training individuals or developing training programs as a means of increasing satisfaction of employees with promotion, supervision, and salary will not work.

Hypothesis 12 (modified)

Organizations with employees with higher mean years of employment will have higher mean levels of satisfaction with a) supervision, promotion, and c) salary.

At the organizational level, Commodity extension have employees with lower mean years of employment and this is expected to lead to lower mean levels of satisfaction with supervision, promotion, and salary. Tables 14 and 17 indicate that the more the years of employment the lower the satisfaction with supervision, promotion and salary. The hypothesis is therefore rejected.

Hypothesis 13 (modified)

Organizations with employees with lower mean age will have higher mean levels of satisfaction with (a) supervision, (b) promotion, and (c) salary.

At the organization level, Commodity extension have employees who are younger and they are expected to be satisfied with supervision, promotion and salary. Tables 14 and 17 show this to be the case. The hypothesis cannot be rejected.

Table 21

Individual Level Relationships Between Years of Training and Measures of Satisfaction

Satisfaction with	Pearson correlation coefficient	Level of significance
Supervision	-.1726	N.S.
Promotion	-.3779	.001
Salary	-.0949	N.S.

Individual level analysis indicate that the relationships between measures of satisfaction are not significant (see Table 22). The simplification for the organization is that recruiting younger employees does not necessarily lead to satisfaction of these employees nor is it going to lead to better performance. Younger and older employees are likely to be dissatisfied if the organization does not meet those needs perceived to be important.

Hypothesis 14 (modified)

Organization with employees with lower mean years of schooling will have higher mean levels of satisfaction with (a) supervision, (b) promotion, and (c) salary.

At the organizational level, Commodity extension has lower mean years of schoolship and this is expected to lead to satisfaction with supervision, promotion, and salary. Tables 14 and 17 indicate that this is in fact true. The hypothesis cannot be rejected. Proceeding to the individual analysis, it is shown (Table 23) that the relationship between years of schooling and measures of satisfaction is not statistically significant. Recruiting individuals who have few years of schooling and expecting that they will be satisfied with supervision, promotion, or salary will be a waste of resources. These results do not suggest that education is not important in influencing satisfaction. It may influence other facets of satisfaction; for example, satisfaction with work itself and co-workers.

Table 22

Individual Level Relationships Between Age and Measures of Satisfaction

Satisfaction with	Pearson correlation coefficient	Level of significance
Supervision	-.1791	N.S.
Promotion	-.1661	N.S.
Salary	-.1182	N.S.

Table 23

Individual Level Relationships Between Years of Schooling and Measurements of Satisfaction

Satisfaction with	Pearson correlation coefficient	Level of significance
Supervision	-.0517	N.S.
Promotion	-.0236	N.S.
Salary	-.0639	N.S.

Discussion on Organizational and Individual Level Relationships

The analysis has been done at three levels, first we have established that the two organizations are significantly different with respect to satisfaction with three dependent variables: satisfaction with promotion, satisfaction with salary, and satisfaction with supervision. I have also established that the two organizations are significantly different with respect to the following independent variables: autonomy, feedback, span of control, formalization, years of agricultural training, years of schooling, length of employment, and age. Third at the individual level of analysis, only satisfaction with supervision and satisfaction with promotion were found to be significantly related to formalization, autonomy, feedback, and years of agricultural training. Satisfaction with supervision is associated with formalization, autonomy and feedback while satisfaction with promotion is associated with formalization and years of agricultural training.

The findings of this study are consistent with findings in the literature. The characteristics of the job that are likely to influence satisfaction are those that enable an individual to schedule his or her work and decide on procedures to be followed in the work and also provide that individual with outcomes that are intrinsically meaningful. The individual should also be able to know how well he or she is performing on the job. Jobs that are high in autonomy and feedback meet these requirements.

Results from the case study in CHAPTER IV indicated that not only did Commodity extension agents visit their headquarters regularly, they were also very regularly visited by their supervisors and sometimes by the donor agencies. This provides a friendly and personal relationship between the Commodity extension and their supervisors and confidence that they can do their job well.

When organizations such as extension are able to design jobs that give individuals the decision on how to do the job and see the results of that job and also get feedback on how he is doing on the job, the extension agents are likely to be satisfied with supervision. This conclusion contradicts Alderfer's (1967) assertion that complex jobs are difficult to evaluate. This could create a negative relationship between the employee and their supervisor. Alderfer's conclusion applies to industrial jobs in developed countries; the jobs performed by extension agents are possibly not as complex as those performed by industrial workers, and the context within which the job is performed is very different.

Where individual extension agents are aware of their roles, the procedures and regulations or guidelines of accomplishing the organizational goals they take pride in

doing their tasks. The knowledge of what an individual's rights are, or what to expect from the organization with respect to promotion are likely to lead to less complaints than when the individual is unaware of these rights. Since Commodity extension agents have often received well-defined instructions, with respect to their rights and what is expected of them by the organization, they are more likely to be satisfied.

Individuals who are more trained in agriculture feel that they should receive more in terms of salary and promotions. Since these are limited in both organizations individual agents with more training are likely to be dissatisfied with promotion or salary.

CHAPTER VI

CONCLUSIONS AND RECOMMENDATIONS

The general objective of this study is to compare two agricultural extension systems in Tanzania: the defunct Coffee Authority (Commodity) extension and the General extension. Although the Coffee Authority extension has since been dissolved, the comparisons points out some useful experiences that may be emulated by the General extension service to improve the quality of its services. Data for the study were collected through a questionnaire distributed to a sample of extension agents from five coffee growing regions in Tanzania. This procedure was supplemented by personal and group interviews, and document analysis. In this chapter, the major findings and conclusions are presented, and recommendations for policy makers and extension administrators are suggested.

Job Satisfaction of the Respondents

Five facets of job satisfaction are analyzed: satisfaction with work itself, satisfaction with salary, satisfaction with promotion, satisfaction with supervision, and satisfaction with co-workers. Commodity extension scores are higher on all five job satisfaction facets. However, both General and Commodity extension agents are least satisfied with salary and promotion, and the highest score for both organization is

measured on satisfaction with co-workers. Thus, while there is a good working relationship among the extension agents within each organization, there is dissatisfaction with the extrinsic rewards that the organizations offer to their employees.

Organizational Structure Variables

Three organizational structure variables are analyzed: span of control, centralization, and formalization. While there are no differences between the two organizations on centralization, the span of control and formalization scores are much higher for Commodity than for General extension. General extension was expected to have a higher span of control but, as the concept is measured, Commodity extension has a higher span of control. Transport is perceived to be much better in Commodity extension but this did not solve problems with span of control; the organization will have to find other solutions to address the problems with span of control.

Job Design Characteristics

In terms of job design characteristics, the jobs performed by General and Commodity extension agents are the same in terms of the variety of tasks they perform. With respect to feedback and autonomy there are significant differences with Commodity extension enjoying higher levels of feedback and autonomy. One conclusion emerges from the analysis of feedback and autonomy: not only do Commodity extension agents enjoy frequent and satisfactory evaluation of their work,

they also have more freedom in scheduling their work than do their counterparts, and they perceive their jobs to be more enriched and more satisfying.

Demographic Characteristics of the Respondents

The analysis focused on such demographic variables as age, years of schooling, years of agricultural training, work experience, job level, and rural background. When compared to the Commodity extension agents, on average the General extension agents are older, have worked longer for their organization, have more years of schooling, and more agricultural training. This implies that General extension agents have invested more into their jobs than their counterparts and would expect more from the organization.

Hypotheses Testing

Hypotheses were formulated in order to test the relationships between the two organizations' organizational environment and the dependent and independent variables. Explaining the differences between the two organizations may aid in suggesting recommendations to strengthen the operations of the General extension organization.

I analyzed, for certain variables, the consistency in the pattern of relationships between dependent and independent variables at the organizational and individual levels. Consistency in the relationships at the two levels of analysis gives greater confidence in the interpretation of the results.

At the organizational level of analysis, significant differences between organizations are found for the following measures of the dependent variables: satisfaction with salary, satisfaction with promotion and satisfaction with supervision, but not for satisfaction with work itself and satisfaction with co-workers.

For the structural variables, statistically significant differences are found for span of control and formalization, but not for the measure of centralization. For the job design characteristics differences between the two organizations in the measures of autonomy and feedback are statistically significant. The measure of variety does not differ between the two organizations. Finally, the two organizations differ on the following demographic variables: age, years of employment, length of schooling, and years of agricultural training, while no differences are found for rural background.

The three facets of job satisfaction found to be significant are under the direct control of the organization (satisfaction with supervision, satisfaction with promotion, and satisfaction with salary). Those that are not significant are beyond the control of the organization. Satisfaction with work itself is often considered an intrinsic factor in job satisfaction. Satisfaction with co-workers is an aspect that is controlled by workers themselves.

The implication of this finding is that the organization has opportunities to enhance job satisfaction of extension agents. The problems are internal to the organization and solutions also have to be internal.

Span of control and formalization are two important organizational structure variables that distinguish the two organizations. General extension needs to develop

rules and procedures that will enable extension agents to effectively perform their jobs.

These rules/procedures should be communicated to the agents at the field level.

Commodity extension agents have fewer farmers under their jurisdiction, they also have adequate transportation, yet they reported having problems with span of control. This suggests that transport does not adequately solve problems with span of control and organizations will be required to find other solutions to address the problem.

General extension agents reported the less autonomy and feedback. In terms of variety, the nature of the jobs performed by Commodity and General extension is perceived to be the same.

One would expect that General extension agents would report more autonomy because of lack of supervision. Perhaps this reinforces the importance of supervision, one needs no supervision if there is no organized calendar of work or work schedule to follow. It is the presence of an organized work schedule that calls for strict supervision and possibly a need for more autonomy. Lack of supervision will also lead to lack of feedback from supervisors. Feedback that comes from seeing accomplishments of ones work would also likely to be missing if extension agents are not given enough time to work in one district. Frequent transfers may result in the lack of this kind of feedback.

The implication from the demographic characteristics have been pointed out earlier. The organization with younger and inexperienced employees needs strict and regular supervision, but in such an organization there are opportunities for the employees to work longer in the organization if their needs are met. The less

educated have fewer demands because they tend to be more satisfied than the more educated.

One would, however, hesitate to suggest that the General extension should employ the less educated because General extension agents have to deal with more crops than Commodity extension agents.

On the basis of initial hypotheses testing, subsequent testing for relationships between satisfaction measures and the independent variables were limited to only those variables that were found to show differences between the two organizations. Once both the dependent and the independent variables were shown to be statistically different between the two organizations, the association between organization characteristics (e.g., autonomy) and employee satisfaction (e.g., satisfaction with promotion) was verified. However, in order to avoid false inferences about the consequences of organizational characteristics for individual behavior (the ecological fallacy) these relationships between dependent and independent variables were also tested at the individual level. When a relationship is not only confirmed at the organizational level but also at the individual level, recommendations about the consequences of changes in organizational characteristics for individual behavior can be made with greater confidence.

Of the 10 hypotheses tested at the individual level, six were rejected. The hypotheses that were not rejected are summarized below:

1. The organization with the higher mean formalization has the higher mean level satisfaction with (a) supervision, (b) promotion, and (c) salary. Pearsonian

correlation coefficient indicate that at the individual level higher formalization is associated with higher satisfaction with supervision and promotions.

2. The organization with the higher mean autonomy has the higher mean level satisfaction with (a) supervision, (b) promotion, and (c) salary. Pearsonian correlation coefficient indicate that at the individual level higher autonomy is associated with higher satisfaction with supervision.

3. The organization with the higher mean feedback has the higher mean level satisfaction with (a) supervision, (b) promotion, and (c) salary. Pearsonian correlation coefficient indicate that at the individual level higher feedback is associated with higher satisfaction with supervision.

Organizations with employees with lower mean years of agricultural training has higher mean level of satisfaction with: (a) supervision, (b) promotion, and (c) salary. The test of the hypothesis shows that at the individual level, only years of agricultural training is associated with satisfaction with promotion.

Factors That Explain the Differences Between Levels of Job Satisfaction in the Two Organizations

I have established that the organizational and individual levels of analysis, the following independent variables: autonomy, feedback, formalization, and years of agricultural training are likely to explain the differences in satisfaction with supervision and satisfaction with promotion.

Satisfaction with supervision is associated with higher formalization, higher autonomy, and higher feedback. One organizational structure variable (formalization) and two job design characteristics variables (autonomy and feedback) explain satisfaction with supervision. Individual characteristics (demographic variables) have no impact in explaining satisfaction with supervision.

Providing extension agents with adequate instruction and procedures to do the job and freedom to schedule their work plus regular evaluation should lead to satisfaction with supervision irrespective of their level of education, age, rural background, or work experience.

Satisfaction with promotion is associated with formalization and years of agricultural training. It seems that job design characteristics have nothing to do with satisfaction with promotion. Higher formalization explains both satisfaction with supervision and satisfaction with promotion.

As pointed out earlier, in the facets of job satisfaction and the role of the organization, independent variables affecting facets of satisfaction, satisfaction with supervision, and satisfaction with promotion are under the control of the organization. They are formalization, autonomy, feedback, and training. The organization can make the rules and pass them to employees, it can adhere to strict supervision and instructions and deprive individuals of their freedom and independence, and it can decide not to provide individuals with any information regarding how they are performing on the job. It can decide to invest very little in the training of extension agents. All these variables are under the control of the organization, and to ensure

higher satisfaction among its employees, extension organizations ought to look at how they are organized, what the design of their jobs look like and the nature of training offered, and how these affect satisfaction with supervision and promotion.

Although hypotheses testing at the individual level tested the variables that were statistically significant at the organizational level, it is possible that those variables that were not statistically significant at the organizational level could be statistically significant at the individual level. It is important, therefore, to be aware of these variables when the organization is considering improvements in the work environment.

The dependent variables satisfaction with work itself and satisfaction with co-workers were not statistically significant at the organizational level. For the independent variables statistically significant differences were not found in variety and centralization.

Span of control is statistically significant at the organizational level but not at the individual level. For demographic variables statistically significant differences are found at the organizational level with respect to age, years of schooling and work experience.

Recommendations

Having established that significant differences exist between Commodity and General extension organizations, and having shown that some of the independent variables are associated with some dependent variables, I believe that recommendations related to these significant variables will stand the test of time if adopted.

As a general recommendation, the General extension organization will benefit by learning from the experiences of the Commodity extension organization, especially in the areas where Commodity extension was strong. Scores on satisfaction with supervision and satisfaction with promotion were significantly higher for Commodity extension agents than they are for General extension agents. These differences in levels of satisfaction may be explained by the differences in rules and procedures governing the work of extension agents, the freedom, independence provided to the agents in scheduling their activities, the frequent feedback from their supervisors, and the level of agricultural training provided by the organization. The following recommendations will relate to these factors because they were found to be related both at the organizational and individual level.

In order to improve the levels of satisfaction with supervision among extension agents, the organization should incorporate in its structure rules, procedures and communications that govern the jobs of extension agents, and develops channels of communications to make the agents aware of these procedures. Hiring and recruitment practices should be geared towards employment of supervisors who are experienced, can provide feedback, and autonomy at the field level.

Specific steps that may be implemented by the organization are:

1. Introduce a district wide orientation program for newly employed extension agents. The newly employed extension agents should be made aware of the rules, procedures governing their jobs. A detailed letter of appointment should be provided to the agents, explaining terms and conditions of service, salary, fringe benefits,

promotions, firing, pension schemes, retirement, and so forth. The letter of appointment that is provided at the moment does not contain enough details.

2. Provide a job description to the extension agents. The extension agents should also be made aware of the importance of his/her jobs and the consequences of the failure to adhere to his/her role.

3. Use monthly meetings at the district headquarters to inform the extension agents of any changes in rules or regulations or government circular letters that have recently been introduced.

4. Organize courses at the Ministry of Agriculture Training Institutes that will provide supervisory and management skills to extension agents. The courses should be incorporated into the regular two-year training program for the extension agents.

5. Seminars for supervisory personnel should also be organized in order to improve supervisory skills. Experienced supervisors will be able to provide a supervisory behavior that is supportive of the extension agents and yet provides freedom and discretion to the individual in scheduling his or her work.

6. Hiring supervisors who hold the same rank as the extension agents should be abolished.

7. Secure more funds to provide transport for the supervisors to regularly visit the extension agents in the field to provide them with needed support and objectively evaluate their work.

8. Establish an extension policy that will require the extension agents to organize demonstrations in the villages where they work, and provide the necessary

resources to make these demonstrations a success. To visit the different villages with demonstrations, the village extension agent should be provided with transportation.

Objective evaluation should be based on the success of these demonstrations.

9. Extension agents should not be transferred frequently. A minimum of say five years in an area will give an agent enough time to see the results of the different programs he/she established in a village and enable supervisors to know and objectively evaluate the extension agents.

In order to enhance satisfaction with promotion, the extension organization should develop a promotion policy that recognizes the levels of agricultural training attained by the extension agents; those individuals who are not promoted should be informed as to why they are not promoted. Specific steps to attain the above.

10. Establish different salary scales for diploma holders and certificate holders. Diploma holders should have a higher salary scale to reflect two more years of training (4 years of agricultural training). They also should be given more responsibilities than those given to certificate holders. Diploma holders must be promoted before the certificate holders when their promotion is due.

11. Since diploma holders have in general worked longer in the extension service, the period from one promotion to the next should be shorter than it is for certificate holders. There should be a "rule of thumb" for promotion, say three years for certificate holders and two years for diploma holders. This must be followed, otherwise the Ministry of Agriculture should provide incentive schemes other than promotion.

The Role of the Bean Cowpea Program (CRSP),
and Other Donor Agencies

The Bean Cowpea Collaboration Research Support Program provides funds for improving bean and cowpea production through training and research. This support could be extended to other crops grown in Tanzania.

Demonstrations to test the yield potential of different bean varieties are organized and supervised by village level extension agents employed by the Ministry of Agriculture and Livestock Development. CRSP has organized workshops at the Sokoine University of Agriculture to improve technical skills of those extension agents in Morogoro region who help in organizing bean demonstration plots. These workshops should be extended to other bean growing areas in the country and should also include technical skills in other crops that are intercropped with beans. These workshops will then have spillovers into other areas of extension.

Since experts from other countries are invited to attend CRSP annual workshops, and these experts have technical and other supervisory skills, the seminar for extension agents working for CRSP should be organized a week earlier than the annual workshop so that these experts could be used to provide a one week seminar on management or supervisory skills to supervisors. In fact the same experts who attend the bean workshop could give these seminars in other regions if CRSP takes the initiative to collaborate with the General extension service.

Other donors like the World Bank can provide support in training supervisors in General extension, especially in areas where T&V (training and visit) system has not

been introduced. Consultants employed by the extension service through the World Bank can provide seminars in areas such as supervision, management, leadership and so forth.

Papers presented in the CRSP often deal with the important areas in extension, such as Female Headed Households and their role in agriculture, or the neglect of Female Headed Households by extension agents. Inviting extension agents at the field level to these workshops, as well as administrators, will sensitize them to the needs of the Female Headed Households. Recommendations made often do not take Female Headed Households into account and as a result, if implemented would not lead to the desired results. If administrators of extension and extension agents are aware of research findings related to women and extension they may pay more attention to meeting their needs.

Suggestions for Future Research

On the basis of the findings of this study the following future research areas are suggested:

1. The comparison of the two extension organizations was based on extrinsic factors related to job satisfaction of extension agents. It was based on the assumption that these are the most important factors that affect job satisfaction of extension agents in developing countries and the fact that the instrument used in measuring job satisfaction in a western environment could also (with modification) be used in a

developing country. The instrument was successful in tapping perceptions of extension agents in a third world setting.

It is recommended that in future research the measurement of job satisfaction of extension agents include intrinsic factors (i.e., in addition to measuring facets) such as satisfaction with supervision, salary, co-workers, work itself, and promotion, the focus should be on advancement, responsibility, personal growth, achievement, and the like. These may not be easily measured, but the present research indicates that it may be worth it to modify the instruments used in a western setting and use them in a third world setting.

2. The T&V system of agricultural extension has been introduced into some parts of Tanzania. It would be interesting to compare job satisfaction of extension agents in T&V and non-T&V area.

3. Since women are employed by the extension service, knowledge of the extent to which they are satisfied with their jobs would help the extension service to improve their jobs. Their level of job satisfaction could be compared with those of male extension agents.

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APPENDIX A
QUESTIONNAIRE

SOKOINE UNIVERSITY OF AGRICULTURE
P.O. BOX 3002 - MOROGORO - TANZANIA

23rd June, 1988

Dear Extension Agent:

I am conducting a study of how organizational structure and job characteristics affect the success of your work while you were employed by the Coffee Authority. In order to accomplish this, would you be so kind as to answer the questions in this questionnaire?

All the questions in this questionnaire are concerned with your work while you were employed by the Coffee Authority before you were transferred to Kilimo. Another questionnaire will be given to you which will request information regarding your job with the current employer - Kilimo.

The Ministry of Agriculture is aware of this study. However, your responses will be kept in strict confidence. Therefore, please be candid because your truthful answers will help us to determine what factors make extension agents successful in their jobs.

QUESTIONNAIRE FOR VILLAGE LEVEL EXTENSION AGENTS
IN COMMODITY EXTENSION - COFFEE AUTHORITY

Organization _____
Village _____
District _____

1. For how long were you employed by Coffee Authority as an extension agent?
_____ years

2. What was your position before you were transferred back to Kilimo?

- _____ AFO I 1
- _____ AFO II 2
- _____ AFO III 3
- _____ AFO IV 4
- _____ Other 5

3. What percentage of your time did you spend on the following activities during the cropping season?

<u>Activity</u>	<u>Percentage Time Spent</u>
Arranging for farm loans	_____ 1
Providing information for marketing	_____ 2
Providing information on improved agricultural practices	_____ 3
Discussing individual farm problems	_____ 4
Supplying farm inputs	_____ 5
Enforcing regulations/rules	_____ 6
Debt collection	_____ 7
Others specify	_____

4. While you were employed by the Coffee Authority, when was the last time you went for an inservice training?
_____ year

With reference to your former employer (Coffee Authority) indicate the extent to which you agree or disagree with the following statements.

5. The type of training I have received was adequate for the work I did in Coffee Authority.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

6. The policies and conditions of service in my former organization (Coffee Authority) were not clearly explained.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

7. The jobs in my former organization (Coffee Authority) were not clearly defined and logically structured.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

8. I was generally involved in the planning of extension programs that I was required to implement.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

9. The extension organization I worked with (Coffee Authority) involves farmers in the planning of programs that affect their will being.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

10. The extension organization I worked with had well defined targets for every employee.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

11. Were you able to meet all the objectives or targets set in your program in the year before your transfer to Kilimo?

_____ no 1
 _____ yes 2

12. Which of the following statements below are the causes of difficulties which prevented you from accomplishing all your objectives.

- a. Lack of adequate transportation _____ no 1
 _____ yes 2
- b. Lack of money for organizing field trips and demonstration farm shows, etc. _____ no 1
 _____ yes 2
- c. Too many farmers under my jurisdiction _____ no 1
 _____ yes 2
- d. Lack of cooperation from research _____ no 1
 _____ yes 2
- e. Lack of cooperation from input distribution agencies _____ no 1
 _____ yes 2
- f. Lack of cooperation from farmers _____ no 1
 _____ yes 2
- g. Lack of adequate training on your part _____ no 1
 _____ yes 2
- h. Lack of other working tools _____ no 1
 _____ yes 2
- i. Other reasons:

13. Where did you get the information you extended to farmers while working with your former organization?

- _____ Research Station 1
- _____ University 2
- _____ My supervisor 3
- _____ Myself 4
- _____ My colleagues 5
- _____ Other farmers 6

14. Would you say that the General extension service is:

- More effective than the former Commodity extension service (Coffee Authority) 1
- Less effective than the former Commodity extension service (Coffee Authority) 2
- Just as effective as the former Commodity extension service (Coffee Authority) 3
- I don't know 4

Explain:

16. The purpose of this questionnaire is to help us understand how you felt about some aspects of your former job when you were employed by the Coffee Authority, what things you were satisfied with and what things you were not satisfied with. Please mark the responses below that best describe your feelings about each of the statements.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I felt satisfied with the work I did	_____	_____	_____	_____	_____
My immediate supervisor often asked for my advice	_____	_____	_____	_____	_____
My salary was enough to support me and my family	_____	_____	_____	_____	_____
There were good opportunities for advancement in my for job	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
My coworkers were easy to make friends with	_____	_____	_____	_____	_____
I did the same kind of work everyday	_____	_____	_____	_____	_____
My immediate supervisor rarely visited me in the field	_____	_____	_____	_____	_____
Opportunities for promotion were limited in my former organization	_____	_____	_____	_____	_____
Compared to others with similar qualifications my salary was low	_____	_____	_____	_____	_____
My former co-workers did not get along well together	_____	_____	_____	_____	_____
My immediate supervisor was very strict when it came to work	_____	_____	_____	_____	_____
In periods of stress my former coworkers supported me	_____	_____	_____	_____	_____
Those who did a good job had good chance of being promoted	_____	_____	_____	_____	_____
24. (continued)					
Sometimes I did not get paid on time	_____	_____	_____	_____	_____
I always knew what was expected of me in my former job	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Sometimes I felt that my job was a source of frustration	_____	_____	_____	_____	_____
My immediate supervisor praised good work	_____	_____	_____	_____	_____
Sometimes I felt that I was doing too much work	_____	_____	_____	_____	_____
My former coworkers always provided me with good advice	_____	_____	_____	_____	_____
My immediate supervisor was not concerned with me as an individual	_____	_____	_____	_____	_____
My salary was not related to my qualifications	_____	_____	_____	_____	_____
Most of the time I did not look forward to meeting my coworkers	_____	_____	_____	_____	_____
Most of the things I did, did not help farmers very much	_____	_____	_____	_____	_____
My chances for promotion were not affected by how well I performed my job	_____	_____	_____	_____	_____
I had a good working relationship with my coworkers	_____	_____	_____	_____	_____
Promotions in my former organization (Coffee Authority) depended on "who you knew" rather than good work	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
When I was transferred to a new station in my former organization, they provided me with fair reimbursements of my money expenses	_____	_____	_____	_____	_____
Salary increment in my former organization depended on length of service rather than technical ability	_____	_____	_____	_____	_____
Sometimes I felt that my former coworkers were undermining me	_____	_____	_____	_____	_____
The policies for granting salary increases in my former organization were unfair	_____	_____	_____	_____	_____
Those who got promoted in my former organization deserved to be promoted	_____	_____	_____	_____	_____
My former job allowed me to contribute new ideas and suggestions	_____	_____	_____	_____	_____
My immediate supervisor was always there when I needed him	_____	_____	_____	_____	_____
I had been unfairly considered in promotions in my former organization	_____	_____	_____	_____	_____
The spirit of cooperation among my former coworkers was high	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
My immediate supervisor told me how I was doing in my former job	_____	_____	_____	_____	_____
The farmers and those I worked with respected my job	_____	_____	_____	_____	_____
My immediate supervisor got the inputs I needed in time	_____	_____	_____	_____	_____
Compared to what I was doing then, my salary was more than adequate	_____	_____	_____	_____	_____
Promotions were very infrequent in my former organization	_____	_____	_____	_____	_____

The statements given below deal with certain aspects of your former job. We want to know the extent to which you felt about them, and the extent of their existence in your former organization, Coffee Authority. Please circle the space that describes your response or feeling about the statement.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
17. In my former job there was much variety	_____	_____	_____	_____	_____
18. I did different things each day	_____	_____	_____	_____	_____
19. I performed the same tasks everyday	_____	_____	_____	_____	_____
20. My duties were repetitions	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
21. I was often left on my own to do my job	_____	_____	_____	_____	_____
22. I had the opportunity for independent action in my former job	_____	_____	_____	_____	_____
23. I had the freedom to do pretty much what I wanted in my former job	_____	_____	_____	_____	_____
24. My immediate supervisor always told me how I was doing in my former job	_____	_____	_____	_____	_____
25. I was very much aware of the level of my performance on the former job	_____	_____	_____	_____	_____
26. There were a lot of opportunities for me to find out how I was doing on my former job	_____	_____	_____	_____	_____
27. I was satisfied with the extent of feedback I received from my former supervisor	_____	_____	_____	_____	_____

One of the factors that affect the success of your work was the way the organization is structured. The statements below describe some aspects of the organizational structure of your former organization, the Coffee Authority. Please mark the response that describes your feeling.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
28. I was unable to meet my objectives because I had too many farmers to supervise _____	_____	_____	_____	_____	_____
29. The quality of my work had been affected because I had too many farmers under my jurisdiction _____	_____	_____	_____	_____	_____
30. I was unable to keep up my schedule because there were too many farmers who needed my attention _____	_____	_____	_____	_____	_____
31. Sometimes the field assistants I supervised took much of my time _____	_____	_____	_____	_____	_____
32. It was difficult for me to know who made important decisions in my former organization _____	_____	_____	_____	_____	_____
33. The decisions regarding how much should be spent in my former project could only be made by the district agricultural officer _____	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
34. There was only one person in my former organization who could authorize payment of my field allowance	_____	_____	_____	_____	_____
35. My immediate supervisor could employ new agricultural assistants without consultations with the principal secretary	_____	_____	_____	_____	_____
36. My former District Ag. Officer had the authority to fire me from my job if my performance was very unsatisfactory	_____	_____	_____	_____	_____
37. When I joined the Coffee Authority, a document describing my job was given to me	_____	_____	_____	_____	_____
38. As a new graduate from an agricultural training institute joining the civil service for the first time, I went through a formal orientation program before I began my field work with my former employer	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
39. I have read a document which specified my salary per year, fringe benefits and other conditions of service in my former organization	_____	_____	_____	_____	_____
40. My immediate supervisor kept a written record of my performance in my former organization	_____	_____	_____	_____	_____
41. Sometimes I felt that the excessive rules and administrative procedures in my former organization had affected my performance	_____	_____	_____	_____	_____
42. My contact with farmers while working under Coffee Authority was rewarding	_____	_____	_____	_____	_____
43. My former organization handled very well the important needs of the farmers	_____	_____	_____	_____	_____
44. I feel that farmers had a positive image of my former organization	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
45. Most of the things I did in my former job did not help farmers very much to improve their standards of living	_____	_____	_____	_____	_____
46. Transfers were very frequent in my former organization	_____	_____	_____	_____	_____
47. Some of my former colleagues took new appointments in other organizations	_____	_____	_____	_____	_____
48. Some of my fellow workers had retired prematurely in my former organization	_____	_____	_____	_____	_____
49. I felt proud to have worked in my former organization	_____	_____	_____	_____	_____
50. This organization had encouraged my participation in decision making	_____	_____	_____	_____	_____
51. I was involved in making many decisions in my former organization	_____	_____	_____	_____	_____
52. My former organization provided me with very good working conditions	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
53. I generally had most of the needed support and backup support to do a good job	_____	_____	_____	_____	_____
54. I liked to perform the tasks assigned to me by my former organization	_____	_____	_____	_____	_____
55. Fertilizers, chemicals and other inputs that I needed for farmers in my area had always arrived on time	_____	_____	_____	_____	_____
56. Whenever I wanted to organize demonstrations and field days, the necessary resources were available	_____	_____	_____	_____	_____
57. For purposes of field visits in my former organization I always had reliable transportation	_____	_____	_____	_____	_____
58. The leadership in my former organization had been very supportive	_____	_____	_____	_____	_____
59. Without the contribution of the Coffee Authority agricultural development will suffer tremendously	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
60. My immediate supervisor knew his job very well	_____	_____	_____	_____	_____
61. I was not regularly informed of research recommendations on the crops I worked on while working with my former organization	_____	_____	_____	_____	_____
62. I did not attend any training session while working with my former organization	_____	_____	_____	_____	_____
63. The training sessions I attended while employed by Coffee Authority had been useful	_____	_____	_____	_____	_____
64. Working with my former organization was a challenge to me	_____	_____	_____	_____	_____
65. I will recommend my relatives and friends to seek employment in my former organization	_____	_____	_____	_____	_____
66. Most farmers served by extension agents in my former organization practice what the extension agents recommend	_____	_____	_____	_____	_____

Thank you very much for your time!

SOKOINE UNIVERSITY OF AGRICULTURE

P.O. BOX 3002 - MOROGORO - TANZANIA

23rd June, 1988

Dear Extension Agent:

I am conducting a study of how organizational structure and job characteristics affect the success of your work. In order to accomplish this, would you be so kind as to answer the questions in this questionnaire?

The Ministry of Agriculture is aware of this study. However, your responses will be kept in strict confidence. Therefore, please be candid because your truthful answers will help us to determine what factors make extension agents successful in their jobs.

**QUESTIONNAIRE FOR VILLAGE LEVEL EXTENSION AGENTS
IN GENERAL AND COMMODITY EXTENSION ORGANIZATIONS**

Organization _____
 Village _____
 District _____

1. What is your age? _____ years
2. Years of schooling? _____ years
3. Years of formal agricultural training? _____ years
4. Qualifications attained:

___ Certificate	1
___ Diploma	2
___ Degree	3
___ Other	4
5. What is the occupation of your father?

___ Nonfarmer	1
___ Part-time farmer	2
___ Full-time farmer	3
6. What type of primary school did you attend?

___ City school	1
___ Town school	2
___ Village school	3
7. Where did you spend most of your holidays while you were going to school?

___ City	1
___ Town	2
___ Village	3
8. How much exposure to farming did you have before you joined the extension service?

___ Never worked on a farm before	1
___ Had worked on a farm occasionally	2
___ Had worked on a farm for several years	3

9. For how long have you been employed as an extension agent in this agency? _____ years

10. What is your present position?

_____	AFO I	1
_____	AFO II	2
_____	AFO III	3
_____	AFO IV	4
_____	Other	5

11. What percentage of your time do you spend on the following activities during the cropping season?

<u>Activity</u>	<u>Percentage Time Spent</u>
Arranging for farm loans	_____ 1
Providing information for marketing	_____ 2
Providing information on improved agricultural practices	_____ 3
Discussing individual farm problems	_____ 4
Supplying farm inputs	_____ 5
Enforcing regulations/rules	_____ 6
Debt collection	_____ 7
Others specify	_____

12. How long ago is it since you went for an inservice training?

- _____ Less than one year 1
- _____ 1 year ago 2
- _____ 2 years ago 3
- _____ 3 years ago 4
- _____ 4 years ago 5
- _____ Never went to inservice training 6

Indicate the extent to which you agree or disagree with the following statements:

13. The type of training I have received is adequate for the work I do.

Strongly Disagree Disagree Undecided Agree Strongly Agree

1 2 3 4 5

14. The policies and conditions of service in this organization have not been clearly explained.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

15. The jobs in this organization are not clearly defined and logically structured.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

16. I am generally involved in the planning of extension programs that I am required to implement.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

17. The extension organization I work with involves farmers in the planning of programs that affect their will being.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

18. This organization has well defined targets for every employee.

Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1	2	3	4	5

19. Were you able to meet all the objectives or targets set in your program last year?

no 1
 yes 2

20. Which of the following statements below are the causes of difficulties preventing you from accomplishing all your objectives.

- | | | |
|--|------------------------------|---|
| a. Lack of adequate transportation | <input type="checkbox"/> no | 1 |
| | <input type="checkbox"/> yes | 2 |
| b. Lack of money for organizing field trips and demonstration farm shows, etc. | <input type="checkbox"/> no | 1 |
| | <input type="checkbox"/> yes | 2 |
| c. Too many farmers under my jurisdiction | <input type="checkbox"/> no | 1 |
| | <input type="checkbox"/> yes | 2 |
| d. Lack of cooperation from research | <input type="checkbox"/> no | 1 |
| | <input type="checkbox"/> yes | 2 |
| e. Lack of cooperation from input distribution agencies | <input type="checkbox"/> no | 1 |
| | <input type="checkbox"/> yes | 2 |
| f. Lack of cooperation from farmers | <input type="checkbox"/> no | 1 |
| | <input type="checkbox"/> yes | 2 |
| g. Lack of adequate training on your part | <input type="checkbox"/> no | 1 |
| | <input type="checkbox"/> yes | 2 |
| h. Lack of other working tools | <input type="checkbox"/> no | 1 |
| | <input type="checkbox"/> yes | 2 |
| i. Other reasons: | | |

21. Where do you get the information you extend to farmers:

- | | |
|---|---|
| <input type="checkbox"/> Research Station | 1 |
| <input type="checkbox"/> University | 2 |
| <input type="checkbox"/> My supervisor | 3 |
| <input type="checkbox"/> Myself | 4 |
| <input type="checkbox"/> My colleagues | 5 |
| <input type="checkbox"/> Other farmers | 6 |

22. Would you say that the General extension service is:

- More effective than the Commodity extension 1
- Less effective than the Commodity extension 2
- Just as effective as the Commodity extension 3
- I don't know 4

Explain:

24. The purpose of this questionnaire is to help us understand how you feel about some aspects of your job, what things you are satisfied with and what things you are not satisfied with. Please circle the space below that best describe your feelings about each of the statements.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
I feel satisfied with the work I do	_____	_____	_____	_____	_____
My immediate supervisor often asks for my advice	_____	_____	_____	_____	_____
My salary is enough to support me and my family	_____	_____	_____	_____	_____
There are good opportunities for advancement in my job	_____	_____	_____	_____	_____
My coworkers are easy to make friends with	_____	_____	_____	_____	_____
I do the same kind of work everyday	_____	_____	_____	_____	_____

24. (continued)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
My immediate supervisor rarely visits me in the field	_____	_____	_____	_____	_____
Opportunities for promotion are limited in this organization	_____	_____	_____	_____	_____
Compared to others with similar qualifications my salary is low	_____	_____	_____	_____	_____
My co-workers do not get along well together	_____	_____	_____	_____	_____
My immediate supervisor is very strict when it comes to work	_____	_____	_____	_____	_____
In periods of stress my coworkers will support me	_____	_____	_____	_____	_____
Those who do a good job have good chance of being promoted	_____	_____	_____	_____	_____
Sometimes I do not get paid on time	_____	_____	_____	_____	_____
I always know what is expected of me in this job	_____	_____	_____	_____	_____
Sometimes I feel that my jobs is a source of frustration	_____	_____	_____	_____	_____
My immediate supervisor praises good work	_____	_____	_____	_____	_____

24. (continued)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Sometimes I feel that I am doing too much work	_____	_____	_____	_____	_____
My coworkers have always provided me with good advice	_____	_____	_____	_____	_____
My immediate supervisor is not concerned with me as an individual	_____	_____	_____	_____	_____
My salary is not related to my qualifications	_____	_____	_____	_____	_____
Most of the time I do not look forward to meeting my coworkers	_____	_____	_____	_____	_____
Most of the things I do, do not help farmers very much	_____	_____	_____	_____	_____
My chances for promotion are not affected by how well I perform my job	_____	_____	_____	_____	_____
I have a good working relationship with my coworkers	_____	_____	_____	_____	_____
Promotions in this organization depends on "who you know" rather than good work	_____	_____	_____	_____	_____
When I am transferred to a new station my organization provides me with fair reimbursements of my money expenses	_____	_____	_____	_____	_____

24. (continued)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Salary increment in this organization depends on length of service rather than technical ability	_____	_____	_____	_____	_____
Sometimes I feel that my coworkers are undermining me	_____	_____	_____	_____	_____
The policies for granting salary increases in this organization are unfair	_____	_____	_____	_____	_____
Those who get promoted in this organization deserve to be promoted	_____	_____	_____	_____	_____
My job allows me to contribute new ideas and suggestions	_____	_____	_____	_____	_____
My immediate supervisor is always there when I need him	_____	_____	_____	_____	_____
I have been unfairly considered in promotions	_____	_____	_____	_____	_____
The spirit of cooperation among my coworkers is high	_____	_____	_____	_____	_____
My immediate supervisor tells me how I am doing in my job	_____	_____	_____	_____	_____
The farmers and those I work with respect my job	_____	_____	_____	_____	_____

24. (continued)

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
My immediate supervisor gets the inputs I need in time	_____	_____	_____	_____	_____
Compared to what I do, my salary is more than adequate	_____	_____	_____	_____	_____
Promotions are very infrequent in my organization	_____	_____	_____	_____	_____

The statements given below deal with certain aspects of your job. We want to know the extent to which you feel about them, and the extent of their existence in your organization. Please circle the space that best describes your response or feeling about the statement.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
25. In my job there is much variety	_____	_____	_____	_____	_____
26. I do different things each day	_____	_____	_____	_____	_____
27. I perform the same tasks everyday	_____	_____	_____	_____	_____
28. My duties are repetitions	_____	_____	_____	_____	_____
29. I am often left on my own to do my job	_____	_____	_____	_____	_____
30. I have the opportunity for independent action in my job	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
31. I have the freedom to do pretty much what I want in my job	_____	_____	_____	_____	_____
32. My immediate supervisor always tells me how I am doing in my job	_____	_____	_____	_____	_____
33. I am very much aware of the level of my performance on the job	_____	_____	_____	_____	_____
34. There are a lot of opportunities for me to find out how I am doing on my job	_____	_____	_____	_____	_____
35. I am satisfied with the extent of feedback I receive from my supervisor	_____	_____	_____	_____	_____

One of the factors that affect the success of your work is the way the organization is structured. The statements below describe some aspects of the organizational structure. Please circle the space that best describes your response or feeling about the statement.

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
36. I am unable to meet my objectives because I have too many farmers to supervise	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
37. The quality of my work has been affected because I have too many farmers under my jurisdiction	_____	_____	_____	_____	_____
38. I am unable to keep up my schedule because there are too many farmers who need my attention	_____	_____	_____	_____	_____
39. Sometimes the field assistants I supervise take much of my time	_____	_____	_____	_____	_____
40. It is difficult for me to know who makes important decisions in this organization	_____	_____	_____	_____	_____
41. The decisions regarding how much should be spent in my project can only be made by the district agricultural officer	_____	_____	_____	_____	_____
42. There is only one person in this organization who can authorize payment of my field allowance	_____	_____	_____	_____	_____
43. My immediate supervisor can employ new agricultural assistants without consultations with the principal secretary	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
44. My District Ag. Officer has the authority to fire me from my job if my performance is very unsatisfactory	_____	_____	_____	_____	_____
45. When I joined this organization a document describing my job was given to me	_____	_____	_____	_____	_____
46. As a new graduate from an agricultural training institute joining the civil service for the first time, I went through a formal orientation program before I began my field work	_____	_____	_____	_____	_____
47. I have read a document which specifies my salary per year, fringe benefits and other conditions of service	_____	_____	_____	_____	_____
48. My immediate supervisor keeps a written record of my performance	_____	_____	_____	_____	_____
50. My contact with farmers in this organization have been rewarding	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
51. This organization has handled very well the important needs of the farmers	_____	_____	_____	_____	_____
52. I feel that farmers have a positive image of this organization	_____	_____	_____	_____	_____
53. Most of the things I do in this job do not help farmers very much to improve their standards of living	_____	_____	_____	_____	_____
54. Transfers are very frequent in this organization	_____	_____	_____	_____	_____
55. Some of my colleagues have taken up new appointments in other organizations	_____	_____	_____	_____	_____
56. Some of my fellow workers have retired prematurely	_____	_____	_____	_____	_____
57. I feel proud to be working in this organization	_____	_____	_____	_____	_____
58. This organization has encouraged my participation in decision making	_____	_____	_____	_____	_____
59. I was involved in making many decisions in this organization	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
60. This organization has provided me with very good working conditions	_____	_____	_____	_____	_____
61. I generally have most of the needed support and backup support to do a good job	_____	_____	_____	_____	_____
62. I like to perform the tasks assigned to me by this organization	_____	_____	_____	_____	_____
63. Fertilizers, chemicals and other inputs that I needed for farmers in my area have always arrived on time	_____	_____	_____	_____	_____
64. Whenever I wanted to organize demonstrations and field days, the necessary resources were available	_____	_____	_____	_____	_____
65. For purposes of field visits I always had reliable transportation	_____	_____	_____	_____	_____
66. The leadership in this organization has been very supportive	_____	_____	_____	_____	_____

	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
67. Without the contribution of this organization, agricultural development will suffer tremendously	_____	_____	_____	_____	_____
68. My immediate supervisor knows his job very well	_____	_____	_____	_____	_____
69. I have not been regularly informed of research recommendations on the crops I work on	_____	_____	_____	_____	_____
70. I have not attended any training session while working with this organization	_____	_____	_____	_____	_____
71. The training sessions I attended while employed in this organization have been useful	_____	_____	_____	_____	_____
72. Working with this organization has been a challenge to me	_____	_____	_____	_____	_____
73. I will recommend my relatives and friends to seek employment in this organization	_____	_____	_____	_____	_____

Strongly Disagree Disagree Undecided Agree Strongly Agree

74. Most farmers in this organization practice what the extension agents recommend

Thank you very much for your time!

VITA

NAME: Naftali Medoti Mollel

TITLE: Lecturer

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BIRTHPLACE: Arusha, Tanzania DATE OF BIRTH: 1952

MARITAL STATUS: Married with children

ACADEMIC BACKGROUND

Primary School--Moshono Primary School	1960-1963
Certificate--Burka Upper Primary School	1964-1966
"O" Level Certificate--Minaki Secondary School	1967-1970
General Certificate in Agr.--Mati Ukiriguru	1977-1979
Diploma (Crop Production)--Mati Uyole	<u>1977-1979</u> ¹
BSC (Agr)--University of Dares Salaam	1980-1982
M. of Ext. Ed.--University of Illinois	1984-1986

PROFESSIONAL BACKGROUND

- 1973-1977 - Research Assistant, Coconut Research Project Mlingano
Research Station Coconut Research--Extension Liaison Person
- 1979 - National Coconut Development Program (NCDP) Mlingano-Tanga,
Research and Extension Liaison
- 1983-1985 - Tutorial Assistant, Department of Agricultural Education and
Extension, Sokoine University of Agriculture: Organized
workshops, conferences, and short course at the Center for
Continuing Education.
- 1985-1989 - Lecturer, Department of Agricultural Education and Extension,
Sokoine University of Agriculture

PROFESSIONAL INVOLVEMENT

- Member, Tanzania Society of Agricultural Education and Extension (TSAEE)
- Member, Association of Agricultural Education and Extension for Africa
- 1985-1987 - Teaching Assistant Office of Extension Education University of
Illinois at Urbana-Champaign; Organized and arranged for under-
graduate and graduate instruction with Professor Violet M. Malone.

RECOGNITION HONORS

- 1986 The National Deans List
- 1986 Travel Grant, UIUC, to attend conference on Gender Issues in
Farming System Research and Extension-University of Florida-
Gainesville
- 1988 Research Grant--Center for African Studies, UIUC, to do research for
three months in Tanzania
- 1988 Certificate of Appreciation--Teaching Assistant, Department of
Extension Education

PUBLICATION (Articles)

- Due, J., Mollel, N., & Malone, V. (1986, March 26). Does the T&V system
reach female-headed families? Some evidence from Tanzania. Journal of
Administration and Extension, 26, 209-217.

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